The 12th National Tuberculosis Programme Managers Meeting

Report of the Meeting
Dhaka, Bangladesh, 3–6 December 2007
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# Abbreviations

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<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACSM</td>
<td>Advocacy, communication and social mobilization</td>
</tr>
<tr>
<td>AFB</td>
<td>Acid-fast bacilli</td>
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<tr>
<td>AIDS</td>
<td>Acquired immuno-deficiency syndrome</td>
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<tr>
<td>ART</td>
<td>Antiretroviral therapy</td>
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<tr>
<td>BPS</td>
<td>Basic package of services</td>
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<tr>
<td>BRAC</td>
<td>Bangladesh Rural Advancement Committee</td>
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<tr>
<td>CDC</td>
<td>U.S. Centers for Disease Control and Prevention</td>
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<tr>
<td>C/DST</td>
<td>Culture and drug susceptibility testing</td>
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<tr>
<td>CPT</td>
<td>Co-trimoxazole preventive therapy</td>
</tr>
<tr>
<td>DOT</td>
<td>Directly observed treatment</td>
</tr>
<tr>
<td>DOTS</td>
<td>The internationally recommended strategy for TB control</td>
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<td>DRS</td>
<td>Drug resistance surveillance or survey</td>
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<tr>
<td>DST</td>
<td>Drug susceptibility testing</td>
</tr>
<tr>
<td>EQA</td>
<td>External quality assurance</td>
</tr>
<tr>
<td>FDC</td>
<td>Fixed-dose combination</td>
</tr>
<tr>
<td>GDF</td>
<td>Global TB Drug Facility</td>
</tr>
<tr>
<td>GFATM</td>
<td>Global Fund to Fight AIDS, Tuberculosis and Malaria</td>
</tr>
<tr>
<td>GLC</td>
<td>Green Light Committee</td>
</tr>
<tr>
<td>HBC</td>
<td>High-burden country of which there are 22 that account for approximately 80% of all new TB cases each year</td>
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<tr>
<td>HCW</td>
<td>Health care worker</td>
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<tr>
<td>HIV</td>
<td>Human immunodeficiency virus</td>
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<td>HRD</td>
<td>Human resource development</td>
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<tr>
<td>HRH</td>
<td>Human resources for Health</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<td>---------</td>
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</tr>
<tr>
<td>IDUs</td>
<td>Injecting Drug Users</td>
</tr>
<tr>
<td>IEC</td>
<td>Information, education, communication</td>
</tr>
<tr>
<td>IMA</td>
<td>Indian Medical Association</td>
</tr>
<tr>
<td>IPT</td>
<td>Isoniazid preventive therapy</td>
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<tr>
<td>ISTC</td>
<td>International Standards for Tuberculosis Care</td>
</tr>
<tr>
<td>KAP</td>
<td>Knowledge, Attitude, Practice</td>
</tr>
<tr>
<td>LQAS</td>
<td>Lot quality assurance scheme</td>
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<tr>
<td>MDGs</td>
<td>Millennium Development Goals</td>
</tr>
<tr>
<td>MDR-TB</td>
<td>Multidrug-resistant tuberculosis (resistance to at least isoniazid and rifampicin)</td>
</tr>
<tr>
<td>NACPs</td>
<td>National AIDS Control Programmes</td>
</tr>
<tr>
<td>NAT</td>
<td>Nucleic acid testing</td>
</tr>
<tr>
<td>NGOs</td>
<td>Nongovernmental organizations</td>
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<tr>
<td>NHSO</td>
<td>National Health Security Office</td>
</tr>
<tr>
<td>NRL</td>
<td>National reference laboratory</td>
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<tr>
<td>NTP</td>
<td>National TB Control Programme</td>
</tr>
<tr>
<td>NTS</td>
<td>National Tuberculosis Strategy</td>
</tr>
<tr>
<td>ODPC</td>
<td>Regional offices of disease prevention and control</td>
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<tr>
<td>OPD</td>
<td>Outpatient department</td>
</tr>
<tr>
<td>OR</td>
<td>Operational Research</td>
</tr>
<tr>
<td>PCMO</td>
<td>Provincial chief medical officer</td>
</tr>
<tr>
<td>PEPFAR</td>
<td>US President’s Emergency Plan for AIDS Relief</td>
</tr>
<tr>
<td>PHC</td>
<td>Primary health care</td>
</tr>
<tr>
<td>PLHA</td>
<td>Person living with HIV/AIDS</td>
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<tr>
<td>PPHO</td>
<td>Provincial public health office</td>
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<tr>
<td>PPM</td>
<td>Public-private, or public-public mix</td>
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</table>
PTC  Provincial TB Coordinator
RIT  Research Institute for Tuberculosis, Japan
RTC  Regional TB Coordinator
SEA  South-East Asia
SNRLs Supra national reference laboratories
SOP  Standard operating procedure
STAG Strategic Technical Advisory Group
TA  Technical assistance
TB  Tuberculosis
TB/HIV Tuberculosis / Human immunodeficiency virus
The Union The International Union Against Tuberculosis and Lung Diseases
TOT Training of trainers
UC  Universal coverage
VCT/C Voluntary Counselling and Testing / Centre
VHV  Village health volunteers
WHA  World Health Assembly
WHO  World Health Organization
XDR-TB Extensively drug-resistant tuberculosis
1. Introduction

The South-East Asia Region of WHO continues to bear one third of the global burden of tuberculosis. Since the introduction of the DOTS strategy in 1993, the Region has significantly expanded the availability of DOTS services. The case detection rate and treatment success rates have both shown steady progress compared to the targets set by the World Health Assembly (WHA) in 2000. Following the launch of the Stop TB strategy in 2006, regional and national plans have been prepared. These plans include the additional interventions under the new strategy including the management of drug resistant tuberculosis and intensifying TB/HIV collaborative activities.

The annual meeting of the national tuberculosis programme managers of the Region, technical and in-country partners and WHO focal points provides an opportunity to share and learn from each others’ successes and failures. The meeting was held at Dhaka, Bangladesh between 3 and 6 December 2007 and was attended by participants from each of the Member countries, WHO/HQ, Regional and country office focal points and members from technical and research institutes, WHO Collaborating centres in the Region and nongovernmental agencies such as Bangladesh Rural Advancement Committee (BRAC) and the Damien Foundation.

2. Inaugural session

The meeting was opened by H.E. Major-General (Retd) Dr ASM Matiur Rahman, Health Adviser, Govt. of Bangladesh, who stressed the importance of sharing experiences not only of success stories but also failures so that countries can learn from each other. He underlined the importance of preventing the emergence of drug resistant TB by adhering to DOTS. The need for newer diagnostics, especially for smear-negative and extrapulmonary tuberculosis, was equally important, he said.

The message from Dr Samlee Plianbangchang, Regional Director, was read out by the acting WHO Representative, Bangladesh. In his message, the Regional Director said that though a small but perceptible impact of control measures was being seen on the burden of tuberculosis in the Region, emerging evidence of increase in the TB incidence in areas with
high HIV prevalence and of drug resistant TB, posed an increasing demand on the national programmes to manage these issues. He drew attention of Member countries in the Region that a resolution supporting the full implementation of the new Stop TB Strategy had been passed at the recently held meeting of the Regional Committee for the WHO South-East Asia Region. He stressed the need to ensure continued commitment to work hard to show that investments in TB control in the Region bring maximum benefit to those who deserve them most, the most vulnerable and least informed people. The need to build the capacity of primary health care systems to effectively deliver TB control services is to be considered a priority. He urged the participants to use the opportunity to exchange their experiences and decide on bold and conclusive measures to intensify TB control efforts and make wise use of the unprecedented global funding opportunities so as to achieve the TB targets set under the Millennium Development Goals.

The main objectives of the meeting were:

1. To review the achievements, and constraints for TB control in Member countries in the Region.
2. Prioritize activities and plan interventions to intensify implementation of the Stop TB strategy at regional and country levels in country-specific contexts.
3. Recommend ways to ensure and sustain necessary technical and financial resources required for implementation of planned activities.

Dr PR Narayanan, Chair of the South-East Asia Technical Working Group on TB was nominated as the Chair for the meeting. Dr Mohamed Abdul Miah, National Programme Manager, Bangladesh, and Dr Pandup Tshering, National TB Programme Manager, Bhutan as the rapporteur, as the co-chair, respectively.

3. **Tuberculosis control in the SEA Region**

The situation and progress in TB control in countries of the SEA Region and an update on the follow-up recommendations of the Meeting of Partners held in Jakarta in 2006, and other regional meetings and workshops held
during the year, were presented. Based on the reports submitted by the Member countries, the Region as a whole, has achieved a case detection rate of 68% for the year 2006 and a treatment success rate of 87%.

**Figure 1: Progress in DOTS implementation in the South-East Asia Region**

Preparedness and progress in implementing the new Stop TB strategy as reported by countries, was also discussed. The rapidly expanding HIV epidemic in the Region is a growing concern. More than four million people are estimated to be affected in the South-East Asia Region. India alone is estimated to have more than 2.5 million people living with HIV. In the Region, India, Myanmar, Nepal and Thailand have the highest rates of TB/HIV co-infection. The prevalence rate of TB among people living with HIV has been estimated at 3.1% in Nepal, 5.2% in India, 7.1% in Myanmar, and 7.6% in Thailand. The HIV epidemic has reached a generalized stage in Thailand, Myanmar and in six states in India. Concentrated HIV epidemics are being reported from Bangladesh (among IDUs), in some states in India, Indonesia and Nepal. TB is the single most life-threatening infection and the leading cause of mortality among people living with HIV infection in the Region. The course of the TB/HIV epidemic in South-East Asia will depend heavily on efforts to prevent and control both TB and HIV, and decisive steps must be taken now to combat the dual epidemics. The vast majority of TB cases, however, still occur among HIV un-infected people because the overlap between the two epidemics is still limited.
Steady progress is being made in initiating plans for MDR-TB treatment. Bangladesh, India, Myanmar and Nepal have established MDR-TB treatment sites. Nepal has recently expanded coverage to all five regions in the country. Indonesia and Timor-Leste have completed all preparations and patient enrolment will begin in mid-2008. Two countries, Bhutan and Sri Lanka plan to commence MDR-TB treatment in 2008. With the exception of Thailand, all countries have identified laboratory capacity as the major constraint to scaling up MDR-TB diagnosis and treatment. Expanding laboratory capacity for quality assured culture drug susceptibility testing for both first and second-line drugs in the countries of the Region for better surveillance and to diagnose and treat these cases is an urgent priority.

The other concern is that unless management of MDR-TB develops rapidly in the public sector an increasing number of MDR-TB cases will be managed by the unregulated private sector, leading to an increase in drug resistance.

The other issue brought up was the need to involve all health care providers in TB control activities. Efforts to scale-up private-public partnerships are continuing in eight of the 11 countries in the Region. The International Standards of TB Care are being widely disseminated through professional bodies and medical schools in many countries. The main challenges brought out were difficulties in monitoring activities in the private sector to ensure quality, while, at the same time, expanding these services. With regard to advocacy, communication and social mobilization, several initiatives are being taken by the Member countries.

During the discussion that followed, Member countries described additional actions being taken to implement the new Stop TB strategy. The need to undertake population-based surveys to develop more accurate denominators for TB case detection was highlighted by DPR Korea and Myanmar. Laboratory strengthening for culture and drug susceptibility testing was brought up as an essential component for implementing the management of drug resistant tuberculosis by all countries. A point to be considered is whether the National reference laboratory (NRL) and Supranational reference laboratories (SNRLs) in the Region are sufficient by capacitated to provide the required support. It was felt that the laboratories needed to be further strengthened to extend quality control mechanisms.
4. Overview on global tuberculosis control

A presentation on the global updates on TB control and the key issues deliberated by Global TB Strategic Technical Advisory Group (STAG), and meetings of MDR-TB and TB-HIV working groups followed. Available data suggest a decrease in the prevalence and mortality, but there is a need to accelerate the rate of this decline in order to achieve the TB targets under the Millennium Development Goals. Although the case detection rate is improving (62% for 2006), the increase has been slower compared to 2002-2006. The global target for treatment success has almost been achieved with four of the 22 high burden countries achieving the global target for both case detection and treatment success. The provision of HIV testing for TB patients is increasing, but is still below that envisaged in the Global Plan for TB control 2006-2015. There is a need for scaling up HIV testing and access to CPT and ART for TB-HIV patients. Though progress has been made in the context of extending services for MDR-TB, these are far short of the global plan.

5. Update on STAG recommendations

The final STAG recommendations for case finding, new case definitions and the use of liquid culture were presented.

Case finding: The number of specimens to be examined for screening of TB cases can be reduced from three to two, in places where a well-functioning external quality assurance (EQA) system exists, where the workload is very high and human resources are limited. The revised definition of a new sputum smear positive pulmonary TB case is based on the presence of at least one acid-fast bacillus (AFB) in at least one sputum sample in countries with a well functioning EQA system. With regard to liquid culture, STAG has recommended the use of liquid cultures and rapid species identification to address the needs for culture and drug susceptibility testing (DST), integrated within a country-specific comprehensive plans for laboratory capacity strengthening. The specific recommendations are that liquid culture and DST should be implemented in National Reference Laboratories as first priority and phased decentralization of this be done according to country needs and capacity. The recommendations for biosafety should also be reflected in country plans for liquid culture implementation.
These recommendations have been endorsed by STAG in June 2007 and supported by key technical agencies.

In the discussion that followed, it was felt that use of liquid culture should be implemented as an adequately budgeted "package" addressing safety; maintenance of infrastructure and equipment in laboratories, training of staff, transportation logistics; and rapid communication of results. Detailed customer plans describing guarantees and commitments of the manufacturer are also essential.

The availability of laboratory technologists was another issue that was highlighted.

6. MDR TB

Scaling-up the capacity for treatment of MDR TB

Background

The status of DOTS-Plus implementation in the Region and the challenges for further scaling-up were presented. Although drug-resistant TB has been around for as long as the drugs themselves, most countries are not in a position to begin to treat large numbers of patients with MDR-TB. The gap between global targets and country plans is self-evident (Table 1), but plans to address this gap have not been made.

Table 1: 2008 Targets for MDR-TB patients initiated on treatment
(from Global MDR-TB and XDR-TB response plan)

<table>
<thead>
<tr>
<th>Country</th>
<th>Stop TB target</th>
<th>Country plan* (%)</th>
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<tbody>
<tr>
<td>Bangladesh</td>
<td>3,375</td>
<td>150 (4.4%)</td>
</tr>
<tr>
<td>India</td>
<td>29,442</td>
<td>500 (1.7%)</td>
</tr>
<tr>
<td>Indonesia</td>
<td>8,758</td>
<td>100 (1.1%)</td>
</tr>
<tr>
<td>Myanmar</td>
<td>1,375</td>
<td>100 (7.2%)</td>
</tr>
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*As reported by country participants at the WHO-SEARO Workshop on Programme Management of Drug Resistant TB, Faridabad, India, August 2007.
The key issue brought out in the presentation was the need to provide universal access for treatment of MDR TB. Participants questioned the appropriateness of scaling-up treatment for MDR-TB where defaults from Category II regimens were high (up to 14% in some settings). Programme managers also felt that the pace of expansion hugely depended on the country capacity, particularly of laboratories. The gap between Stop TB Global Response Plan to MDR- and XDR-TB and country plans for treatment of MDR-TB was highlighted.

Even if the diagnostic bottleneck for MDR-TB could be resolved through nucleic acid amplification directly performed on sputum specimens, the capacity to diagnose is incomplete without the capacity to treat. The bottlenecks to ensuring universal access to treatment of MDR-TB are treatment capacity, the political will to promote universal access to treatment of MDR-TB and difficulties in following-up treatment for the entire duration of anti-TB treatment for MDR-TB cases. Participants also debated the conditions under which alternative modes of treatment support and supervision could be considered, and what these alternatives for patient support and supervision could be to reduce the impact on patients and programmes. The need for improving capacity for surgical management of MDR/XDR TB in the Region was also raised, as were issues relating to the need to establish infection control measures in health facilities managing MDR-TB cases.

7. Scaling-up the capacity for diagnosis of MDR TB

In a presentation by the Tuberculosis Research Centre, Chennai, India, the need for strengthening laboratory services for diagnosis of drug resistant tuberculosis in the Region was highlighted. Maintaining a quality-assured smear microscopy service is a key priority of the NTP. Culture has two purposes; (i) obtaining an isolate for DST, and (ii) laboratory diagnosis of TB. Providing guidance on establishing a national policy for C/DST must consider the present and future needs. Priorities will change over time related to capacity increases and the introduction of new technologies. At present, C/DST are mainly used for Drug-resistance surveys (DRS) and to identify drug-resistance among Category-II treatment failures. The use of culture as a diagnostic tool needs to be expanded to other categories of patients such as smear-negative, HIV-seropositive patients, symptomatic contacts of known
MDR/XDR TB patients, paediatric cases, and extra-pulmonary cases. Each country should determine the speed at which culture facilities are expanded for the diagnosis of these categories of patients. More sensitive methods will also need to be explored.

Laboratory capacity to diagnose MDR-TB has long been widely identified as a key bottleneck to meeting the challenge of drug-resistant TB. Despite this recognition, the development of mycobacterial culture and drug-susceptibility testing laboratory capacity in public sector health services has been exceptionally slow in all countries of the SEA Region, with the notable exception of Thailand. The key issues debated related to how to ensure quality assurance for the diagnosis of drug-resistant tuberculosis, scale-up capacity for culture and DST, prepare laboratories for the use of liquid culture and rapid diagnostics, and the potential and immediate preparatory steps for use of nucleic acid testing (NAT) for rapid MDR-TB diagnosis in selected settings. The role of the private laboratories in meeting capacity needs for MDR-TB diagnosis was also discussed.

It was pointed out that the WHO SNRL network had been established primarily to provide quality assurance for the WHO/IUATLD Global Project on Anti-TB Drug Resistance Surveillance and not to support capacity building of national laboratory networks. SNRLs themselves therefore need to be supported to take on additional functions.

Determining the workload will assist in helping define the needs for a comprehensive C/DST network. The number of C/DST facilities could be fewer than those for culture alone. Once the full laboratory workload is estimated, the infrastructure and equipment requirements, staffing, training, consumables, and required budgets can be determined.

The following provide rough guidance in this regard:

- Culture: one culture laboratory per 5 million population
- DST: one laboratory per 25 million population
- Minimum workload to maintain competency of 200 cultures/year
- Equipment lists for culture and culture, drug susceptibility testing (C/DST) laboratories and to determine consumables inventory/budget for laboratories performing testing should be developed.
Laboratories performing C/DST are undergoing a form of accreditation. However, the process is not uniform across the Region. Most countries have no regulatory mechanism in place for accrediting laboratories and have no established central authority to ensure compliance with standards. National and international professional laboratory organizations need to work with ministries of health and NTPs to establish successful accreditation programmes.

Technical Assistance (TA) from a Supranational Reference Laboratory is a key part of developing quality assured C/DST. In the early stages, intensive TA support is required. Fly-in/fly-out approaches are suboptimal and fulltime, in-country expert(s) are essential. A major problem is the availability of such experts to work in countries for extended periods of time. Another option may be to have at least one laboratory resource person placed at the Regional Office with the remit to support countries. The placement of full-time, in-country laboratory experts during the early development of the C/DST network was also felt to be critical to scaling-up laboratory capacity.

Providing international standard training to laboratory personnel was considered important. Laboratory management courses are at the regional level but the need far exceeds the current capacity for training. No international training manual/modules are available although they are being developed. There is therefore a need for developing an international standard training package on culture and for DST and also to conduct more laboratory management courses.

Laboratory equipment with demonstrated reliability in country situations is required. There is also a need to ensure that these are maintained and serviced regularly. There is great variation in the quality of laboratory reagents and consumables available in the market. NTP's therefore need advice on the specifications for these reagents. The programme managers requested that standardized specifications for equipment and materials be provided to them.

This was followed by presentations from Bangladesh, India and Nepal on their experiences in implementing the DOTS-Plus strategy.
In Bangladesh, MDR-TB is currently being managed by the Damien foundation in their area of work and the National Institute for Disease of Chest and Hospital. The country has secured funds to manage 700 patients in four years under Round 5 Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) grant and obtained approval from Green Light Committee (GLC). A DOTS-Plus coordination committee has been established and a clinical management and social support committee set up. The main challenges are getting the National TB Reference Laboratory (NTRL) accredited with culture and DST facilities, procurement of second-line drugs and human resource development.

India has established a DOTS-Plus committee, finalized the guidelines for management of MDR-TB, established intermediate reference laboratories in two states and plans to establish a network of 24 such reference laboratories. MDR-TB treatment has been initiated for 50 patients so far. The main challenges are delays in establishing a network of quality assured laboratory services for culture and DST, identifying providers who are qualified to administer injections, infrastructure development, building human resources and establishing logistics for drugs.

Nepal has been implementing ambulatory management since 2005. The country has introduced patient-wise boxes to facilitate and simplify drug supply management of MDR-TB cases. Decentralization of services for management of MDR-TB cases is the main challenge faced by the country. The laboratory at the National TB Centre is currently undertaking accreditation.

8. **TB/HIV – Strategies and plans for wider implementation**

Recent policy developments in TB/HIV, outlining the 12-point policy package of the "WHO interim policy on TB/HIV collaborative activities", and introducing the main concepts of the policy document "Improving the diagnosis and treatment of smear-negative pulmonary and extrapulmonary TB among adults and adolescents: Recommendations for HIV prevalent and resource constrained settings", were summarized. Conditions conducive to the successful implementation of TB/HIV collaborative activities were presented, namely, setting of TB/HIV targets, development of national
TB/HIV policy and technical guidelines, increased access to HIV testing, particularly provider-initiated testing and counselling, and use of rapid tests with test results being provided at the point of consultation. It was highlighted that none of these activities will be captured by monitoring systems unless TB data are incorporated into HIV registers, and HIV data are incorporated into the TB registers.

India has reported a six-fold increase between 2004 and 2006, in referrals from VCT sites in the pilot states (where HIV prevalence is highest) for TB screening which has resulted in an additional 14,000 TB cases diagnosed during the most recent six-month period. More than two thirds of these cases were HIV negative. Over the same period there was a three fold increase in HIV testing of TB patients, with over 50,000 TB patients being consulted and tested for HIV. This has in fact preceded the introduction of a policy, in the high-HIV-prevalence states, of offering HIV testing to all TB patients. Isoniazid preventive therapy remains a topic of debate.

Dr Sriprapa Nateniym reported that 14% -17% of TB patients in Thailand are estimated to be HIV infected, and TB is the most common reported opportunistic infection among AIDS patients. Collaborative TB/HIV activities are being implemented at national level, but performance in the field depends on good relationships between those responsible for delivery of TB and HIV services at the local level. In 2006, 50% of TB patients were tested for HIV, while 80% of patients with HIV were screened for TB, and 8% were found to need anti-TB treatment. Of the 14% of TB patients found to be HIV infected, 65% received co-trimoxazole preventive therapy (CPT) and 32% anti-retroviral treatment (ART), but mortality remains high among those with HIV infection at 22% compared to 7% among the HIV uninfected.

In Myanmar, by end-2007, 2.4 million of the country’s population were covered by TB/HIV pilot projects. HIV infection rates in TB patients detected accounted for 19% – 33% of the total number of TB patients diagnosed at the pilot sites. Case fatality rates are consistently higher in HIV-positive patients compared to those without HIV infection, in part, because most patients are not yet receiving ART. Of all patients with HIV-associated TB, 61% have smear-negative pulmonary TB. It is in this group that the mortality is especially high. HIV testing is only done in approximately 60% of patients, using the VCT approach. Significant shortcomings were in the
area of planning, supervision, monitoring and in the provision of ART. A major training effort is underway with a view to introducing TB/HIV activities in additional areas in the country.

With the exception of IPT all three countries have made good progress in implementing all the 12 points of the internationally recommended policy package. It was not clear if other countries were making similar progress. It was uniformly agreed that TB/HIV coordination needs improving, especially in the area of surveillance.

Countries with generalized and concentrated HIV epidemics in the Region have implemented TB/HIV collaborative activities. Ensuring logistics for diagnostics and drugs for the detection and management of TB-HIV remain challenges for the expansion of TB-HIV interventions. The varying epidemiology of HIV between countries and within countries, especially in larger countries, is an added challenge to developing a uniform national policy. The recording and reporting system established by TB control programmes could serve as a basis for capturing information on the outcomes from TB/HIV activities implemented in countries.

The main point raised during the discussion was the difficulty in working at country level with the NACP counterparts, and the reluctance to be held accountable for TB/HIV activities, such as anti-retroviral treatment for TB patients, while this was felt to be outside of the mandate of the NTPs. In some countries eligibility criteria for ART do not include TB patients. The only solution to this is better communication and collaboration between the NTP and NACP in each country. Furthermore, few NACP managers see TB as a priority, but only as “another opportunistic infection”, while NTP managers appear reluctant to persuade them, recognizing that the NACPs are generally much larger with significantly bigger budgets. One NTP manager (Nepal) made a strong plea for a resolution on the integration of TB and HIV services to be addressed at the World Health Assembly.

It was pointed out that TB/HIV, or HIV/TB, is recognized more at the global level with increasing funds available, especially from PEPFAR and the World Bank, as well as the Global Fund. UNAIDS is also addressing HIV/TB as the major technical theme at its next Programme Coordinating Board.
Questions were asked about the justification for TB/HIV activities in low-prevalence countries, which depend essentially on human rights arguments for obtaining the best possible care for each patient. Knowing the HIV status of any TB patient is merely good clinical care. Clearly, resources may dictate that priority be given to where HIV is highest. Concerns were raised about the stigma associated with sending TB patients to VCT. It was pointed out that referring infectious TB patients to rooms full of HIV-infected susceptible people could result in an unintended increase in TB transmission and active disease among these groups of people, and that with rapid HIV testing available everywhere, there was no real need to send patients to VCT. With respect to HIV surveillance among TB patients, while the recommendations for routine HIV testing of all TB patients in high HIV prevalence settings was appropriate, periodic or sentinel surveys should continue in low HIV prevalence areas or countries.

Given that HIV testing is the gateway to most HIV services, there is a clear need for provider-initiated testing and counselling in the Region.

Participants also proposed that future meetings or workshops should include representatives from HIV programmes and possibly also community activists and representatives from professional associations and the private sector.

The need for representation from the Region on the TB/HIV Core Working Group, given the proportion of the global burden of TB borne by the Region was also raised.

The Region should address the need for better documentation of the improper use of second-line drugs as a cause of the MDR-TB seen in the Region.

9. Advocacy, communication and social mobilization: Evidence and case studies

The advocacy, communication and social mobilization (ACSM) session consisted of three presentations. The Stop TB Partnership provided an overview that defined the concept of an ACSM strategy supporting NTP objectives and not as stand-alone activities. Included in the presentation
was information about the five key planning steps for ACSM implementation which were: to create a national partnership/ task force; conduct an ACSM needs assessment; develop a workplan and budget; implement activities; and monitor and evaluate results. Technical resources are available for countries to develop their national ASCM strategies and activities such as ACSM planning workshops, technical assistance missions and new tools like the ACSM Handbook and KAP Guidelines. In 2007, the Stop TB Partnership funded ACSM experts to join country missions to Bangladesh, Indonesia, Nepal and Thailand. This was in addition to an exchange of reports between Nepal and Indonesia, and a regional planning workshop for ACSM that involved four SEAR Member countries.

Best practice examples from Bangladesh and Indonesia followed. The presentation from Bangladesh covered advances in ACSM activities made under Global Fund Round 5. In the context of activities at central, district and community levels, the NTP has undertaken a successful mass media campaign with a national celebrity. This is in addition to disseminating educational messages through print, radio and television broadcasts.

In Indonesia, the ACSM framework aims to achieve high political commitment through advocacy and strengthening of the “Gerdunas” partnership. The activities also seek to create a demand through improved patient-education and community participation. The presentation included a summary of a government-financed TB study that indicated commitment at national level/ NTP and broad-based donor funding, but low government investment in health (1.2% GDP) and unsustainable donors.

**Conclusion**

The discussion that followed the presentations focused mainly on two areas: building an evidence base for ACSM and engaging the private sector. Many countries highlighted the benefits of ACSM in building strong public sector support.

Opportunities for increased funding for ACSM activities and technical assistance exist to make sure that ACSM can be used to support the scale up of the different priority areas of the NTPs (e.g. MDR-TB, TB-HIV, PPM, etc). Countries recognize the need to monitor and evaluate ACSM activities;
however, they need guidance, for example in selecting meaningful indicators and methods to measure the effectiveness of specific ACSM activities.

It was felt that countries should continue implementing targeted ACSM activities that support NTP priorities stated in their five-year national TB control plans, assess technical assistance needs and make use of available mechanisms to meet those needs (TBTEAM, Stop TB Partnership), and build capacity for ACSM by involving local partners and NTP staff with technical assistance missions conducted by external consultants.

The Stop TB Partnership would support countries through continued technical assistance missions and regional planning workshops, developing an M&E guide to assist with the development of ACSM indicators, supporting the collection and dissemination of best practices to build an evidence base for ACSM and developing an advocacy document that would complement the International Standards for Tuberculosis Care (ISTC) and be used to engage the private sector.

10. Operational research: Setting priorities and commissioning research

An overview on “Operational Research: Setting priorities and commissioning research” was presented. It was highlighted that the DOTS strategy itself was put together by using the results of decades of varying sets of research and that this has continued to evolve as the strategy was adapted to local situations and needs, the ever-emerging scientific data. Component 6 of the 2006 WHO Stop TB strategy is to “Enable and promote research – i) programme based operational research (OR); and ii) research into new diagnostics, drugs, and vaccines”. This recognizes the need for a continuum of research, ranging from basic research for discovery, development of new tools (diagnostic tests, drugs, vaccines), implementation research (health policy, systems and service delivery), social science and behavioural research, monitoring and evaluation of impact, and epidemiology and modelling.

An eight-point roadmap was presented for the guidance of NTP Managers in relation to the OR process: (1) identify priority areas for OR; (2) establish process for implementation of OR; (3) identify funds for OR;
(4) identify agency/institution to conduct the OR; (5) proposal development and finalization; (6) implement and monitor OR activity; (7) disseminate the findings of OR activity; and (8) Discussion (and adoption) of OR findings by NTP. A number of challenges in conducting OR were raised. These included the linking of NTPs and researchers, the limited interest of researchers to undertake NTP-relevant OR, the limited capacity for developing protocols and undertaking OR, and the availability, or lack of, funding for OR.

India and Indonesia, then presented respective country experiences. A wide range of OR studies that had been carried out in the two countries were covered. Both highlighted the need for the NTP to have clearly identified priority areas for OR and a mechanism to implement, monitor and disseminate the OR findings. The challenge faced by of the lack of capacity to undertake NTP-relevant OR studies was also raised by both countries.

It was felt that the focus of OR should increasingly be on topics around implementation, in order to improve the services provided by NTPs. A crucial first step is for each NTP to identify priority areas for OR “and that research for research sake should be discouraged”.

It is necessary to build capacity to implement and monitor programmatic research through training, designating and recruiting staff to work on research within the programme, as well as through increasing collaboration with in-country research teaching facilities.

Methods for dissemination of OR findings for both advocacy and resource mobilization, and to inform and guide formulation of policy, strategies and interventions should also be strengthened.

Health systems strengthening and TB control – Conclusions and recommendations

Health Systems Strengthening was a key agenda item at the 12th meeting of the National TB Programme Managers in the South-East Asia Region. The draft document “Contributing to Health Systems Strengthening/guiding principles for national TB programmes and partners” was presented and discussed. The presentation looked at the importance of Health Systems
Strengthening for national TB programmes and the role National TB programmes can play in strengthening health systems. The roles identified, described and discussed were: analysing health systems barriers, identifying opportunities and threats of ongoing/planned health sector development processes and, finally, addressing barriers, threats and opportunities.

Following this presentation, Thailand and Timor-Leste presented the health systems strengthening activities undertaken by their respective TB programmes. India, Nepal and Thailand briefly described their contributions to health systems strengthening which was followed by group discussions. It was felt that TB programmes are already contributing to health systems strengthening through their activities. Programmes needed to analyse and document how their activities were contributing to health systems strengthening in order to highlight their role in health systems strengthening to governments and other stakeholders. National TB programme managers were asked to review the draft document presented and provide their inputs and feedback to WHO/HQ.

11. Human resource development

The purpose of the presentation was to review the rationale for strategic and annual HRD plans and outline the components of a strategic HRD plan for comprehensive TB control.

Health workforce development or human resource development (HRD) is concerned with the different functions involved in planning, managing, and supporting the professional development of the health workforce within the health system. HRD aims at getting "the right people, with the right skills and motivation, in the right place, at the right time" HRD is the process of planning, managing, and supporting the health workforce for comprehensive TB control within overall health workforce development. The overall priority health workforce problems are related to: inequitable distribution – misdistribution – ; Shortages – in particular in rural areas; Provider-patient relationships – lack of faith, and inadequate morale and productivity – low salaries, low motivation and low support.

WHO has defined a threshold in workforce density below which high coverage of essential interventions, including those necessary to meet the
health-related MDGs, is very unlikely. This threshold has been estimated at 2.28 health care professionals (counting only doctors, nurses and midwives) per 1000 population, ranging from 2.02 to 2.54 (allowing for uncertainty). Based on these estimates there are currently 57 countries with critical shortages of which six are in the SEA Region. Challenges in reaching the goal for HRD for comprehensive TB control includes ensuring that existing staff in the health system, managerial and clinical, are competent to implement the Stop TB Strategy and ensuring there are enough staff available.

The goal for HRD for comprehensive TB control was presented to be: to reach and sustain a situation where (i) Health workers at different levels of the health system have the skills, knowledge, and attitudes (professional competence) necessary to successfully implement and sustain comprehensive TB control services based on the Stop TB Strategy, and (ii) A sufficient number of health workers of all categories involved in comprehensive TB control is available at all levels of the health system with the needed support systems to motivate staff to use their competencies to provide quality preventive and curative TB services for the entire population according to their needs. The following strategies to reach this goal were presented:

(1) Contribute to overall workforce planning and policy development and planning to strengthen the workforce.

(2) Organize on-going in-service training (clinical, laboratory and managerial) for all health workers involved in the implementation of the Stop TB Strategy i.e., promote and sustain lifelong learning.

(3) Strengthen pre-service training (basic training) for physicians, nurses, and other health workers involved in the implementation of the Stop TB Strategy.

(4) Engage in strategic partnerships for health workforce development for comprehensive TB control with training divisions/institutions, other in-service training programmes, e.g., HIV/AIDS, ministry of education and other relevant ministries, professional associations, the private sector including NGOs and bilateral and international organizations.

(5) Contribute to integrated personnel management system to foster adequate workforce planning, recruitment, hiring, deployment and retention.
(6) Monitor and supervise health worker performance to detect performance deficiencies, identify new staff in need of training, and identify additional staff needs for current interventions and for new interventions/strategies.

Planning HRD for the implementation of the Stop TB Strategy involves the preparation of a strategic plan (overall guidance to NTP in planning and implementing strategies to ensure achieving the goal of an adequate, competent and motivated workforce for comprehensive TB control) as well as an annual implementation plan (short-term objectives and activities to ensure progress towards the goal). The outline of a national strategic plan was detailed.

It was pointed out that the annual plan should include background on the TB situation in the country, a situational analysis on the human resources in place, annual objectives, major activities, a budget, monitoring indicators and a plan for evaluation.

In conclusion, the health workforce is the catalytic lever for driving performance of health systems and priority disease control programmes. A motivated, available and skilled workforce is critical to manage TB, HIV-AIDS, MDR/XDR TB and malaria. Strategic HRD planning by NTPs in close cooperation and coordination with national overall management of HRH is essential to the creation of sustainable TB control services. It is now well established that there are no shortcuts around HRH for achieving the health MDGs and that much more attention needs to be given to all aspects of HRD.

**An approach to comprehensive coordinated technical assistance**

The TBTEAM mechanism and tools were presented. The rationale for TBTEAM was discussed and it was highlighted that this was not a completely new mechanism but a more systematic approach to technical assistance coordination by all technical agencies around the world that provide technical assistance to national TB control programmes. The new terms of reference for the proposed national TBTEAM focal points were also presented.
The main action points identified were:

(1) To identify and appoint national TBTEAM focal points in addition to the National TB programme managers (2) analyse human resource and financial gaps in national plans (3) identify needs for technical assistance and prepare a parallel technical assistance plan in line with the national plan and (4) inform regional TBTEAM focal points about the needs for Global Fund Round 8 grant preparation assistance.

**Workshop on operational research**

A workshop on operational research was organized by BRAC on the fifth evening. Key research topics were discussed and the participants worked in groups to identify priority areas for research in the following topics: case finding; laboratory diagnosis; clinical management; treatment and treatment adherence; socioeconomic and behavioural research; epidemiology; health systems and TB control, and basic research. The areas identified for OR are as given in the Annex.

**Sharing of country experiences**

Each of the Member countries made a poster presentation on their plans and achievements. Members viewed the posters put up by countries. This was followed by group work where the participants worked in country groups to review the national multi-year plans in the light of the discussions and will result to fully and effectively implementing the new Stop TB strategy and make amendments, if necessary. Countries were also asked to prepare the details of their plans, technical assistance and monitoring missions for 2008, and to identify funding gaps, if any.

**12. Country presentations on updating the national plans**

**Bhutan**

An update on the TB control measures in the country was presented. It was observed that the number of extra-pulmonary cases registered for treatment
in is almost equal to the number of new smear-positive cases. The main factors contributing to the success of the programme were commitment at all levels, free health care, dedicated health workers and advocacy and awareness on TB. TB/HIV and MDR-TB activities are in progress, but need much more attention. Currently all TB patients are screened for HIV during rounds of sentinel surveillance. TB patients with clinical features suggestive of HIV and HIV patients with clinical features suggestive of TB are screened for HIV and TB respectively. There are plans to collect baseline data on the prevalence of HIV among TB patients, promote acceptability of HIV testing by TB patients and to establish TB/HIV collaborative activities. The need to strengthen human resources, the health management information system, develop policy guidelines for MDR-TB management including refurbishing of MDR-TB wards and training of staff and to apply to the Green Light Committee (GLC) was highlighted. Other activities planned include improving diagnostic services, cross-border activities, improving monitoring and supervision and undertaking community-based surveys.

**Bangladesh**

On the basis of the Stop TB Strategy to reach the related MDG by 2015, NTP Bangladesh has a Strategic Plan (2006-2010) that covers three broad objectives with eight service delivery areas. The main objectives of the strategic plan are 1) to increase the case-detection and maintain high cure rates, 2) To strengthen major critical components of the services, and 3) to address the issue of drug resistance. These are to be achieved by strengthening current DOTS activities, involving all health care providers in delivering TB/DOTS services, developing joint TB/HIV collaborative activities, creating demand for services by introducing comprehensive advocacy, communication and social mobilization activities, strengthening procurement and supply systems, strengthening supervision, monitoring and evaluation, establishing culture and drug-sensitivity testing capacity and undertaking drug resistance surveys and implementing DOTS-plus projects for the management of MDR-TB.

**DPR Korea**

The main constraints faced by DPR Korea were related to identifying and maintaining funding to sustain and improve the quality of DOTS
implementation, improving laboratory services for quality assurance, culture and DST, ensuring uninterrupted supplies of high quality anti-TB drugs, strengthening surveillance monitoring and evaluation systems to more accurately determine trends in the TB epidemic in the country, encouraging community-based TB care through decentralizing provision of treatment and care through the ‘dong’ and ‘ri’ clinics, scaling-up collaboration with other sectors such as the military, police and railways to detect and treat TB cases in these sectors under DOTS instead of through older, conventional therapy for TB control. The major concern for the programme is to avoid the mishap of going back to conventional therapy as was being provided previously with much lower cure rates and higher risk of developing MDR-TB due to unfulfilled resources.

The country is proposing to have a partners’ review of the TB control programme to make a firm case for funding for TB control, submit a proposal during Global Fund Round 8 and call for applications, to request the Global TB Drug Facility (GDF) to extend its grant mechanism beyond 2008, or at least until funding for drugs are identified from other sources. The presentation was concluded with the following remarks — Assistance in adversity is real assistance from the donors’ perspective and effective use of the help is the best, sincere and grateful attitude to the donor from our perspective.

**India**

The country will prioritize activities and plan interventions to intensify implementation of the new Stop TB Strategy in a country-specific context. The rapidly growing private sector, increasing urbanization and the wide availability of first- and second-line drugs in the open market were identified as the main challenges including involving all health care providers effectively. The proposed action for 2008-09 includes revision of guidelines for NGO/private sector involvement, including culture/DST laboratories in medical colleges and health institutions, and scaling-up of the involvement of private practitioners through the IMA project (Global Fund Round 6). Though there is limited experience within the TB control programme in this area, it is proposed to enhance community involvement through community meetings, involving organized groups (self-help groups, youth organizations, Panchyathi Raj etc.) The diverse HIV epidemiology
across the country, the maturing HIV epidemic, centralized provision of ART and multiple guidelines and training materials are the main constraints for addressing TB/HIV collaborative activities. The proposed plans include scaling-up collaborative activities covering the whole country, implementing routine referral of TB patients in nine states with high HIV prevalence, integration of HIV data into TB registers to facilitate routine reporting and introduce intensified case finding for TB at ART centres. The main constraints faced in addressing MDR-TB are difficulties in establishing quality assured culture and DST laboratories, establishing logistics over long distances and provision of ambulatory DOT and the widespread availability of second-line drugs in the open market. The actions proposed include establishment of accredited culture/DST laboratories in 22 states and introducing management of MDR TB cases in these states. Technical assistance will be required from WHO to assist in establishing these laboratories and to prepare infection control guidelines. Nonavailability of technical manpower and rapid turnover of trained staff are the major challenges in health system strengthening.

**Maldives**

The proposed activities for Maldives are to pursue high quality DOTS through ensuring intensified case finding with emphasis on early detection and access to quality microscopy services and empowering the community through increased awareness. In addition, training of laboratory technicians for Regional and atoll hospitals on case finding and quality assurance, training workshops on TB case management and international training for culture and DST for central level staff are being planned. Collaboration across public health programmes by promoting joint planning, policy and strategy is seen to be critical. This would help strengthen collaboration among TB/HIV activities. For advocacy and social mobilization, Radio spots would be produced and a countrywide advocacy and mass media campaign is being planned.

**Myanmar**

Myanmar proposes to improve and sustain high quality DOTS by enhancing training and supervision, and ensuring supplies of quality laboratory equipment, consumables and first-line drugs. The country is planning to
enhance TB/HIV activities by conducting HIV surveillance among TB patients, having a joint supervision and monitoring system and scaling-up VCCT and preventive measures. For MDR-TB, the plans are to increase the diagnostic facilities, training on management, infection control and making the second-line drugs available. A nation-wide KAP survey is proposed to be undertaken to develop key messages and targeted materials for community-based IEC activities.

Nepal

The major challenges identified for the NTP in Nepal were: 1) Programme sustainability: High dependence on external funding 2) Insufficient human resource capacity at central level to carry out management responsibilities, 3) Limited drug storage facilities at central level 4) Limited procurement capacity (currently WHO procures TB drugs) 5) No Regional Quality Control Assessor positions. Currently, QC run by partners in 3/5 Regions and 6) NRL yet to be established (expected by mid-2008). Nepal has already introduced MDR-TB management into their DOTS programme since 2005 with GLC approval. There is a need to address the issue of socio-economic support for patients, further decentralization of treatment facilities and introduce infection control measures. A national task force has been appointed and an official strategy for the collaborative activities needs to be established. A DOTS committee has been established at health centre level for involving the community. Medical colleges, partly the private sector, prisons and some factories are involved in TB control activities, but this needs to be scaled up. It is proposed to have the ISTC approved by professional societies. Lack of human resources for implementing the various components of the new Stop TB Strategy is a major constraint.

Sri Lanka

Strengthening the existing services, internal and external quality assurance systems, dissemination of the diagnostic algorithms, maintaining the government budget line, updating the programme management information system and periodic internal and external review of TB control activities are proposed by the country to pursue quality DOTS. For addressing TB/HIV and MDR-TB activities, national guidelines need to be developed and the concerned staff trained. Culture and DST facilities at the
National Reference laboratory need to be strengthened and the Laboratory accredited for quality assured culture and DST. A distance learning package is to be developed for the general practitioners, sensitization of specialist consultants and other medical officers in the private sector, inclusion of DOTS in the pre-service curriculum and orientation programmes for the pre-intern medical officers are being planned for engaging all care providers. The country proposes to enhance activities for ACSM and introduce DOTS into the work-place.

**Thailand**

The plans for improving quality of DOTS include involving larger hospitals, strengthening supervision and the reporting system, procurement of drugs through GDF, develop national operational guidelines for community based DOTS and to finalize the revision of national NTP guidelines. TB/HIV collaborative activities need to be strengthened and the revised guidelines finalized. For MDR-TB management, the revised guidelines need to be finalized, a national reporting and recording system established, training needs met and DOTS-Plus implemented at three pilot sites. To improve Public-private, or public-public mix (PPM) activities, the ISTC will be introduced in private hospitals and DOTS introduced in workplaces. ACSM strategies are to be developed and good practice models established.

**Timor-Leste**

The major challenges faced by NTP are inadequate technical and management capacity of the NTP to forecast needs, plan, oversee and report on implementation of activities, lack of access to TB diagnostic services among populations in remote areas, lack of facilities for diagnosis and management of MDR-TB cases, low community awareness and health seeking and lack of coordination with the NGO network and private health facilities. To address these issues, the country has developed a National Tuberculosis Strategy (NTS) which is an essential element of the communicable disease component of the Basic Package of Services (BPS). The Global Fund Round 7 has been approved.
The priority areas identified for action are: Improving quality of diagnosis of TB cases, strengthening DOT and patient support, streamlining the drug supply and management system, building technical and management capacity at all levels, strengthening monitoring and evaluation and supervision, and establishing links with the supranational laboratory in Adelaide for TB culture and drug susceptibility testing.

13. Major recommendations

For National TB Control Programmes

Laboratory strengthening

- Assign/designate a full-time laboratory expert at the central level to plan, coordinate and monitor the expansion of the national laboratory network during early development, phased scale-up of the culture and DST network;
- Plan more intensively to train and retain personnel for laboratories; ensure inclusion of adequate training courses on both technical aspects and laboratory management;
- Update national manuals and guidelines to reflect as appropriate, the new recommended definitions and guidelines for diagnosis of smear-positive, smear-negative, childhood and HIV-TB cases;
- Include through a careful process, laboratories outside the confines of the existing national TB laboratory network—(private laboratories, laboratories in medical teaching and research institutions, other public health laboratories) and extend QA mechanisms to these laboratories to increase access to QA smear microscopy, culture and DST.

Human resource development

- Revise/update the strategic HRD plans for comprehensive TB control to harmonize with guidelines presented in the document, “Handbook for how to plan HRD for the implementation of the Stop TB Strategy” (WHO HQ document in press).
Procurement and supply management


TB-HIV

- Together with national HIV/AIDS programmes, establish and scale-up provider-initiated testing and counselling;
- Actively include community activists, PLH, and those working in HIV, especially staff of the NACP, as well as members of professional associations and the private sector to develop more inclusive and better targeted plans and interventions in the context of the new Stop TB strategy and particularly for TB/HIV and DOTS-Plus; and
- Link with HIV/AIDS, and respiratory disease prevention and control programmes to more actively pursue introduction and adherence to recommended infection control measures, particularly in the context of drug resistance and HIV co-infection.

Resource mobilization

- Further refine the national TB plans to adequately reflect all required activities and the associated costing more accurately; carefully analyse human resource and financial gaps in national plans;
- Make every effort to ensure timely and effective implementation and reporting to benefit from performance-based funding through all available and potential sources of funding;
- Identify needs for technical assistance, and prepare a parallel technical assistance plan in line with the national plan;
- Ensure inclusion of adequate budgets for the necessary technical assistance and capacity building required at country level within proposals submitted to the GF, other bilateral or international funding initiatives; and
Identify and appoint national TBTEAM focal point in addition to the National TB programme managers, to better coordinate and maximize the benefits from technical assistance requested and provided through various in-country and external technical partners.

**Health systems**

- Analyse and document how current NTP activities contribute to health systems strengthening;
- Advocate for the role of NTPs in health systems strengthening with governments and other stakeholders based on evidence;
- Increasingly document and seek to disseminate through the available regional and global forums, best practice approaches developed to address specific issues, settings or population groups;
- Revise/update the strategic plans for TB control to reflect essential components of health systems strengthening, as outlined in the draft document “Contributing to Health Systems Strengthening- Guiding Principles for NTPs and Partners” (in press).

**Research**

- Focus especially on topics around implementation, in order to improve the services provided by NTPs. The crucial first step is for each NTP to identify priority areas for OR, “research for research sake should be discouraged”;
- Build capacity to implement and monitor programmatic research through both training and designating/recruiting staff to work on research within the programme, as well as through increasing collaboration with in-country research facilities; and
- Establish methods for dissemination of OR findings, for both advocacy and resource mobilization, and to inform and guide formulation of policy, strategies and interventions.
For WHO and partners

**Laboratories**

- Strengthen the capacity of the regional supranational reference laboratories;
- Appoint a laboratory resource person at regional level to support and coordinate necessary technical assistance to reference laboratories in the Region, including through the global network of supranational reference laboratories and to coordinate the work of the regional task force for laboratories;
- Develop a standardized training package for culture and for DST;
- Assist countries in building capacity to pilot and then routinely utilize newer diagnostics under programme conditions; and
- Prepare and disseminate standardized specifications for laboratory equipment and materials.

**Procurement and supply management**

- Continue supporting countries to apply for GDF Direct Procurement and Paediatric grants; further streamline procedures to reduce procurement lead-times;
- Assist in building in-country capacity for improved procurement and drug management;
- Assist countries in securing sustainable long term funding for procurement of first line drugs, and exceptionally, extension of GDF grants to fill the financial gaps;
- Advocate through relevant forums, gradual increments in government funding for TB control; and
- Provide technical support through prequalification services to selected in-country manufacturers
**Human resource development**

- Continue technical assistance to countries to revise/update national strategic Human Resource Development plans, in line with the guidelines presented in the document, “Handbook for how to plan HRD for the implementation of the Stop TB Strategy”.

**TB-HIV and MDR-TB**

1. Assist in building capacity in countries to introduce and rapidly scale up MDR-TB diagnosis and treatment facilities in collaboration with the Green Light Committee;

2. Assist countries in further expanding TB-HIV collaborative activities through: (1) finalizing, revising, and updating the TB-HIV components within national plans (2) disseminating best practice examples (3) helping to formulate strategies and operational guidelines based on lessons learnt and (4) undertaking assessment and monitoring missions to review progress and jointly plan future actions; and

3. Assist countries in establishing adequate infection control measures particularly in the context of drug resistance and HIV co-infection.

**Research**

- Actively assist countries in improving surveillance: improving capacity for data management, analysis and use of routine programme data to both measure the impact of interventions and in undertaking planned population-based surveys, to develop more accurate denominators for case detection; and

- Provide technical assistance to countries to build capacity to undertake programme-relevant operational research, and assist in taking research findings from dissemination to policy development.
Health systems strengthening

- Given the increasing technical capacity in countries, increasingly facilitate exchange of expertise and “peer support” between national TB programmes within the Region; and
- Provide technical assistance to countries to revise/update national strategic plans for TB control to more comprehensively cover health systems strengthening components as outlined in the draft document “Contributing to Health Systems Strengthening- Guiding Principles for NTPs and Partners” (WHO HQ document in press).

Resource mobilization

- Recognizing the increasing technical and financial requirements for the implementation of the new Stop TB strategy, assist countries in (1) further refining the national TB plans to adequately reflect all required activities and the associated costing more accurately; (2) assist in maximizing resource inflows for TB control to countries in the Region through all available international and bilateral initiatives; (3) identify mechanisms to leverage resources for those least able to benefit from existing mechanisms; and
- Coordinate and facilitate through the TBTEAM mechanism, provision of necessary technical assistance and capacity building required at country level.
### Annex 1

#### Programme

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| **Thursday, 6 December 2007** | Side meeting of the Technical Working Group and Expert Group on MDR/XDR-TB (continued)  
 NTP Managers: Site visits to BRAC / Damien |
|              | Departure of NTP Managers  
 Side meeting of the Technical Working Group and Expert Group on MDR/XDR-TB (continued)  
 Closing |
| **Friday, 7 December 2007**   | WHO staff meeting  
 Coordination of Technical Assistance to countries by WHO and partners  
 1245-1330 Lunch |
Annex 2

List of participants

Country participants

Bangladesh
Dr Mohd. Abdul Awal Miah
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Mr Sonam Tshering
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JDWNR Hospital
Thimphu

DPR Korea
Dr Kim Jong Kuk
National TB Programme Staff
Pyongyang
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