The Thirteenth Meeting of National TB Programme Managers from the WHO South-East Asia Region was held in Male, Maldives, in December 2008. Participants at the meeting included representatives of national TB programmes, technical agencies and staff from WHO headquarters, the Regional Office for South-East Asia and country offices. The meeting was organized concurrently with the Eighteenth Meeting of the National HIV/AIDS Programme Managers to allow for a day (for both programmes to jointly review the progress and challenges and discuss next steps to scale up a comprehensive package of interventions for HIV-associated TB in Member States of the Region.

Achievements in countries towards meeting the global targets set for TB control were presented. Key technical and programmatic issues, including interventions required to effectively respond to multi-drug resistant and HIV-associated tuberculosis were discussed and country experiences shared. Member States also presented their plans for the coming year and the technical assistance and resource requirements to effectively carry out all planned interventions were identified.
The Thirteenth Meeting of the National Tuberculosis Programme Managers

Report of the meeting
Male, Maldives, 1-4 December 2008
### Abbreviations

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<td>ACSM</td>
<td>advocacy, communication and social mobilization</td>
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<td>AIDS</td>
<td>acquired immunodeficiency syndrome</td>
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<td>ART</td>
<td>antiretroviral therapy</td>
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<td>ARTI</td>
<td>annual risk of TB infection</td>
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<td>BPS</td>
<td>basic package of services</td>
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<td>BRAC</td>
<td>Bangladesh Rural Advancement Committee</td>
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<td>CDC</td>
<td>U.S. Centers for Disease Control and Prevention</td>
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<td>C/DST</td>
<td>culture and drug susceptibility testing</td>
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<td>CPT</td>
<td>cotrimaxizole prophylactic treatment</td>
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<tr>
<td>DOT</td>
<td>directly observed treatment</td>
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<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>
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<td>EQA</td>
<td>external quality assurance</td>
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<td>FDC</td>
<td>fixed-dose combination</td>
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<td>GDF</td>
<td>Global TB Drug Facility</td>
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<td>GF</td>
<td>Global Fund to Fight AIDS, Tuberculosis and Malaria</td>
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<td>GLC</td>
<td>Green Light Committee</td>
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<td>GLI</td>
<td>Global Laboratory Initiative</td>
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<tr>
<td>GMP</td>
<td>good manufacturing practice</td>
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<td>HBC</td>
<td>high TB burden country</td>
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<td>HCW</td>
<td>health care worker</td>
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<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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<td>IDUs</td>
<td>injecting drug users</td>
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<td>IEC</td>
<td>information, education, communication</td>
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<td>IMA</td>
<td>Indian Medical Association</td>
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<td>IPT</td>
<td>isoniazid preventive therapy</td>
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<td>LPA</td>
<td>line probe assay</td>
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<td>ISTC</td>
<td>International Standards for Tuberculosis Care</td>
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<td>KAP</td>
<td>knowledge, attitude, practice</td>
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<tr>
<td>LQAS</td>
<td>Lot quality assurance scheme</td>
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<td>MDGs</td>
<td>Millennium Development Goals</td>
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<td>MDR-TB</td>
<td>multidrug resistant tuberculosis</td>
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<td>NGO</td>
<td>nongovernmental organization</td>
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<tr>
<td>NTP</td>
<td>national TB control programme</td>
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<tr>
<td>OPD</td>
<td>outpatient department</td>
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<tr>
<td>OR</td>
<td>operational research</td>
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<tr>
<td>PAL</td>
<td>practical approach to lung health</td>
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<td>PHC</td>
<td>primary health care</td>
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<td>PITC</td>
<td>provider initiated testing and counselling</td>
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<td>PLHIV</td>
<td>people living with HIV</td>
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<td>SEA</td>
<td>South-East Asia</td>
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<td>SNRL</td>
<td>supranational reference laboratory</td>
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<td>SOP</td>
<td>standard operating procedure</td>
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<td>STAG</td>
<td>Strategic Technical Advisory Group</td>
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<td>TA</td>
<td>technical assistance</td>
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<td>TB</td>
<td>tuberculosis</td>
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<tr>
<td>TB/HIV</td>
<td>tuberculosis/human immunodeficiency virus</td>
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<tr>
<td>TBTEAM</td>
<td>TB Technical Assistance Mechanism</td>
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<tr>
<td>The Union</td>
<td>The International Union Against Tuberculosis and Lung Diseases</td>
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<tr>
<td>TOT</td>
<td>training of trainers</td>
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<td>UC</td>
<td>universal coverage</td>
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<tr>
<td>VCTC</td>
<td>voluntary counselling and testing centre</td>
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<td>WHO</td>
<td>World Health Organization</td>
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<td>XDR-TB</td>
<td>extensively drug resistant tuberculosis</td>
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1. Introduction

Good progress continues to be made towards reaching the targets set for tuberculosis (TB) control in Member States of the Region. With respect to case detection and treatment success rates among the new smear-positive TB cases, which are the two indicators set under the Millennium Development Goals (MDGs) to measure progress in TB control, the overall rates in the South-East Asia (SEA) Region stand at 69% and 87% respectively. In terms of the impact on the disease, the Region is witnessing a small but steady decline in TB mortality, prevalence and incidence.

At the same time, in order to maintain and indeed accelerate the present rate of decline, it is essential that countries of the Region not only continue to pursue high-quality DOTS (the internationally recommended strategy for TB control) but also implement the five other equally important components of the Stop TB strategy. Multidrug resistance, now being reported from all Member States, must be urgently addressed. Human immunodeficiency virus (HIV)-associated TB is a major concern not only for TB control programmes, but also for HIV programmes. Much attention has therefore also been focused on HIV-associated TB and the role that national AIDS and TB programmes and HIV and TB communities as a whole must play to address the needs of people dually affected by these diseases. While many national TB programmes in the Region are being acknowledged globally for having established widely inclusive partnerships with private and other public sector health-care providers, much more needs to be done to effectively expand these partnerships to have an impact at the national level. Informing and mobilizing communities so that they use available services in a timely manner is an essential step to help people overcome the social and economic barriers that prevent them from accessing care in a timely and effective manner. Health systems and service delivery capacity need to be improved through the strengthened and inclusive primary health care (PHC) approach to ensure equitable access to quality services, including for TB.

The annual meetings of the national TB programme managers of the Region with technical and in-country partners and World Health Organization (WHO) focal points continue to provide an opportunity to
share technical and programmatic updates, review country experiences and develop plans of action for the implementation of proposed interventions in country-specific contexts.

The Thirteenth Meeting of the National TB Programme Managers of the SEA Region was held in Male, Maldives between 1-4 December 2008. The meeting was attended by 39 participants including national TB programme managers and staff from nine countries (Sri Lanka and Thailand could not attend), representatives from three technical agencies (Japan International Cooperation Agency, PATH, International Union Against Tuberculosis and Lung Disease), nongovernmental organizations (NGOs) from Bangladesh (Damien Foundation and Bangladesh Rural Advancement Committee [BRAC]), and WHO TB staff from the headquarters, WHO Regional Office for South-East Asia and country offices. The meeting was organized concurrently with the Eighteenth Meeting of the National HIV/AIDS Programme Managers so as to allow for a common day to review progress and challenges and discuss next steps to scale up joint interventions for HIV-associated TB in the countries of the Region.

2. Inaugural session

The meeting was opened by HE the Minister of Health and Family of Maldives, who welcomed the participants to Maldives, mentioning that this was the first country in the Region to have achieved the case detection and treatment success targets in 1996. While recounting her own experience with TB, she expressed the commitment of the Government of Maldives to eliminate the disease in the coming decades ahead of the Stop TB Partnership target set for 2050.

The Regional Director’s message was read by WHO Representative to Maldives. In his message, the Regional Director conveyed to the participants that while there had indeed been encouraging progress in TB control in countries of the Region, multidrug-resistant TB (MDR-TB) and HIV-associated TB were pressing concerns for national TB as well as HIV/AIDS programmes, and these challenges needed to be urgently addressed. He was pleased that the staff of both HIV and TB control programmes were meeting in Male to jointly address the issue of HIV/TB. He emphasized the fact that in order to respond to HIV/AIDS and TB effectively, it was necessary not only that the two programmes worked closely together but that they aligned their work with the agenda for
strengthening health systems through a strengthened primary health care PHC approach. PHC he said, was also the best approach to encourage community participation and ownership, including ownership by people affected by HIV/AIDS and TB, allowing at the same time for the prioritization of at-risk and vulnerable populations. He urged participants to plan for and apply the most effective interventions outlined in the various strategies and frameworks that have already been developed, to bring services more effectively and efficiently to the homes and communities where those who need these services live and work.

The main objectives of the meeting were to:

(1) share progress made in TB control in Member States and in the Region as a whole;

(2) review constraints and identify key actions to intensify the implementation of TB control interventions in countries, including interventions for MDR-TB and extensively drug resistant tuberculosis (XDR-TB);

(3) identify joint actions for scaling up TB/HIV prevention, diagnosis, treatment and control in Member States; and

(4) identify the key technical and financial resource requirements for the implementation of all planned interventions, and outline activities to meet these requirements.

Dr Jane Soepardi, National TB Programme Manager, Indonesia, Ms Shameema Hussein, Director, National TB Programme Maldives, and Mr Constantino Lopez, National TB Programme Manager, Timor-Leste were nominated as the chair, co-chair and rapporteur respectively for the meeting.

3. Progress in TB control – global and regional overview

3.1 Progress towards global targets for TB control

TB incidence rates are steadily falling globally, barring in the African and Eastern European regions. Prevalence and mortality rates are also gradually falling. The current rate of decline shows that the Americas, South-East Asia SEA and Western Pacific regions are set to reach the target of halving TB
mortality by 2015. The HIV epidemic in Africa and high rates of multidrug resistance in Eastern Europe are hampering progress in these two regions. While excellent treatment success rates continue to be met, particularly in the SEA and Western Pacific regions, a more recent levelling-off of the case detection rates at around 70% is a worrying trend, indicating that 30% of new smear-positive cases are not being found and registered for treatment. It is estimated that 71% of these missing cases are in Africa and South-East Asia (42% and 29% respectively). The reasons for the stagnation in case detection therefore need to be analysed and addressed, particularly in high TB-burden countries.

In the context of HIV/TB, almost 85% of HIV-positive TB cases are in Africa, where there has been significant progress in scaling up TB/HIV interventions.

Multidrug resistant TB is now being reported from all Member States, with 49 countries now having confirmed XDR-TB cases.

In order to address these challenges, it is essential that national TB control programmes (NTPs) work closely with general health systems addressing issues relating to health financing, the health workforce, partnerships with all providers, and especially on strategic information which would assist in more accurately assessing both trends in the disease as well as programmatic issues that would help to develop more effective interventions.

Countries of the SEA Regions with the exception of the Democratic People’s Republic of Korea, Maldives, Sri Lanka and Thailand, are among the countries with critical shortages in health staffing. At the same time, the Region has the highest provision of health care through the private sector among all WHO regions. While several countries in the Region are engaged in population-based surveys to estimate trends and the disease burden, improvements in routine programme notification data are needed so that this data can be used more effectively to accurately reflect trends as well as to guide policy and programme interventions.
3.2 TB in the SEA Region

The Region continues to have the highest number of TB cases and the second-highest number of people living with HIV (PLHIV) among all six WHO regions. Steady progress continues to be made in implementing the DOTS strategy, with the Region as a whole having achieved a case detection rate of 69% and a treatment success rate of 87.5% (Figure 1).

Five countries in the region have met both the 70% case detection and 85% treatment success rate as of December 2008, with Indonesia having slipped out of the target zone because of a slowing in implementation in 2007 caused by disruption in support from the Global Fund to Fight AIDS, Tuberculosis and Malaria (GF) during the year. While Bangladesh, India and Nepal are considered not to have met the case detection target based on UN population figures for these countries, all three countries have achieved the case detection targets when case detection rates are calculated based on national population census figures (Figure 2).

Figure 1: Global targets: Case detection and treatment success rate, SEA Region, 1997-2007

Source: Annual Reports on TB control, National TB Programmes, SEAR Member Countries, December 2008
Several countries are engaged in undertaking population-based TB prevalence and annual risk of TB infection surveys in order to better define trends in the disease pattern. In addition, Indonesia is undertaking a survey to determine mortality rates. Data emanating from these surveys are indicative of a small decline in the burden of disease in India, Indonesia, and Nepal, while in the Democratic People’s Republic of Korea and Myanmar data from surveys indicate much higher numbers of prevalent cases than presently estimated by WHO. Surveys in Bangladesh and Thailand are ongoing and preliminaries are expected in 2009. Bhutan and Sri Lanka will commence ARTI surveys in 2009. Case notifications of all forms of TB continue to rise steadily; however, there has been a levelling-off of the case detection rate among new smear-positive cases through 2007.

Countries in the Region are making concerted efforts to accelerate the case detection rate through partnerships with health providers in several other state and non-state, including ministries of railways, shipping, mines,
The Thirteenth Meeting of the National Tuberculosis Programme Managers

defence, etc. Over 350 medical colleges, 15,000 private and public hospitals, professional societies in five countries, 2,500 NGOs, 550 prisons, and 150 corporate houses have been involved so far. Many community-based service delivery models are being pursued in eight of the 11 Member countries. Involving these sectors has resulted in an increase of up to 50% in case notifications in areas where these sectors have been involved. Several issues remain, however, in terms of ensuring quality while expanding these intersectoral collaborative interventions.

Countries in the Region are also making steady progress in addressing the diagnosis and treatment of those with multidrug resistant TB and HIV/TB. Providing equitable and effective services in cross-border areas is proving to be a particular challenge, especially for the smaller countries. While many initiatives have been taken, firm policy, strategies and approaches for cross-border service delivery are yet to be implemented. Total available funding for TB control activities is fairly encouraging for all the countries in the Region with the exception of the Democratic People’s Republic of Korea and Myanmar. However, the recent financial downturn has already begun to impact domestic budget lines for critical elements of TB control programmes such as drugs, funding for supervision and training.

3.3 Updates on key technical and programme issues

Key issues deliberated by the Global TB Strategic Technical Advisory Group (STAG TB), and meetings of the various working groups under Stop TB were presented. Participants were updated on the key conclusions and recommendations of the Eighth Meeting of the STAG TB held in June 2008.

The key recommendations relating to the technical areas discussed were:

1. Pursue universal access to high-quality diagnosis of TB including microscopy, culture and newer diagnostics such as liquid cultures and line probe assays (LPAs) for the rapid diagnosis of MDR-TB.

2. Ensure access to high-quality first- and second-line TB treatment.

3. Increase political will for well-resourced health systems and adequate number of skilled staff.
(4) Inform and engage with communities.

(5) Expand and intensify basic, applied and operational research (OR) to improve and increase availability of the tools required to combat TB and to achieve the TB targets set under the MDGs.

Participants were then updated on the key outcomes of the meeting of the Childhood TB Working Group that related mainly to the new recommendations on increasing the doses of anti-TB drugs for children; treatment of TB in HIV-infected children; standards of care for childhood TB; and the new recommendations on the use of the BCG vaccine in high-HIV-prevalence settings. The lack of data on the magnitude of childhood TB in countries and the absence of effective diagnostic tools and child-friendly drug formulations are the main challenges in this area. It was proposed that countries engage with national paediatric associations and ministries of health for higher commitment to investing in managing childhood TB. In this context, WHO and technical partners are finalizing technical guidelines for management of childhood TB, while the Global TB Drug Facility (GDF) is working with manufacturers on fixed-dose combination formulations for children.

3.4 TB control and health systems: perspective from the regional workshop

A Regional workshop on “TB control in the context of health systems strengthening” in Colombo, 19-22 August 2008, was organized in response to a felt need for identifying ways for TB control programmes in the Region to benefit from ongoing health systems development as well as contribute more effectively to health systems and human resource development (HRD) and management. The opportunities and challenges for NTPs in the context of each of the six building blocks in the health systems framework were reviewed at the meeting. It was recognized that TB control programmes were benefiting from ongoing health sector reform processes in terms of an increase in service delivery points, increased private-sector and NGO involvement, and through the provision of incentives for quality care. The reform processes have necessitated capacity-building at regional, state and district levels and increased flexibility for the use of resources at the local level. The attempts to more rationally and cost-effectively use common resources with other disease control progress, streamline procurements, standardize training content for health staff at the different levels of the
health system and integrate data management systems were all opportunities for TB control programmes. At the same time, TB control programmes are contributing significantly through their strong recording, reporting and monitoring systems, initiatives to involve private providers and contributions to improved procurement and supply management and laboratory capacity. The clear understanding and delineation of components that are specific and therefore required to be managed by NTPs, as distinct from components of a more cross-cutting nature that TB control programmes should engage in together with other sectors, has greatly helped TB control programmes to benefit from health systems strengthening. Areas of common concern, however, were:

- **insufficient realization of government commitment and funding** for critical inputs such as drugs and enhancing capacity of diagnostic facilities;
- **lack of clear comprehensive HRD strategies and plans** (unattractive employment packages and no career advancement opportunities; lack of incentives and enablers for staff to work in remote and difficult areas);
- **inadequate attention to building capacity for effective management of programmes**, in-country supply management, and service delivery; and
- **weak national health information systems**;
- **infrastructure constraints**; and
- **underutilization of public services by the community** for a number of reasons, including lack of awareness, suboptimal health-seeking behaviour, and perceived low quality of public services.

The key recommendations that emerged from the meeting were for ministries of health to mobilize necessary external funding and realize all domestic funding commitments to support all essential health services including TB control services; and to ensure collaboration between departments responsible for overall national health and human resource planning and priority disease control programmes in order to address imbalances in distribution of health staff, exploring the use of appropriate incentives and enablers for staff in the more remote and difficult-to-reach areas.
For their part, NTPs were urged to create demand through established national partnerships for sustaining national budget lines; to adopt health systems strengthening and HRD tools in developing proposals for support from the Global Alliance for Vaccines and Immunization, GF and other donors; and to revise/update strategic HRD plans, including private healthcare providers, for the implementation of the Stop TB Strategy control, utilizing the Health Action Framework.

WHO and international partners were requested to advocate at high-level interministerial and other forums about the need to retain and gradually increase domestic budget lines for critical elements of the NTP, particularly drugs, and to assist countries in strengthening national health systems, through national TB programmes as well as joint actions involving other relevant stakeholders and partners. They were also urged to help build capacity and better manage the health workforce through comprehensive national HRD plans and actively assist in building the capacity of local manufacturers to meet international good manufacturing practice (GMP) standards. It was also urged that development partners should agree on common, well-defined indicators for countries to report on the progress and impact of ongoing health systems strengthening measures.

### 3.5 Country updates on implementing the Stop TB Strategy

Participants from each of the NTPs represented at the meeting made poster presentations on their key achievements, main challenges and plans for 2009 and 2010. All participants reviewed the posters, shared experiences and discussed several issues relating to each of the countries’ TB control efforts through interactive discussions during the poster presentation by each country. In the following plenary, facilitators and participants discussed technical aspects of newer interventions, their feasibility in their own country situations, and how some shared constraints had been overcome. Bangladesh, India, Indonesia and Nepal shared outcomes of the newly established MDR-TB and TB/HIV projects and sites in their countries. The feasibility and use of new tools such as LPAs and liquid cultures in programme settings were also discussed.

These discussions contributed to the group work on the fourth day of the meeting that was dedicated to reviewing and updating the national multi-year plans for fully and effectively implementing the new Stop TB strategy.
4. **Global response to MDR-TB and XDR-TB**

It is estimated that there were nearly 500,000 new cases of MDR-TB in 2008 and that nearly a tenth of these cases had XDR-TB. While some countries in the Eastern European Region have the highest rates of MDR-TB, in terms of absolute numbers, China and India have the highest numbers of MDR-TB cases and are among 27 countries globally that carry 85% of the estimated global burden of MDR-TB.

While it is recognized that the best-performing national TB programmes have managed to limit the rate of increase in MDR-TB, they have not been entirely successful, largely due to a significant proportion of anti-TB drugs being prescribed and used without adherence to DOTS outside of these programmes. The widespread availability and sale of second-line drugs in the open market is also a major source of concern in the context of emerging MDR- and XDR-TB. In the absence of any new anti-TB drug become available in the near future, the failure to contain MDR-TB through sound application of DOTS will have serious consequences for NTPs and national health systems.

The Global MDR and XDR response plan released in 2007 was based on the recommendation of the First Global Task Force on XDR-TB and aims for universal access to diagnosis and treatment for all MDR-TB cases by 2015, at least in the 27 most highly affected countries. The objectives of the response plan are to:

- strengthen basic TB and TB/HIV control;
- scale up the programmatic management of MDR-TB and XDR-TB;
- strengthen laboratory service;
- expand MDR-TB and XDR-TB surveillance;
- develop and implement infection control measures;
- strengthen advocacy, communication and social mobilization (ACSM);
- pursue resource mobilization; and
- promote research and development into new tools.
Progress is being made towards meeting these objectives. Updated guidelines and training materials for the management of MDR-TB were drafted during 2007 and 2008. The Global Laboratory Initiative (GLI) has been launched, resulting in considerable support to countries in the area of detection of MDR-TB. Capacity for quality assured culture and drug susceptibility testing (C/DST) is gradually increasing in many countries. LPAs have been successfully evaluated. Peru has become the first country globally to achieve universal access to MDR-TB diagnosis and treatment. The GDF is making progress in increasing procurement of second-line drugs. National infection control policies and interventions are beginning to be established in several of the 22 high-burden countries. Seven newly developed anti-TB drugs are in various phases of clinical trials.

However, as more national programmes begin to undertake MDR-TB case management, several issues relating to access to diagnostics and drugs, and ethical issues relating to rights of patients with MDR-TB, are beginning to emerge. Only 6 out of the 27 countries with the highest burdens of MDR-TB have adequate laboratory capacity for C/DST. In most countries the lack of laboratory capacity is a major bottleneck for expansion of MDR-TB diagnosis and treatment. While there is widespread availability of second-line drugs in the open market in countries, the availability of quality-assured second-line drugs for use by national programmes is also limited. As a result, only a tenth of MDR-TB patients globally are being treated for MDR-TB under national programmes, and only one third of these are being treated in line with international recommendations. Priorities therefore for scaling up MDR-TB interventions are to support countries to establish quality-assured C/DST facilities, ensure regular and adequate supplies of quality-assured second-line anti-TB drugs, improve data management systems to better track programmatic management of MDR-TB cases, and establish proper infection control measures in both in- and out-patient facilities that will cater to these patients.

Figure 3 shows the capacity gap in the laboratory services expected to be in place to detect all forms of TB, including MDR-TB globally.
Figure 3: **Capacity gap in laboratory services**

To reach the MDG targets, laboratory capacity for 120 million smears, 50 million cultures and 5 million drug susceptibility investigations must be met by 2015, requiring an investment of at least USD 2.5 billion in laboratory infrastructure globally over next 7 years.

Models of care, whether hospital-based or outpatient, need to be developed based on the numbers of the patients estimated to be treated and hospital bed capacity. Health staff must be trained and motivated to provide services for this far more complex form of TB. At the same time, ensuring a “patient-centered” approach, directly observed treatment (DOT) and social support networks to promote adherence for an extended period of treatment of up to two years, are challenges that have to be met.

### 4.1 MDR- and XDR-TB in the SEA Region

The region carries 28% of the global burden of MDR-TB cases. While the overall MDR-TB resistance rate among new smear-positive patients is 2.8%, the rate among previously treated patients is much higher, at 18.8%. Of the six countries–namely Bangladesh, India, Myanmar, Nepal, Sri Lanka and Thailand–where representative data on MDR-TB resistant rates are
available, only Myanmar reports an MDR-TB rate higher than 4% among new smear-positive patients. The rates among previously treated patients vary from 11% in Nepal to 35.5% in Thailand.

There is limited information on second-line drug resistance in the Region. Surveys are ongoing in India, Indonesia, Myanmar and Thailand. The widespread availability and sale of first- and second-line drugs outside of national programmes was a major concern in the context of emerging drug resistance.

Figure 4: First- and second-line TB drug market by country

![Graph showing first- and second-line TB drug market by country.](image)


While Bangladesh, India, Indonesia, Myanmar, Nepal, Sri Lanka and Thailand have established culture and first-line DST at least at the national level, only Thailand has adequate capacity to offer C/DST throughout the country.
The Region is also constrained by the fact that there are only two supranational reference laboratories (SNRLs) in the Region to provide external quality assurance and technical assistance (TA) to national reference laboratories in the Region. As a result, countries in the Region are linked additionally to four SNRLs outside the Region.

A growing number of national programmes are establishing MDR treatment at various sites in the countries. In Nepal a pilot site was established in 2005 and services are now available in all five regions of the country. India has begun enrolling cases in four states and plans to expand to additional states in 2009, most of this outside the Green Light Committee (GLC) mechanism. Bangladesh and Timor-Leste have begun enrolling patients at national level. Indonesia and Myanmar will commence enrolment in early 2009. Bhutan and Sri Lanka have submitted applications to the GLC in 2008. A total of approximately 800 MDR-TB patients are currently on treatment in countries of the Region. Scaling up interventions to treat the 120,000 cases estimated to occur every year requires that NTPs meet several challenges relating to procurement and logistics for second-line drugs, managing adverse reactions and scaling up support services to ensure adherence. Building up staff capacity and motivation to manage patients and instituting adequate infection control measures will require considerable investments in training, managing staff and financing to upgrade facilities.

MDR-TB case management expansion plans therefore remain conservative till date. Several initiatives have been taken at the regional level to support countries in this area. A regional working group on MDR- and XDR-TB was established in 2007, a regional response plan was developed, and regional and national training workshops on strengthening laboratory capacity and training staff on managing MDR-TB have been supported. WHO regional and country office staff continue to support countries in developing and submitting applications to the GLC, to enable countries to establish MDR-TB case management programmes in line with international recommendations and access quality second-line drugs at competitive prices. They are also engaged in developing national guidelines, plans, and operational tools to help establish MDR-TB case management programmes in countries.
4.2 Group work: responding to MDR-XDR TB: status and plans for scaling up interventions

Countries worked in small groups using a template designed to prepare plans for scaling up interventions for MDR- and XDR-TB. The interventions in the planning template covered activities that would be needed in the following areas:

- developing or updating national plans and strategies for MDR-TB case management;
- undertaking drug-resistance surveys and/or routine drug resistance surveillance;
- strengthening the capacity of national reference laboratories and national laboratory networks for drug resistance surveillance (DRS) and to support the diagnosis and follow-up of MDR-TB cases to be treated in each country (based on the estimates of MDR-TB cases in the country);
- introducing new diagnostic tools, as appropriate, in the country-level context;
- capacity assessment and planning for scaling up MDR-TB treatment, including evaluation of pilot sites and preparedness for scale-up of case management;
- procurement and supply management of laboratory equipment, reagents and second-line drugs;
- interventions to strengthen monitoring and evaluation of MDR-TB case management under national programmes;
- assessment and preparation of national infection control plans; and
- developing models of care.

Following the small group discussions, countries made presentations for their plans and also identified their TA requirements for implementing these plans.
4.3 Country experiences

Country experiences from Bangladesh, India and Nepal in managing MDR-TB were presented, and discussions followed on the programmatic issues relating to MDR-TB diagnosis and management on a national scale.

With the exception of Thailand, all countries have identified laboratory capacity as the major constraint to scaling up MDR-TB diagnosis and treatment. An urgent priority is expanding laboratory capacity for quality-assured C/DST for both first- and second-line drugs in the countries of the Region, for better surveillance and to diagnose and treat these cases.

A major concern is that unless diagnosis and management of MDR-TB and XDR-TB cases is made rapidly available under national programmes, an increasing number of cases will be continue to be managed by the unregulated private sector, potentially leading to an increase in MDR-TB and XDR-TB. A main issue brought up in this context was the need to involve all health-care providers in implementing quality DOTS in order to prevent the emergence of drug resistant TB. Efforts to scale up private-public partnerships and to more widely disseminate the International Standards of TB Care (ISTC) through professional bodies and medical schools in many countries were raised. The main challenges brought out were difficulties in monitoring activities in the private sector to ensure quality while expanding these services.

5. Implementing TB/HIV interventions: global update and key technical and programmatic issues

There were an estimated 700 000 new HIV-positive TB cases globally in 2007. This estimate takes into consideration the revised estimates for HIV prevalence published by the Joint United Nations Programme on HIV/AIDS (UNAIDS) in 2008. However, it is expected that the global estimates for HIV/TB cases will be readjusted to at least 1.2 million, based on HIV prevalence rates among TB patients in Africa, which indicates that the proportion of those testing positive for TB is higher than the current estimate by a factor of 1.8.

Collaborative TB/HIV interventions are ongoing in a 157 out of 211 Member States. The scale and scope of the interventions, however, vary
considerably across countries, with 47 out of 63 countries which collectively account for 97% of HIV-positive TB cases undertaking all or many of the 12 interventions included under the current global policy for collaborative TB/HIV activities. A smaller number of countries have policies relating to the use of isoniazid preventive therapy (IPT). Given the reported data from countries in 2008, the number of countries with policies and ongoing activities is much higher than in the previous year. The number of countries testing TB patients for HIV is also gradually increasing; over 800 000 TB patients were screened for HIV in 2007. Of the nearly 300 000 found to be HIV-positive, 200 000 received cotrimaxazole prophylactic treatment (CPT), and nearly a third received antiretroviral therapy (ART). At the same time nearly 600 000 PLHIV were screened for TB, nearly a quarter of whom were diagnosed to have active TB. IPT was however made available to less than a quarter of PLHIV globally. In the SEA Region, nearly 90 000 TB patients were tested for HIV, a sixth of whom were found to be HIV-positive. Of these, less than a tenth received CPT and ART. Of the estimated 3.6 million PLHIV in the Region, a fourth were screened for TB and a tenth of these found to have active TB. Table 2 below shows HIV testing and treatment in TB patients by WHO Region in 2009.

**Table 1: HIV testing and treatment in TB patients, by WHO region, 2007**

<table>
<thead>
<tr>
<th>WHO Region</th>
<th>% of notified TB patients tested for HIV</th>
<th>% of tested patients HIV-positive</th>
<th>% of estimated HIV-positive TB cases identified by testing</th>
<th>% of identified HIV-positive TB patients started on CPT</th>
<th>% of identified HIV-positive TB patients started on ART</th>
<th>Regional distribution of estimated HIV-positive TB cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFR</td>
<td>38</td>
<td>51</td>
<td>42</td>
<td>76</td>
<td>29</td>
<td>85</td>
</tr>
<tr>
<td>AMR</td>
<td>47</td>
<td>15</td>
<td>67</td>
<td>44</td>
<td>28</td>
<td>3.0</td>
</tr>
<tr>
<td>EMR</td>
<td>1.1</td>
<td>11.0</td>
<td>6.4</td>
<td>40</td>
<td>61</td>
<td>0.9</td>
</tr>
<tr>
<td>EUR</td>
<td>47</td>
<td>5.0</td>
<td>44</td>
<td>9</td>
<td>87</td>
<td>1.8</td>
</tr>
<tr>
<td>SEAR</td>
<td>1.8</td>
<td>20</td>
<td>33</td>
<td>45</td>
<td>22</td>
<td>5.6</td>
</tr>
<tr>
<td>WPR</td>
<td>5.8</td>
<td>11.0</td>
<td>38</td>
<td>26</td>
<td>16</td>
<td>3.2</td>
</tr>
<tr>
<td>Global</td>
<td>14</td>
<td>34</td>
<td>42</td>
<td>73</td>
<td>29</td>
<td>100</td>
</tr>
</tbody>
</table>

Significant attention is now being focused on three key elements of the package of interventions for TB/HIV. These are intensified TB case-finding among PLHIV, provision of IPT to PLHIV without active TB, and
infection control. It is recognized that PLHIV with TB present at a more advanced stage of the disease and therefore have higher case fatality rates. Intensified case-finding is known to increase survival among PLHIV, besides being a high-yield activity given the rates of TB infection among PLHIV.

While many countries have adopted policies for intensified case-finding, less than half actually implement this. Of the 3.6 million PLHIV in the SEA Region, only 80,000 were reported as having been screened for TB.

While IPT is known to be an effective intervention to prevent active TB among PLHIV, the uptake of HIV testing among countries has been low due to technical and operational considerations on the part of national programmes. While 82 countries have adopted policies on IPT, only a quarter offer IPT to PLHIV. In the SEA Region, India, Indonesia, Myanmar and Nepal are pilot-testing the operational feasibility of IPT for PLHIV. The technical concerns relate mainly to the difficulties in excluding active TB among PLHIV and the fear of magnifying resistance to isoniazid through provision of isoniazid monotherapy to PLHIV who may have undiagnosed active TB. The operational difficulties relate mainly to TB-HIV service coverage mismatch, supply of isoniazid and adherence to IPT.

There is, however, an overwhelming body of evidence in favour of use of IPT among PLHIV. The key points relating to this evidence were discussed with the programme managers at the meeting, including the role of chest X-rays to rule out active TB. A comprehensive package for infection control in health-care settings has been developed, comprising four strategic approaches: programmatic, administrative, engineering and environmental, and personal protection. This package of interventions was shared with the managers from both programmes. Policy guidelines for collaborative HIV and TB infection control for injecting and other drug users were also shared with the participants. The revised TB/HIV indicators were also discussed, including the new recording and reporting formats.

A main challenge is the coordination of service delivery between HIV and TB control programmes. This arises from the vastly disparate levels and numbers of health facilities providing services for TB and HIV. The rate of expansion of integrated collaborative services for people dually affected therefore depends on the rate of decentralization of HIV counselling, testing and treatment facilities. Increased leadership and ownership from the HIV stakeholders and community is essential for greater uptake of efforts of intensified case-finding, which serves as a gateway for IPT, infection control and integrated service delivery. There is at the same time a
need for increased community mobilization and creation of demand for services. In order to meet the considerable requirements to implement the proposed interventions, additional financial resources will need to be mobilized. In this context, it is of note that the GF board proposed at their last meeting that all existing and new GF applications include HIV in TB proposals, and TB in all HIV proposals, in order to help scale up universal access to TB/HIV collaborative services.

5.1 TB/HIV in the SEA Region

An estimated 3.6 million persons are estimated to be living with HIV/AIDS in the SEA Region. The Region is distinguished by a complex, heterogeneous HIV epidemic at different stages, both within countries and across the Region. For example, approximately two-thirds of the estimated HIV burden in India is in nine states in the south and northeast, which make up only a third of the country’s population. In the four states in southern India, HIV prevalence appears to be slowly decreasing. In Indonesia, where the overall prevalence of HIV is low, three provinces have been reported to have much higher rates of HIV and the country now has the fastest-growing HIV epidemic in Asia. In other countries, such as in Bangladesh and Nepal, increasing HIV prevalence among high-risk groups such as injecting drug users has raised concerns about the potential risk of a generalized HIV epidemic in these countries. The diversity of the HIV trends in the Region is shown in Figure 5.

While it is recognized that TB is indeed the most common life-threatening opportunistic infection among PLHIV, HIV does not appear to have fundamentally altered the epidemiology of TB in the Region to the extent that has been observed in sub-Saharan Africa. A dynamic model based on trends in India suggest that while the incidence of TB has been minimally affected by the HIV epidemic, the impact on TB mortality is likely to have been much more substantial. The impact of HIV on TB mortality has also been recognized in Thailand and Myanmar, where high case-fatality rates have been reported in regions known to have high HIV prevalence. However, in Indonesia there is evidence that in the six provinces with higher HIV rates, the average age of TB patients is at least five years lower than among TB patients elsewhere in the country, and that the age of female TB patients is even lower. Data from Thailand have shown that most patients were severely immunosuppressed at the time that they were diagnosed with TB, and that as a result case-fatality rates ranged from 43% to 56%.
TB/HIV activities are widely available in Thailand and are being expanded in India and Myanmar. India is implementing and intensified package of TB/HIV interventions in the nine states with a high HIV prevalence. There has been a more than five-fold increase in referrals from HIV counselling and testing centres to TB services, and a more than three-fold increase in referrals from the TB to HIV services over the last three years. The uptake of HIV testing among TB patients in Myanmar (at project sites) and Thailand is over 90%.
However, in order to rapidly scale up TB/HIV interventions more widely in countries of the Region a number of challenges must be addressed:

- **Programmatic**
  - Availability of TB/HIV services, and the level at which they are delivered, are quite different (6046 voluntary counselling and testing centres (VCTCs) as compared to >20 000 microscopy centres; 1385 ART facilities as compared to >150 000 DOTS centres)
  - Diagnostics and drugs: Limited availability of HIV test kits, TV cultures and X-rays
  - Personnel: Limited availability of trained, skilled and motivated personnel (both programmes)
  - Few countries have well-formulated plans for TB/HIV interventions with clear indicators and targets

- **Operational**
  - Systems for cross-referral, linkages between services
  - Level of involvement and approaches adopted to involve NGOs and private providers by the two programmes

- **Other**
  - Administrative, ethical, social, etc.

5.2 **Scaling up collaborative TB/HIV interventions: country experiences**

**India**

A national framework for TB/HIV collaborative activities has been developed. This includes intensified case-finding among HIV-positive individuals, HIV testing of TB patients, cross-linkages for continued care and treatment and introduction of infection control measures. A nationwide survey of HIV prevalence among TB patients conducted during 2006-2007 showed a wide variation in HIV seroprevalence among TB patients ranging from 1%-14% in various parts of the country. This creates operational challenges for the framework for nationwide interventions for TB/HIV. TB/HIV interventions are therefore stratified, with a basic package of
TB/HIV interventions recommended for all states, with additional intensified measures in the nine states with higher HIV prevalence rates. As a result of implementation of TB/HIV interventions, there has been a four-fold increase in referrals from VCTC to TB services (Figure 6).

**Figure 6: TB suspects referred from VCT centres for evaluation, 2005-2008**

As a result, the number of VCTC clients diagnosed with TB has doubled and the proportion treated under DOTS is now over 90%. Similarly, there has been a three-fold increase in the numbers of TB patients being tested for HIV in six high-HIV-prevalence states, with nearly 100 000 patients having been tested. NGOs are increasingly involved in TB/HIV activities through a new scheme. Reducing risk of TB transmission in VCTC and ART centres is, however, a major concern. CPT for HIV-infected TB patients has been piloted; however, case-fatality rates are still high due to variable adherence to treatment. The lessons learnt are that routine referral of TB patients to HIV services can be efficiently implemented. However, linking HIV-infected patients to HIV care, and provision of CPT and ART is still a challenge. Decentralizing CPT to local health units and ART services is essential. In this context, involving the HIV NGOs in providing services is proving to be very useful.
**Indonesia**

The estimated HIV prevalence among adults in the country is 0.16%. In the province of Papua, however, HIV prevalence rates are 2.4% in the general population. Most of the other provinces of the country are considered to have concentrated HIV epidemics. HIV seroprevalence surveys are ongoing in Papua, East Java and Bali. Indonesia is reporting a sharp increase in AIDS cases since 2004 and reported a total of 15,136 AIDS cases in 2008, among whom 8,409 had TB.

A national TB/HIV policy has been developed and disseminated in provinces with higher HIV prevalence rates. The national policy is to offer VCT for TB patients based on a risk assessment in all provinces except Papua, where VCT is offered to all TB patients. CPT is offered to all HIV-infected TB patients and ART to eligible TB/HIV patients based on CD4 counts and HIV clinical stage. IPT is not yet recommended in Indonesia. Health teams at the provincial level have been trained in TB/HIV collaborative activities, a TB/HIV clinical manual has been developed and recording and reporting formats revised to include TB/HIV activities. Provider-initiated counselling and testing is being piloted in lung clinics in Yogyakarta. Major constraints are that TB/HIV working groups are not yet established in some provinces, there are confidentiality issues around routine integrated surveillance and not all VCTCs and hospitals are implementing the DOTS strategy. Plans for 2009-2010 include finalization of the TB/HIV clinical manual, establishment of functioning TB/HIV working groups in all high-burden provinces and expansion of TB/HIV training into all high-HIV-prevalence areas.

**Thailand**

The first TB/HIV collaborative interventions were established in 2003 as pilot sites. In 2004, Thailand developed national guidelines for TB/HIV collaborative activities and appointed a national committee for TB/HIV. By 2006, TB/HIV activities were being implemented countrywide. TB/HIV national guidelines are currently being updated to reflect changes in the pattern of the co-epidemic in the country and lessons learnt from implementation so far. Thailand has established targets for TB/HIV activities as shown in table 2.
Table 2: Targets for TB/HIV activities (Thailand)

<table>
<thead>
<tr>
<th>Activities</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV Testing</td>
<td>75%</td>
<td>80%</td>
<td>85%</td>
<td>&gt;85%</td>
</tr>
<tr>
<td>CPT</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>&gt;80%</td>
</tr>
<tr>
<td>ARV</td>
<td>50%</td>
<td>55%</td>
<td>60%</td>
<td>&gt;60%</td>
</tr>
<tr>
<td>ICF</td>
<td>80%</td>
<td>85%</td>
<td>90%</td>
<td>&gt;90%</td>
</tr>
</tbody>
</table>

Source: Bureau of TB Control, Department of Disease Control, Ministry of Public Health, Thailand.

The recording and reporting formats have been modified to capture information on the numbers of TB patients receiving PITC, accepting HIV testing, detected as being HIV-positive, receiving CPT, CD4 testing and then receiving ART. Acceptance of HIV testing among TB patients has increased to 79% (Figure 7). HIV positivity rates among TB patients in Thailand is estimated at 18% in 2008, down from 27% in 2006. Two-thirds of patients with TB and HIV receive CPT, and over a third receive ART. The main challenges are to initiate ART early enough during TB treatment to have an impact on mortality rates, and to link TB screening information to the reporting system under the national AIDS programme.

Figure 7: Increasing acceptance of HIV testing among TB patients: Thailand

Source: Office of Disease Prevention and Control 7, Ubon Ratchatani Province, Thailand.
5.3 Overview of regional strategy for TB/HIV

The regional strategy for TB/HIV was first developed during 2003. The strategy has been revised to reflect changes in policies and strategies relating to TB/HIV over the intervening years as well as changes in the pattern and distribution of the HIV epidemic in the Region and as a result of lessons that have been learnt through implementing TB/HIV interventions. Figure 8 shows the current WHO policy framework for collaborative TB/HIV activities with the additional strategies included in the regional strategy.

Figure 8: Regional policy framework for collaborative TB/HIV activities

<table>
<thead>
<tr>
<th>WHO Policy on TB/HIV</th>
<th>Additional Strategies included in the SEA Regional Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Establish the mechanisms for collaboration</td>
<td></td>
</tr>
<tr>
<td>B. Decrease the burden of tuberculosis in people living with HIV/AIDS</td>
<td></td>
</tr>
<tr>
<td>C. Decrease the burden of HIV in tuberculosis patients</td>
<td></td>
</tr>
</tbody>
</table>

TB/HIV coordinating bodies, technical committees and working groups have been established in 10 out of the 11 countries of the Region, the exception being the Democratic People’s Republic of Korea. The level of collaboration in planning, guidance and oversight has, however, not been optimal. Surveillance for HIV among TB patients and vice versa, and systems to monitor and evaluate TB/HIV activities, remain weak. While many countries have now revised recording and reporting formats to include appropriate HIV data on the TB cards and registers and TB data on the HIV reporting formats, surveys (either sentinel or by other means) continue to be needed until the data compiled are sufficiently robust to reflect trends in TB/HIV through routine programme notifications.
While there are significantly more data available on HIV rates among TB patients, better surveillance of the burden of TB among PLHIV is required in most settings. Many health systems constraints common to both programmes remain unaddressed. Activities have been successful where coordination mechanisms at the local level have been strong.

In the context of implementing the three key interventions—intensified case-finding, IPT and infection control—in the Region, it is necessary that these interventions be owned by HIV programmes and be seen as indispensable to improving the quality of life of PLHIV. Intensified case-finding not only enables earlier identification of TB among PLHIV, resulting in better treatment outcomes, but also reduces transmission of TB in healthcare settings. It has been shown in high-HIV-prevalence settings that symptom screening alone allows for the detection of more than 90% of active TB among PLHIV, and that a negative symptom screen excludes TB with a 95% confidence interval. While IPT among PLHIV has been recommended by WHO since 1998, based on very strong evidence of the effectiveness of reducing TB, none of the countries in this Region has so far widely implemented IPT with the exception of Thailand, for a variety of reasons.

Another critical aspect is airborne infection control in the context of HIV care. Most of the interventions under the airborne infection control package are simple and cost-effective, such as health education on cough hygiene; keeping aerosol-generating activities such as sputum collection away from other patients; rapidly screening TB suspects in outpatient departments and fast tracking these patients to consult with doctors; maximizing natural ventilation; and decongesting waiting areas. Engineering controls such as UV lights, air filtration systems and other sophisticated measures such as negative pressure rooms are not essential in most healthcare settings, except at the tertiary level.

Integrated case management is an approach that is promoted in order that people with both TB and HIV can benefit from a single source of care for DOTS, CPT and management of opportunistic infections and ART on a closer-to-home basis. This requires increased programme efficiencies which in turn call for better planning, coordination and integration of service delivery. Decentralization of HIV services to the same or similar levels of the health system is critical to achieving integration. The integrated management of adult illness training package for health staff is a tool that has been developed to help countries move towards this goal. Given health
systems constraints, a number of health system strengthening measures must be put in place. The regional strategy addresses the key elements of these measures, including joint resource mobilization, capacity-building, improved data management and surveillance, better procurement and supply management of drugs and consumables and enhanced partnerships with other care providers and the community. Many excellent examples of how these have been put in place are available in the countries of the Region and need to be documented to more widely replicate successful approaches to building support systems for TB/HIV collaborations.

5.4 Group work: responding to HIV/TB in the Region — status and plans for scaling up interventions

In the group work that followed, countries analysed their current health systems and facilities offering various interventions for HIV and TB in terms of numbers of health institutions in each country offering TB treatment, TB microscopy, HIV testing, pre-ART registration, ART treatment, CPT, and percentage of health institutions offering both TB treatment and ART at the same site. Table 2 shows the status of service delivery in this context in the countries of the Region.

### Table 3: TB & HIV Service Delivery in countries of the SEA Region

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>Number of Health institutions offering TB treatment</th>
<th>Number of Health institutions offering TB Microscopy</th>
<th>Number of Health institutions offering HIV testing</th>
<th>Number of Health institutions offering ART treatment</th>
<th>Number of Health institutions providing CPT treatment</th>
<th>% of Health institutions providing TB x ART (assuming overlap)</th>
<th>Ratio of TB diagnostic v HIV diagnostic institutions</th>
<th>CD4 Machine</th>
<th>% CD4 precondition for ART provision of TB patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>BANGLADESH</td>
<td>954</td>
<td>954</td>
<td>23</td>
<td>2</td>
<td>1</td>
<td>0.2%</td>
<td>41.48</td>
<td>4 YES</td>
<td></td>
</tr>
<tr>
<td>BHUTAN</td>
<td>30</td>
<td>30</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>3.3%</td>
<td>4.29</td>
<td>2 YES</td>
<td></td>
</tr>
<tr>
<td>DPR KOREA</td>
<td>285</td>
<td>285</td>
<td>34</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8.38</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>INDIA</td>
<td>300000</td>
<td>12000</td>
<td>4967</td>
<td>179</td>
<td>179</td>
<td>0.1%</td>
<td>2.14</td>
<td>YE S</td>
<td></td>
</tr>
<tr>
<td>INDONESIA</td>
<td>8000</td>
<td>4855</td>
<td>482</td>
<td>148</td>
<td>122</td>
<td>1.6%</td>
<td>10.07</td>
<td>22 NO</td>
<td></td>
</tr>
<tr>
<td>MALDIVES</td>
<td>203</td>
<td>35</td>
<td>22</td>
<td>1</td>
<td>1</td>
<td>0.5%</td>
<td>1.59</td>
<td>1 YE S</td>
<td></td>
</tr>
<tr>
<td>MYANMAR</td>
<td>329</td>
<td>324</td>
<td>73</td>
<td>33</td>
<td>33</td>
<td>10.0%</td>
<td>4.44</td>
<td>10 YES</td>
<td></td>
</tr>
<tr>
<td>NEPAL</td>
<td>4129</td>
<td>409</td>
<td>136</td>
<td>23</td>
<td>23</td>
<td>0.6%</td>
<td>3.15</td>
<td>9 YES</td>
<td></td>
</tr>
<tr>
<td>SRI LANKA</td>
<td>26</td>
<td>26</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>19.2%</td>
<td>1.00</td>
<td>3 NO</td>
<td></td>
</tr>
<tr>
<td>THAILAND</td>
<td>74</td>
<td>18</td>
<td>9</td>
<td>2</td>
<td>2</td>
<td>2.7%</td>
<td>2.00</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>314030</td>
<td>19456</td>
<td>5379</td>
<td>394</td>
<td>438</td>
<td>0.13%</td>
<td>3.62</td>
<td>211 0</td>
<td></td>
</tr>
</tbody>
</table>

Source: National HIV/AIDS and TB control programmes, South-East Asia Region.

What became clear from this exercise was that the ratio of TB diagnostic facilities vis-à-vis HIV diagnostic institutions ranged from 0.2% in
Bangladesh to 19.2% in Sri Lanka, illustrating the gap in trying to bring the two services together at the same level of health facilities.

Participants then worked in country groups to develop plans for scaling up TB/HIV interventions using a set of key questions under each of the four strategic approaches under the new regional framework.

Following the small group discussions, countries made presentations for their plans and also identified their technical assistance requirements for implementing these plans.

Summarizing, countries concluded that:

- They all need to revise their current policies and guidelines based on the emerging evidence and their own country’s situation.
- TB/HIV programme management requires greater collaboration and accountability at the level of the national (and, in larger countries, subnational) TB/HIV coordination bodies.
- An evidence base for the use of IPT needs to be presented to the technical committees for adoption and implementation of this policy.
- Training of staff on TB/HIV interventions is critical for programme and case management.
- Prioritizing the implementation of ICF and infection control in VCT/ART centres is required.
- Strengthening TB/HIV surveillance and joint monitoring and evaluation by both programmes is critical.

6. **Technical support and financing: coordination of technical assistance and resource mobilization efforts for effective implementation**

There has been an unprecedented increase in country-level resources for TB control. This has resulted in countries increasingly defining their technical assistance (TA) needs and in an unprecedented increase in request for TA.
In response to this, the Stop TB Partnership and WHO created the TB Technical Assistance Mechanism (TBTEAM), a coalition of National TB Programmes, Stop TB partners, local and international NGOs, financial partners, and WHO, to respond to TA requests. TBTEAM was established under the DOTS Expansion Working Group and is coordinated by WHO Stop TB Department at headquarters and in the regions by the respective WHO regional and country offices. The objectives of the mechanism are to facilitate country planning for TA according to needs; promote exchange of TB expertise particularly between countries; provide a platform for coordination of TA and avoid duplication of efforts; and encourage collaboration of technical partners at every level.

To achieve these objectives, TBTEAM promotes the use of three web-based tools that track technical missions and events (including open requests for assistance), and an updated roster of experts, mapping in this context all partner contributions in countries. This has helped to facilitate planning and coordinate country support missions, share information on missions, events and partners’ activities, and share rosters of consultants as well as reports of TA in missions. One of the key functions has been to raise funds for TA through the United States Agency for International Development, the Office of the U.S. Global AIDS Coordinator, the U.S. President’s Emergency Plan for AIDS Relief and the GF. At the same time, these efforts have led to increasing national expertise in various areas of TB control. While the process has been very encouraging on the whole, the process of planning for TA is not yet systematic, the roster of experts is still quite limited and many partners are not yet fully engaged in providing TA. Another issue that is now coming up is whether TA is becoming too specialized to contribute to building capacity in countries. The need for evaluating the quality of TA was also raised. In order to become more effective, it was proposed that there be systematic planning at country level for TA through a well-coordinated in-country mechanism that would allow national programmes and partners to jointly identify needs and plan for TA, thereby avoiding overlap or multiple missions and to share information on capacity-building exercises in countries.

6.1 Introduction to planning

There are several opportunities for developing more ambitious and comprehensive plans for plans for TB control as compared to the situation five years ago. There is increasing international attention to financing for TB control. Many more tools exist in the form of clear guidelines and training
materials, a well-developed planning and budgeting tool for TB and a good framework for interacting and contributing to health systems strengthening. Countries therefore need to revisit their existing plans to review the burden of the disease, particularly of HIV-associated and MDR-TB, and estimate the real needs based on a good assessment and analysis of the country-specific situation. While the global framework provides guidance, countries need to set their own priorities and define concrete activities, setting milestones and indicators both for the short and medium term to achieve the goals set for TB control by 2015. The plans of all partners must be considered as well, and the involvement of other departments, both within ministries of health and other ministries, is essential to ensure alignment and harmonization. When estimating the needs, all available resources, including within the private sector in the country and from donors and development partners, must be taken into account. In order to benefit from ongoing health sector reform processes, NTPs need to look for opportunities that will help to address constraints while at the same time strengthening the disease-specific aspects of programme management, as clearly defined in the health systems and TB control framework. At the same time it must be recognized that countries in this Region with the highest burdens of TB have much to contribute through operational research. Attention to building capacity for this kind of research is therefore critical to improve programme performance and guide policies for better TB control both within the Region and elsewhere.

A framework for setting priorities was proposed within the national plans for TB control:

1. Intensify effective case identification on broader indications and ensure current policy is followed throughout health system.

2. Target cases already diagnosed but not notified under DOTS:
   - Expand/intensify DOTS, childhood TB, MDR-TB management, public-private or public-public mix, TB/HIV.
   - Improve referral and notification systems, regulation and enforcement.

3. Improve diagnostic capacity and quality (in the whole health system):
   - Make effective use of existing tools for diagnosing drug-susceptible and drug-resistant TB.
   - Implement new tools.
(4) Reinforce and broaden current strategy for active case-finding:
- Broaden contact investigation.
- Broaden indication for screening of additional clinical risk groups beside HIV.
- Screen risk populations, in particular HIV infected persons.
- Reinforce household contact investigation.

(5) Improve health education and social mobilization to improve knowledge and rational health-seeking.

6.2 Group work: plans for 2009-2010 and preparations for next five-year strategic plans 2011-2015: the Stop TB strategy

The group work began with a discussion of priorities in the countries in the Region based on common constraints and challenges for fully implementing the Stop TB strategy. The key points identified were:

- attention to increasing case-detection rates of all forms of TB, and particularly among new smear-positive patients;
- reducing diagnostic delays in order to reduce transmission, prevalence and deaths due to TB;
- building laboratory capacity for quality-assured C/DST;
- systematic provision of HIV testing, counselling and care for TB patients especially in areas with HIV prevalence;
- institution of infection control measures in health-care facilities in the context of expanding TB/HIV and MDR-TB case management;
- involving all care providers in implementing TB control services, in line with international standards of TB care;
- systematically addressing childhood TB;
- expanding intensified case-finding through contact investigation;
- scaling up community involvement in TB, MDR-TB and TB/HIV detection, treatment and care;
creating demand for patient-centred care through patients’ charters; and

building the capacity of the health workforce and health systems in order to implement all of the above in a more effective and efficient manner.

Participants worked in their own country groups together with the facilitators to review the existing 2009-2010 implementation plans and identified specific areas that need to be further strengthened through additional activities or the scale of interventions, based on identified priorities. They also identified additional funding and TA requirements for the current plan period. They then discussed priority activities for the preparation of the next five-year strategic plans (2011-2015), and set milestones towards reaching the targets for 2015. Specific attention was paid to identifying needs for TA by a specific area/activity and by calendar year per area (laboratory strengthening, infection control, TB/HIV, MDR-TB, etc).

The countries presented their plans as follows:

**Bangladesh**

Bangladesh has a Strategic Plan for TB control (2006-2010) that covers three broad objectives with eight service delivery areas. The main objectives of the strategic plan are to 1) increase the case-detection and maintain high cure rates; 2) strengthen major critical components of the services; and 3) address the issue of drug resistance. For the next plan period participants from Bangladesh prioritized building the capacity of the national laboratory network for quality-assured C/DST, streamlining procurement and supply management procedures for first- and second-line anti-TB drugs; improving data management software and analysis and use of data in the programme; developing a comprehensive HRD plan; updating national manuals and developing training materials on interventions for childhood TB and TB/HIV; increasing access to services among high-risk groups and in prisons, including offering contact tracing among these populations, and infection control. The programme also expressed interest in introducing the practical approach to lung health (PAL), scaling-up public-private partnerships, and advocacy, communication and social mobilization activities as a means of reaching
out to other sectors to enhance TB control efforts in Bangladesh. The need to undertake drug resistance surveys and expand the DOTS-plus project for the management of MDR-TB was also highlighted. The next five-year plan (2011-2015) will be developed by mid-2010.

**Bhutan**

Bhutan has a Strategic Plan for TB control (2006-2013), but it does not reflect many of the components of the Stop TB strategy, and the country plans to update and revise the existing plan to cover the period to 2015. The country participants identified the following priorities for the next plan period: establishment of C/DST in two national reference laboratories; finalization of the MDR-TB case management programme in consultation with GLC; customizing and installing data management software for the TB programme and improving capacity for data analysis and use; developing training modules on implementing new Stop TB strategy for health staff at various levels; strengthening TB/HIV collaborative activities, and developing a national strategy for comprehensive ACSM activities. Other planned activities include improving the quality of diagnostic services, strengthening cross-border TB control activities, improving monitoring and supervision, refurbishing of MDR-TB wards and undertaking a national ARTI survey.

**Democratic People’s Republic of Korea**

The Democratic People’s Republic of Korea has a Strategic Plan for TB control that runs until 2015. This plan covers all components of the new Stop TB strategy. The main constraint faced by DPR Korea is related to securing funding to fully implement this plan. The priorities for the NTP are identifying funding to sustain programme implementation, including securing funds for first-line anti-TB drugs following the cessation of GDF grants at the end of 2009; improving laboratory services for quality-assured smear microscopy; introducing C/DST; ensuring uninterrupted supplies of high-quality anti-TB drugs; strengthening supervision, surveillance, monitoring and evaluation; further decentralizing provision of treatment and care through household doctors; scaling up collaboration with other sectors such as the military, police and railways; and introducing MDR-TB case management under the programme. In this context, training modules for peripheral dong and ri clinic staff household doctors, particularly on newer interventions, are a priority. The NTP also plans to improve the
management of childhood TB through revising the guidelines in training modules. Infection control measures are planned to be introduced into health facilities where TB patients are managed. A joint review of the programme is planned in 2009.

**India**

The Revised National TB Control Programme of India will continue to prioritize activities and plan interventions to intensify the implementation of several components of the new Stop TB Strategy. The major focus during 2009-2010 will be to scale up interventions for MDR-TB and HIV-associated TB to reach additional states in the country. C/DST laboratories will be set up in 22 states and MDR-TB case management gradually expanded to cover the whole country by 2010. New diagnostics are currently being validated in the field and will be more widely used in the future. Second-line DST will also be introduced at selected state-level laboratories. HIV/TB collaborative activities will be extended to all states in the country. The programme plans during 2009 to review all aspects of the programme and develop a plan of action for the next five-year period. A joint monitoring mission to review progress and programme performance is planned in April 2009. The availability of first- and second-line drugs in the open market is a major challenge for the prevention and management of MDR-TB. While much progress has been made in involving the private sector, new schemes for its involvement will be implemented involving the Indian Medical Association to promote the use of the international standards of TB care (ICTC) by all health-care providers whether in the public or private sector. Engaging with communities through intensified ACSM approaches are also planned. Scaling-up of interventions among high-risk population groups, introduction of infection control measures, and management of childhood TB under the programme are additional priorities. Ongoing impact assessments will be conducted to report on progress towards the MDGs.

**Indonesia**

The TB programme has scaled up public-private partnerships and hospital-community DOTS linkages, teaching on the principles and practices of DOTS has been integrated into the medical school curriculum and the ISTC endorsed by the professional associations and widely disseminated. ACSM
activities are being scaled up in different provinces of the country. A comprehensive HRD plan is in place. DOTS-plus pilot sites are in preparation and TB/HIV collaborative activities have been initiated in some high-burden provinces. There are, however, challenges due to the decentralization of health services down to district level and overall cuts in the government budget. Planned activities are strengthening provision of TB services in hospitals, further strengthening the capacity of provincial laboratories for C/DST, expanding TB/HIV collaborative activities in high-risk provinces, scaling up MDR-TB DRS in other provinces, expanding from in Central Java, continuing capacity-building to fully implement the Stop TB Strategy and advocacy for sustained funding. The programme will update the five-year strategic plan in 2009 and focus on building in-country capacity towards further reducing dependence on external TA.

**Maldives**

The proposed activities for Maldives are to pursue high-quality DOTS through intensified case-finding with emphasis on early detection. Laboratory strengthening will be a major focus of the programme in 2009. Training of laboratory technicians from the Regional and atoll hospitals and training workshops on TB, MDR-TB case management and infection control are planned. Additional DOTS will be opened in the capital and DOTS services extended to the prisons. TB/HIV collaborative activities will continue and isoniazid preventive therapy will be introduced. An intensified advocacy and social mobilization campaign to increase community awareness and utilization of services will be organized. Collaboration across public health programmes by promoting joint planning, policy and strategy is seen to be critical.

**Myanmar**

The NTP has recently drafted the next five-year strategic plan for 2011-2015. Securing first-line anti-TB drugs beyond 2009 is a foremost concern for the programme. The scaling-up of TB/HIV services and introduction of IPT are part of the plans for 2009-2010. Additional microscopy centres will be opened and TB services further strengthened in the prisons. The involvement of the private sector will be promoted and the ISTC care widely disseminated through workshops. A national workshop on ACSM and activities to ensure that key messages reach the public are planned.
National infection control guidelines will be developed in 2009. Enrollment of MDR-TB cases will be commenced by the national programme in 2009, supported by UNITAID.

**Nepal**

The NTP in Nepal plans to revise the five-year strategic plan in early 2009, in order to apply through the national strategy application channel during the GF Round 9 call for applications. A national HRD plan will also be developed. Infection control policy and training materials will be developed to introduce infection control measures into health facilities attended by TB/HIV and MDR-TB patients. The NTP plans to address the issue of socioeconomic support, further decentralize treatment facilities and introduce infection control measures in the context of countrywide interventions to treat MDR-TB patients. The integrated PAL which has been in place in two districts will be expanded to the rest of the country during the next five years. The programme also plans to review and update and ACSM plan that will run over the next five years.

**Timor-Leste**

The NTP in Timor-Leste has prepared a multiyear strategic plan that runs up to 2015 and has successfully secured support through the GF through Rounds 4 and 7. The country-specific estimates for TB were revised in 2008. MDR-TB case management has commenced under the programme with laboratory support from the supranational laboratory in Australia for C/DST. TB/HIV collaborative activities have been established at national level and TB services extended to three prisons. Expatriate doctors working in community health centres and hospitals have been trained by NTP. Activities planned in 2009 and 2010 are revising the national laboratory manual, developing training modules and refresher training of district TB coordinators and regional supervisors, involving NGOs to extend services to uncovered areas, increasing the involvement of the community and improving monitoring and evaluation of the programme. Strengthening DOT and patient support and streamlining the drug supply and management system are also prioritized for this period.
7. Major recommendations

7.1 Recommendations on TB/HIV

Recommendations for NAPs and NTPs

- NAPs and NTPs should jointly clarify the roles and responsibilities and accountability for the operationalization of TB/HIV collaborative activities.

- NAPs and NTPs should develop and compile joint HIV/TB operational plans with costings which could be used to support resource mobilization efforts.

- NAPs of the Region should prioritize implementation of the “Three ‘I’s” (intensified TB case finding, airborne infection control, and isoniazid preventive treatment) in HIV care settings.

- NAPs and NTPs should scale up HIV testing of TB patients and take steps to improve access for HIV-infected TB patients to ART and CPT. In order to achieve this, the NAPs should promote the further decentralization of HIV testing and ART provision.

- NAPs and NTPs should incorporate the internationally recommended changes in their respective reporting and recording systems to enable the effective monitoring of the implementation of TB/HIV activities.

Recommendations for WHO

- WHO and technical partners should develop a consensus statement which includes:
  - evidence for the effectiveness and feasibility of IPT, addressing the technical and programmatic concerns relating to the use of IPT among PLHIV; and
  - guidance on appropriate modalities for implementation of airborne infection control in health-care settings in countries of the Region, especially those providing HIV and MDR-TB care.
7.2 Recommendations on MDR-TB

**Recommendations for NTPs**

- First and foremost, ensure full and effective implementation of quality DOTS through all public and private health-care providers involved in providing DOTS services to prevent the further emergence of MDR-TB.

- Develop or update the MDR-TB component of the national TB control plan for scaling up of MDR-TB management under the NTPs in order to provide universal access by 2015; high-MDR-TB-burden countries are encouraged to draft these plans as part of the preparations for the meeting on MDR/XDR-TB in Beijing in April 2009.

- Scale up capacity for laboratory diagnosis of drug resistant TB, including introduction of rapid diagnostics as recommended by WHO (LPA, liquid culture) and as appropriate in country-specific contexts. NTPs with limited numbers of MDR-TB suspects to establish functional linkages with C/DST laboratories in the region.

- Institute regular surveillance for more accurate nationally (or subnationally in large countries) representative data on the extent of, and trends in resistance to, first- and second-line drugs.

- Build in measures for a more patient-centred approach through attention to training of health staff providing care for these patients, ensuring adequate psychological and necessary social/financial support to ensure good treatment outcomes.

- Introduce the necessary changes in the reporting and recording systems to enable the effective monitoring of the implementation of MDR-TB activities.

**Recommendation for ministries of health**

- Develop and actively assist in building the capacity of local manufacturers to meet international GMP standards so as to allow for the production of quality first- and second-line anti-TB drugs.
**Recommendations for WHO**

- Provide technical assistance to NTPs for:
  - developing or updating the MDR-TB component of TB control national plans to achieve universal access to MDR-TB management by 2015;
  - developing applications to the Green Light Committee; and
  - scaling up the capacities needed for management of MDR-TB according to WHO guidelines, including thorough training of NTP staff on MDR-TB management.

- Provide guidance to countries on specific issues relating to the management of XDR-TB.

- Advocate with and strengthen drug regulatory authorities for effective pharmacovigilance and to ensure the more rational use of first- and second-line anti-TB drugs.

- Assist countries in establishing linkages with quality-assured laboratories in the Region and coordinate related skills-building trainings.

**7.3 Recommendations on HRD**

**Recommendations for NTPs**

- Ensure follow-up on the recommendations on HRD made during the Regional workshop on “TB control in the context of health systems strengthening” held in Colombo in August 2008.

- In the context of scaling up interventions for TB/HIV and MDR-TB, revise/update strategic and operational plans for HRD for the implementation of the Stop TB Strategy using the approach described in the WHO handbook “Planning the development of HRD for implementation of the Stop TB Strategy”.

**Recommendations for WHO**

- Continue technical assistance to countries to assess the needs and revise/update strategic plans for health systems strengthening, and in particular human resource development, to implement more effectively the Stop TB Strategy.
7.4 Overall recommendations

**WHO**

- Provide TA for building capacity for the full and effective implementation of national multiyear plans for TB control, focusing especially on the following:
  - programmatic areas: HRD, improving programme management, procurement and supply management, monitoring and surveillance; and
  - technical areas: laboratory capacity for the diagnosis of all forms of TB, infection control, childhood TB, MDR-TB, ACSM and operations research.

- Advocate at all high-level policy forums for the sustained and gradual increase in domestic budgets lines for essential priority programmes such as TB control.

**National TB control programmes**

- Develop the next five-year national operational plans for TB control (2011-2015), incorporating all activities and resources from both government and private sector.

- In the above context, develop ambitious proposals for submission during future rounds of GF applications to address financial gaps and build the required capacity to fully implement all planned interventions under national multiyear plans for TB control; also ensuring that the proposals include all foreseen technical assistance requirements and funding for this assistance.

- Assess the impact of the global financial crisis on funding for TB control and plans for scale-up, and take all necessary steps to secure funding for essential components of programme implementation, through both domestic and external sources.

- More actively engage with civil society including activists, both to elevate the profile of TB programmes and promote a “rights” approach for access to TB care, and to increase domestic investments in TB care and control activities.
Annex 1

Programme

1 Dec 2008

0900 – 0930 Opening

1000 – 1030 Progress in TB control: Global and Regional overview
  – K. Bergstrom and N Nair

1100 – 1200 Updates on key technical and programmatic issues
  – K. Bergstrom and F Wares

1200 – 1230 TB control and health systems strengthening: Perspectives from the Regional workshop
  – N Nair

1330 – 1500 Poster presentations Implementing the Stop TB strategy - Country updates
  – National Programme Managers

1530 – 1700 Plenary Discussion: Feedback and discussions on country updates
  (Temporary advisers to make short 5 minute interventions relating to their specific areas)

2 Dec 2008

1000 – 1030 The global response to MDR/XDR-TB (including the overview and plans of the GLI to support scaling-up of lab networks for C and DST:
  – E Jaramillo

1030 – 1115 National responses to MDR/XDR-TB
  – Country experiences:
    – Bangladesh, India, Nepal

1115 – 1130 Introduction to group work
  – E Jaramillo
1130 – 1230  **Group Work:** Responding to MDR/XDR-TB: Status and plans for scaling-up interventions  
– National Programme Managers

1330 – 1600  Group work continued

1600 – 1730  Country presentations on status and next steps to address MDR/XDR-TB  
– National Programme Managers

**3 Dec 2008**

0900 – 0930  TB/HIV: Update on key technical and programme issues  
– C Gunneberg.

0930 – 1015  Implementing TB/HIV interventions: Country experiences  
– India, Indonesia, Thailand  
Discussions

1045 – 1115  Regional Strategic Framework for TB/HIV  
– P Dewan

1115 – 1130  Introduction to group work  
– Oscar Martin Barreneche

1145 – 1230  **Group work:** Responding to HIV/TB in the Region: Status, plans for scaling up interventions  
– National Programme Managers

1330 – 1500  Group work continued

1530 – 1630  Presentations from group work and discussions  
– National Programme Managers

1630 – 1730  Conclusions and recommendations

**4 Dec 2008**

0900 – 0930  Technical support and Financing: coordination of technical assistance and resource mobilization efforts for effective implementation  
– Léopold Blanc

0930 – 0945  Introduction to planning  
– M Grzemska
   – National Programme Managers
1330 – 1430  Group work continued
1430 – 1600  Presentations and discussions
1615 – 1700  Major conclusions and recommendations
1715        Closing
Annex 2

List of participants

Country participants

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The Thirteenth Meeting of National TB Programme Managers from the WHO South-East Asia Region was held in Malé, Maldives, in December 2008. Participants at the meeting included representatives of national TB programmes, technical agencies and staff from WHO headquarters, the Regional Office for South-East Asia and country offices. The meeting was organized concurrently with the Eighteenth Meeting of the National HIV/AIDS Programme Managers to allow for a day for both programmes to jointly review the progress and challenges and discuss next steps to scale up a comprehensive package of interventions for HIV-associated TB in Member States of the Region.

Achievements in countries towards meeting the global targets set for TB control were presented. Key technical and programmatic issues, including interventions required to effectively respond to multi-drug resistant and HIV-associated tuberculosis were discussed and country experiences shared. Member States also presented their plans for the coming year and the technical assistance and resource requirements to effectively carry out all planned interventions were identified.