Regional Strategy to Stop Tuberculosis in the Western Pacific 2011–2015

REACHING OUT TO ALL
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<table>
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<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACSM</td>
<td>advocacy, communication and social mobilization</td>
</tr>
<tr>
<td>AFB</td>
<td>acid fast bacilli</td>
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<tr>
<td>AIDS</td>
<td>acquired immune deficiency syndrome</td>
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<tr>
<td>ART</td>
<td>antiretroviral treatment</td>
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<tr>
<td>CDR</td>
<td>case detection rate</td>
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<tr>
<td>CPT</td>
<td>co-trimoxazole preventive treatment</td>
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<tr>
<td>DOTS</td>
<td>directly observed treatment, short-course</td>
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<tr>
<td>DRS</td>
<td>drug-resistance surveillance</td>
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<tr>
<td>DST</td>
<td>drug susceptibility testing</td>
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<tr>
<td>FDC</td>
<td>fixed-dose combination</td>
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<tr>
<td>GLC</td>
<td>Green Light Committee</td>
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<tr>
<td>HIV</td>
<td>human immunodeficiency virus</td>
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<tr>
<td>IPT</td>
<td>Isoniazid preventive therapy</td>
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<tr>
<td>LED</td>
<td>light-emitting diode</td>
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<tr>
<td>M/XDR-TB</td>
<td>multidrug-resistant TB and extensively drug-resistant TB</td>
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<tr>
<td>MDR-TB</td>
<td>multidrug-resistant TB</td>
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<tr>
<td>M&amp;E</td>
<td>monitoring and evaluation</td>
</tr>
<tr>
<td>NTM</td>
<td>non-tuberculous mycobacteria</td>
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<tr>
<td>PDR</td>
<td>patient diagnostic rate</td>
</tr>
<tr>
<td>PMDT</td>
<td>programmatic management of drug-resistant TB</td>
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<tr>
<td>PPM</td>
<td>public-public and public-private mix</td>
</tr>
<tr>
<td>TB</td>
<td>tuberculosis</td>
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<tr>
<td>ZN</td>
<td>Ziehl-Neelsen</td>
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Since the Special Project to Stop TB was established in 1999, much has changed in TB control. The expansion of DOTS (directly observed treatment, short-course), which has been proven to be a very successful and cost-effective treatment strategy, was being implemented by all countries in the Region by 2005. This contributed to the achievement of the intermediate TB control targets of detecting 70% of cases, successfully treating 85% of cases and reaching 100% of the population with DOTS access. Every year, more than 1.3 million patients in the Region are diagnosed with TB and more than 90% of those with infectious forms of pulmonary tuberculosis are successfully treated. As a result of the successful expansion of quality TB services, the number of prevalent TB patients in the Region fell from 3.6 million in 2000 to 2.0 million in 2008. In addition, fewer patients are dying of TB. The Region, thus, made dramatic progress towards achieving the goal set by the 50th Regional Committee for the Western Pacific—to reduce the number of cases and deaths by one half by 2010 from 2000 levels. According to the latest estimates, both the MDG target and the regional goals set in 1999 and 2005 will be achieved.

In the past decade, more than 10 million patients were diagnosed and an estimated 800 000 lives were saved, but despite these successes, the TB burden in the Region remains unacceptably high with almost 2 million new TB cases and 260 000 TB deaths annually. New challenges threaten to undermine our efforts to control and eliminate tuberculosis in the Region. Tuberculosis is increasingly concentrated in vulnerable and hard to reach populations that have limited access to health care. The situation is further complicated by TB-HIV co-infection. The biggest concern, however, is the emergence and spread of drug-resistant TB, particularly multi-drug resistant TB (MDR-TB) and extensively drug-resistant TB (XDR-TB). It is estimated that 60 000 patients develop MDR-TB each year as the result of poor treatment practices and poor quality drugs. Another 60 000 develop MDR-TB due to the subsequent transmission of MDR-TB in our communities. To confront these obstacles, sufficient technical, financial and human resources must be committed to prevent and manage MDR- and XDR-TB. Failure to leverage the necessary financial resources now will result in much higher costs in the future.
As the characteristics of the epidemic are changing, our TB control strategy must also evolve. In response to the new challenges, WPRO has developed the Regional Strategy to Stop TB 2011–2015. This builds on the previous two regional strategies, and introduces new interventions and revolutionary laboratory technologies to guide the development of country-specific national TB control plans. The vision is to reach all TB patients at an early stage of their disease and to ensure universal access to TB diagnosis, treatment and care for all, regardless of socio-economic status, ethnicity, gender and age. I want to stress that it is of utmost importance that a proper balance between diagnostic and treatment capacity be achieved in order to ensure that all identified patients, especially those with MDR-TB, have access to quality treatment with quality drugs.

The Regional Strategy was strongly endorsed by all Member States at the 61st Regional Committee Meeting in Putrajaya, Malaysia (2010). The Strategy, however, is a guidance document and alone cannot change the quality of TB care, change behaviors or reduce the TB burden in the Region. National TB Control Plans must be developed with strong support from governments in order to have a true and lasting impact on the burden of tuberculosis in the Western Pacific.

Shin Young-soo, MD, Ph.D.
WHO Regional Director for the Western Pacific
In the Western Pacific Region, the most recent estimates indicate that there are approximately 1.9 million incident tuberculosis (TB) cases and 260 000 TB deaths annually. Cambodia, China, the Philippines and Viet Nam, four countries in the Region that are among the 22 high-burden countries globally, account for 93% of the regional case-load.

Significant progress has been made in TB control in the Western Pacific Region in the past decade. The number of prevalent TB patients in the Region fell from 3.6 million in 2000 to 2 million in 2008. During the same period, over 10 million patients were diagnosed and treated and an estimated 800 000 deaths were averted. According to the latest WHO estimates, the Western Pacific Region is likely to achieve its goal of halving prevalence and mortality by 2010 relative to 2000 levels. It should be noted, however, that the latest WHO estimates have large confidence intervals and should thus be interpreted with caution.

Despite these quantitative successes, TB control programmes in the Region face significant qualitative threats. The TB epidemic tends to concentrate in vulnerable and marginalized populations that are difficult to reach and often have limited access to health care. The situation is exacerbated by TB-HIV co-infection and the emergence and spread of drug-resistant TB, particularly multidrug-resistant TB (MDR-TB). The Region faces 120 000 incident MDR-TB cases annually, which equals 28% of the world’s MDR-TB burden. Several factors continue to contribute to the development of drug-resistant TB, such as inadequate treatment, especially in the private sector, over-the-counter sales of TB drugs, and drugs of poor quality. Surveillance data show that as many as half of all MDR-TB cases result from transmission of MDR-TB in the community.

In order to mitigate these threats, the Region must overcome a number of operational challenges. First, the current level of case detection is insufficient to cut the chain of transmission. New evidence suggests a number of underlying causes: some infectious patients do not seek care or self-medicate; a significant proportion of infectious patients has symptoms that do not match the current diagnostic algorithms; many patients with active TB disease turn to private providers who do not follow diagnostic and treatment guidelines; and diagnostic
methods used are not sensitive. Second, there is insufficient laboratory capacity for early
diagnosis of TB and for an effective response to MDR-TB and TB-HIV co-infection.
Third, the scale-up of the programmatic management of drug-resistant TB is hampered
by lack of the following: capacity to test for resistance; qualified human resources; effective
links with private and hospital sectors; models of care that ensure adherence to long and
complicated treatment regimens; quality-assured second-line drugs; and infection control.
Fourth, progress has been slow in the implementation of TB/HIV collaborative activities.
In 2008, only 11% of new TB patients received HIV testing. Among patients found to be
co-infected with TB and HIV, only 18% were enrolled in antiretroviral treatment (ART).
Lastly, current programme management capacity is often insufficient for the acquisition
and management of donor grants and the implementation and expansion of related, and
often complicated, programme operations.

In order to address the challenges listed above, the Regional Strategy to Stop Tuberculosis
in the Western Pacific (2011–2015) has been developed in consultation with the Member
States and the WHO Stop TB technical advisory group (Stop TB TAG). This Strategy
builds on the previous two regional strategic plans, but has been adapted to reflect new
and emerging challenges to TB control, as well as new evidence-based interventions
and technologies. The purpose of the Strategy is to provide guidance to countries on
the critical sets of interventions that are necessary to control TB in the Region. The
Regional Strategy encompasses the following guiding principles: positioning the health
systems strengthening agenda at the centre of the TB control strategy; considering the
legal and ethical issues of TB care and promoting a human rights-based approach to TB
policy developments; and valuing partnership, participation and social mobilization at
all stages of TB programming.

The goal of the Regional Strategy to Stop Tuberculosis in the Western Pacific (2011–2015) is
to reduce by half the prevalence of and mortality from all forms of TB by 2015, relative to
2000 levels, in all countries with a high burden of TB by moving towards universal access
to diagnosis and treatment of all forms of TB, including smear-negative and multidrug
and extensively drug-resistant TB. The Strategy provides a reference for actions to be
taken in light of the five core objectives:

- Objective 1. Promoting universal and equitable access to quality TB diagnosis and
treatment for all people
- Objective 2. Strengthening TB laboratory capacity
- Objective 3. Scaling up the programmatic management of drug-resistant TB
- Objective 4. Expanding TB/HIV collaborative activities
- Objective 5. Strengthening TB programme management capacity

As for Objective 1, important innovations include the introduction of routine contact
investigation for household contacts, the introduction of more sensitive diagnostic algorithms and targeted active case-finding among high-risk populations. In addition, interventions should focus on universal and equitable access to quality TB services by strengthening public-private mix approaches and addressing access barriers to TB care for vulnerable populations.

As for Objective 2, laboratory capacity-building needs to reflect the scale-up plans for MDR-TB response and TB/HIV activities as well as take opportunities for cross-cutting collaboration between disease programmes. New diagnostics, which are easy to operate, offer opportunities to decentralize the diagnosis of drug-resistant TB, to reduce the turn-around time of MDR-TB diagnostics from months to hours, to increase the sensitivity of TB diagnosis compared to conventional methods and to share equipment and human resources with other disease programmes.

Objective 3 addresses the need for development and implementation of comprehensive scale-up plans for the programmatic management of drug-resistant TB. This requires firm political commitment to ensure sufficient financial and human resources, as well as policies and legislation that ensure that all providers give proper treatment using quality drugs.

Objective 4 focuses on the implementation of the comprehensive policy framework for TB/HIV collaborative activities, including critical interventions to reduce the morbidity and mortality associated with TB and HIV. In settings with HIV prevalence among TB patients greater than 1%, HIV testing should be offered to all TB patients. Antiretroviral treatment should be provided to all TB patients with HIV co-infection.

Objective 5 addresses a critical prerequisite for effective TB control, namely TB programme management capacity. Effective TB programmes require sufficient financing, appropriate legislation and regulatory controls, well-planned human resource development strategies, and integrated TB control within the primary health care networks that address cross-cutting issues, such as infection control, monitoring and evaluation (M&E) and evidence-based programme management through operational research.

Indicators to measure progress towards achieving the objectives and corresponding targets have been identified for each of the five objectives. Since this is a guidance document, some indicators and expected results may need to be adapted according to the unique context of each country. Member States are recommended to develop or update their national TB strategic plans using this Regional Strategy as a framework, and to mobilize the resources for sustainable state-of-the-art TB control. Current levels of national funding are not sufficient to scale up and sustain new, costly TB control interventions.
Significant progress has been made in tuberculosis (TB) control in the Western Pacific Region over the past decade. Every year, more than 1.3 million patients in the Region are diagnosed with TB and more than 90% of those with infectious forms of pulmonary tuberculosis are successfully treated. As a result of the successful expansion of quality TB services, the number of prevalent TB patients in the Region fell from 3.6 million in 2000 to 2 million in 2008. In addition, fewer patients are dying of TB.

Despite these successes, TB control programmes in the Region face significant challenges that need to be addressed urgently with increased political commitment and resources. The TB epidemic tends to concentrate in vulnerable and marginalized populations that often have limited access to health care and are difficult to reach. In addition, the HIV epidemic still poses a major threat and has the potential to reverse the gains achieved by TB control efforts. Finally, the Region has not yet adequately responded to the epidemic of multidrug-resistant TB (MDR-TB) in terms of technical, financial and human resources.

The Regional Strategy to Stop Tuberculosis in the Western Pacific (2011–2015) aims to provide guidance to countries in the development of their national TB control strategies, putting into practice the critical components of the Stop TB Strategy (Appendix 1, Table 2). The Regional Strategy was developed based on an in-depth analysis of the evolution of the TB epidemic and public health response in the Region. It builds upon the achievements made by the previous two strategic plans (Box 1), while taking into account regional and country-specific challenges and opportunities. The new strategy also has been informed by the latest technical and health systems developments, including the introduction of new cross-cutting diagnostics.
Box 1. Development of the Regional TB control efforts from 1999 to 2010

Following the declaration by the Regional Committee for the Western Pacific in September 1999 of a “tuberculosis crisis” in the Region, a resolution was adopted to establish the Special Project to Stop TB. The Regional Committee in 2000 endorsed the regional goal of reducing by one half the TB prevalence and mortality compared with the level in 2000, and set the targets for 2010.

As an intermediate step towards reaching this goal, three regional targets were set for 2005—detecting 70% of estimated TB cases, successfully treating 85% of these cases, and achieving 100% region-wide DOTS (directly observed treatment, short-course) coverage. The Special Project to Stop TB in the Region was remarkably successful in achieving these three targets within five years.

In 2006, the second regional plan, the Strategic Plan to Stop TB in the Western Pacific (2006–2010) was launched. The goal of the plan was to increase the decline of prevalence and mortality rates in order to achieve the regional goal by 2010. The plan had three strategic objectives: sustaining and optimizing the quality of DOTS while progressing beyond the “70/85” targets; ensuring equitable access to high-quality TB care for all people with TB; and adapting DOTS to respond to multidrug-resistant and extensively drug-resistant TB, as well as TB-HIV co-infection.

From 2000 to 2008, case notifications have increased by 73% and the Region has achieved remarkable progress by diagnosing 10 million patients, including 6.6 million patients in China. More than 90% of patients with infectious forms of pulmonary TB were treated successfully, and, between 2000 and 2008, an estimated 800 000 deaths were averted.

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1 Regional Committee resolution WPR/RC50.R5.
2 Regional Committee resolution WPR/RC51.R4.
The global TB incidence has seen a reversal since 2004. However, the most recent global estimates indicate that some 9.4 million TB cases occur annually, resulting in 1.3 million deaths. Furthermore, approximately 1.4 million TB patients are co-infected with HIV. In addition, the emergence and silent spread of drug-resistant TB, particularly MDR-TB, poses serious public health challenges. Globally, more than 440 000 MDR-TB cases occur every year, of which only a small proportion of cases has been properly diagnosed and treated.

In the Western Pacific Region, the most recent estimates indicate that there are approximately 1.9 million incident TB cases and 260 000 TB deaths annually (Fig. 1). Cambodia, China, the Philippines and Viet Nam, four countries in the Region that are among the 22 high-burden countries globally, account for 93% of the regional case-load.

**Fig. 1 – TB disease burden by WHO Region**

<table>
<thead>
<tr>
<th>Distribution of TB Case by Region</th>
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<tr>
<td>South-East Asia: 34%</td>
</tr>
<tr>
<td>Africa: 30%</td>
</tr>
<tr>
<td>Western Pacific: 21%</td>
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<tr>
<td>Americas: 7%</td>
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<td>Europe: 5%</td>
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According to the latest WHO estimates, the regional goal of halving prevalence and mortality by 2010 relative to 2000 levels is likely to be achieved (Fig. 2). This achievement is the result of the rapid expansion of DOTS, while maintaining a high cure rate. It should be noted, however, that the latest WHO estimates have large confidence intervals and should thus be interpreted with caution. The 2010 national prevalence survey in China, where approximately 70% of the regional TB burden is found, will provide important information to assess the real burden of disease.

Multidrug-resistant TB and extensively drug-resistant TB (M/XDR-TB) pose increasing threats to TB control in many countries in the Western Pacific Region. The Region carries 28% of the world’s MDR-TB case-load (Fig. 3). As of 2008, it is estimated that 4% of new incident and 24% of previously treated TB patients in the Region are suffering from MDR-TB. China, the Philippines and Viet Nam account for 97% of the total number of estimated MDR-TB cases among both new and re-treatment cases.
In addition, HIV has the potential to reverse the gains of TB control in several parts of the Region. Cambodia, Malaysia, Papua New Guinea, Viet Nam and areas of China are particularly affected in terms of the number of people co-infected with HIV and the number of deaths associated with TB-HIV (Fig. 4). TB case fatality among patients with HIV is considerably higher than among HIV-negative TB patients, even under a well-functioning TB programme. In 2008, the overall estimated prevalence of HIV in new TB cases was 2.3%, with wide variation among countries ranging from less than 1% and up to 15%.

**Fig. 4 – Estimated morbidity and mortality associated with TB-HIV co-infection**

![Bar chart showing estimated number of patients with TB-HIV co-infection and deaths due to TB-HIV co-infection in the Western Pacific Region (Total), China, Viet Nam, Cambodia, Malaysia, and Papua New Guinea.](source)

*Source: Global TB Control 2009, WHO*
Although TB control in the Western Pacific Region has made substantial progress over the last decade, the Region faces significant challenges and there are new opportunities to improve control.

4.1 Many TB patients remain undiagnosed, resulting in ongoing transmission in communities

It is increasingly recognized that the current level of case detection is not sufficient to control TB transmission in communities. Data from TB prevalence surveys, detailed analyses of TB case notifications and various operational research findings suggest the following underlying causes:

• A significant proportion of infectious patients continue transmitting TB before they are detected by TB programmes. The national prevalence survey of Cambodia (2002) found that 38% of identified smear-positive patients did not meet the “TB-suspect criteria” of the TB programme (prolonged cough or haemoptysis). These patients are transmitting tuberculosis, but are currently not diagnosed in routine programmatic settings. In addition, prevalence surveys in the Region show the limitations of TB diagnosis when only smear microscopy is used. The introduction of TB culture during the prevalence survey resulted in the identification of up to three times as many bacteriologically confirmed TB patients, compared to the use of TB smear microscopy alone. These facts show the serious limitations of the current diagnostic algorithm and methods predominantly relying on passive case detection, symptom screening and sputum smear microscopy.

• People with active TB disease are not promptly seeking care from health care providers who are linked with national TB programmes. The prevalence survey of the Philippines (2007) showed that only 32% of subjects with TB symptoms consulted a health care provider, 43% self-medicated and 25% took no action. Of those who consulted a health care provider, 38% went to private providers or hospitals, 26% to public hospitals and 27% to DOTS centres. The national prevalence survey of China (2000) also showed that 43% of symptomatic cases had not attended any health facility. These findings illustrate that the lack of TB awareness in communities results
There are a number of unexplored opportunities for increased case detection among groups of people at high risk of TB. For example, TB contact investigation is not widely implemented, although it has been proven to contribute to the prevention of transmission through the early diagnosis and treatment of patients with active disease, as well as latent TB infection. In addition, intensified contact investigation would provide an excellent opportunity to diagnose TB in children and overcome some of the difficulties in diagnosing childhood TB. It is also known that diabetes is associated with both an increased risk of TB and poor treatment outcomes. Systematic TB screening among diabetic patients may contribute to early case detection and improve patient well-being by preventing complications associated with dual pathologies. Other high-risk populations that deserve attention include health care workers, the elderly, migrants and people in congregated settings.

Ensuring equitable access to quality health services is one of the top priorities of the universal health coverage agenda. Since TB disproportionally affects specific segments of the population, notably the poorest, most marginalized and vulnerable populations, equitable access is crucial to TB programme success, especially in countries with large socioeconomic discrepancies. In this sense, TB control activities could serve as an entry point for broader interventions seeking to provide social and financial risk protection and for removing barriers to quality health services.

4.2 Insufficient laboratory diagnostic capacity

Insufficient laboratory diagnostic capacity prevents an effective response to the challenges of TB-HIV co-infection, smear-negative TB and drug-resistant TB. Gap analyses have confirmed that such a response requires the urgent and massive scale-up of laboratory services, including related human resources. The lack of TB laboratory capacity constitutes a crisis, requiring a paradigm shift in providing laboratory policy guidance, quality assurance and knowledge-creation within national laboratory networks.

New diagnostics, which are easy to operate, offer opportunities to decentralize the diagnosis of drug-resistant TB to the district level and to increase the sensitivity of TB diagnosis compared with conventional methods. In addition, some of these new diagnostic tools can be used for other diseases such as HIV/AIDS, malaria and influenza. However, plans for laboratory strengthening are often developed in isolation, without links to national MDR-TB and TB/HIV activity scale-up plans and without benefiting from opportunities for cross-cutting collaboration between disease programmes.

Lack of coordination between laboratory services, the TB control programme, other disease programmes and relevant ministries may result in insufficient capacity to treat all diagnosed MDR-TB patients and in inefficient utilization of public health resources.
4.3 Slow progress in the expansion of MDR-TB response

The Western Pacific Region has not seen much progress in preventing the development and transmission of drug-resistant TB. Less than 3000 patients received second-line treatment between 2005 and 2009, covering only a fraction of the estimated number of MDR-TB cases (Fig. 3).

Although most countries with a high burden of MDR-TB have successfully piloted programmatic management of drug-resistant TB (PMDT), the scale up is hampered by the lack of: (a) laboratory networks; (b) qualified human resources; (c) effective linkages with private and hospital sectors; (d) models of care that ensure adherence to long and complicated treatment regimens; (e) quality-assured second-line drugs; and (f) infection control. Overall, there is limited strategic planning of PMDT at all levels.

Drug-resistant TB is developing beyond the group of “retreatment cases”. Fig. 5 shows the estimated number of MDR-TB cases among new smear-positive cases (blue bar) and previously treated cases (red bar) based on actual case notifications from countries and reliable drug-resistance surveillance data. These numbers represent the MDR-TB cases that can be detected if all notified smear-positive cases receive culture and drug susceptibility testing (DST). It also illustrates that more than half of MDR-TB occurs in newly infected TB patients as the result of ongoing transmission of MDR-TB in the community.

In addition, several factors continue to contribute to the development of drug-resistance, such as inadequate treatment in the private sector, self-medication, over-the-counter sales of TB drugs and drugs of poor quality.
These challenges require firm political commitment and financial resources to develop and implement comprehensive scale-up plans for the PMDT and to develop policies and legislation that ensure proper treatment with quality drugs by all providers.

4.4 Limited coverage of TB/HIV collaborative activities

Progress has been slow in the implementation of TB/HIV collaborative activities. In 2008, only 11% of new TB patients received HIV testing. Among patients found to be co-infected with TB and HIV, 29% received co-trimoxazole preventive treatment (CPT) to prevent opportunistic infections and only 18% were enrolled in antiretroviral treatment (ART). In total, 10 551 TB patients were identified as HIV-positive, representing 7% of the 152 468 TB cases that were tested. These HIV-positive TB patients represented 22% of the estimated number of HIV-positive TB cases in the Region.

Cambodia has been the most successful country in the Region in implementing TB/HIV collaborative activities. However, a major weakness in all TB high-burden countries has been the inadequate implementation of the three interventions intended to reduce the TB burden among people living with HIV. The three ‘I’s, or interventions, are Intensified TB case-finding, Isoniazid preventive therapy, and ensuring Infection control in health facilities.

4.5 Limited programme management capacity

In many countries, national TB programmes face the challenge of expanding programme operations and increasing financial resources without appropriate management capacity. This inadequacy undermines rational planning, timely implementation of activities, disbursement of donor funds, accountability, programme performance monitoring, supervisory activities, and quality data collection and reporting.

Furthermore, the requirements of the Global Fund to Fight AIDS, Tuberculosis and Malaria and other donors for grant applications, implementation and reporting place an enormous burden on fragile and understaffed programmes. The Stop TB Strategy established at the global level is also far more complex than “basic DOTS” and requires technical competencies that are often not available within countries. Technical assistance provided to countries in response to some of these challenges is often uncoordinated and can unintentionally overwhelm programmes even further.
The Regional Strategy to Stop Tuberculosis in the Western Pacific (2011–2015) encompasses the following guiding principles:

5.1 Positioning the health systems strengthening agenda at the centre of the TB control strategy

It has been increasingly recognized that TB control efforts will have more impact when addressed in conjunction with the critical components of the health systems agenda. Issues particularly relevant to TB control include: (1) universal health care coverage to ensure equitable access to quality care; (2) public policy reforms, including social and financial risk protection for vulnerable and marginalized populations; (3) sound planning and implementation of human resources development for health; (4) strong health and social policies to ensure and enforce quality standards of health care practices and medical products, particularly in the private sector; and (5) the promotion of collaboration between different programmes within the health sector. The strategy therefore covers relevant cross-cutting elements of the critical health systems agenda to maximize synergies between TB control programmes and health system strengthening efforts.

5.2 Considering the legal and ethical issues of TB care and promoting a human rights-based approach to TB policy developments

With the increasing complexity of TB control efforts today—as well as the emergence of multidrug-resistant and extensively drug-resistant TB (M/XDR-TB) and TB-HIV co-infection—a range of concerns has been raised about the ethics of TB care. There is broad consensus that mainstreaming a human rights-based approach to TB programmes will support an effective response to several challenges, including universal and equitable access, TB interventions among undocumented migrants, and ensuring proper care for people in congregated settings. WHO is currently undertaking a thorough analysis and will provide guidance on priority ethical and legal issues related to TB care (e.g. access to diagnosis and treatment, obligations and rights
of health care workers and patients, and public health measures and research). In the meantime, this Strategy aims to incorporate the available knowledge and guidance in these relatively new and important areas.

5.3 Valuing partnership, participation and social mobilization at all stages of TB programming

Partnerships at the global, national and local levels are critically important in any TB control effort. The global Stop TB Partnership has been instrumental in harmonizing and coordinating the global players in TB control with shared responsibilities and objectives. Effective national-level coordination among partners is even more critical in terms of aid effectiveness, planning and priority-setting, as well as ownership of national TB control programmes. Still many countries require further enhanced efforts for advocacy, communications and social mobilization (ACSM) to build a broadly allied social movement to eliminate TB.
The vision of TB control in the Region is to achieve elimination of TB as a public health problem. The definition of elimination is an incidence rate of less than 1 TB case per 1 million population.

The goal of the Regional Strategy to Stop Tuberculosis in the Western Pacific (2011–2015) is to reduce by half the prevalence of and mortality from all forms of TB by 2015, relative to 2000 level, in all countries with a high burden of TB by moving towards universal access to diagnosis and treatment of all forms of TB, including smear-negative and M/XDR-TB.

The Strategy provides a reference for actions to be taken in light of the five core objectives:

**Objective 1.** Promoting universal and equitable access to quality TB diagnosis and treatment for all people

**Objective 2.** Strengthening TB laboratory capacity

**Objective 3.** Scaling up the programmatic management of drug-resistant TB

**Objective 4.** Expanding TB/HIV collaborative activities

**Objective 5.** Strengthening TB programme management capacity

Successful implementation of the Strategy is expected to result in the achievement of the following targets.

- reduce the prevalence and mortality from all forms of TB by half by 2015, relative to 2000 level, in all countries with a high burden of TB, by moving towards universal access to diagnosis and treatment of all forms of TB, including smear-negative and M/XDR-TB;
- cure rates for new cases continue to be higher than 85%;
- an increase in case notification rates of all forms of TB, reflecting intensified case-finding efforts;
- all countries with a high burden of TB develop and implement comprehensive laboratory network plans that take into account opportunities for collaboration with other public health programmes and that include new diagnostics;
all countries with a high burden of TB develop and implement a comprehensive PMDT expansion plan to gradually cover the whole country;

- in areas covered by PMDT, at least 90% of MDR-TB suspects receive an appropriate diagnostic test for drug-resistant TB;

- all identified MDR-TB patients have access to appropriate treatment regimens with quality assured second-line drugs;

- all countries develop a comprehensive policy framework for TB/HIV collaborative activities and implement critical interventions to reduce morbidity and mortality associated with TB and HIV; and

- national TB programmes secure sufficient and adequately trained human resources according to human resources development plans.

Indicators to measure progress towards achieving the objectives and corresponding targets have been identified for each of the five objectives (Appendix 1, Table 1). The indicators should be adapted according to the needs of each country. The specific activities should be formulated in national TB control plans.

6.1 Objective 1 – Promoting universal and equitable access to quality TB diagnosis and treatment for all people

The first objective focuses on intensifying and improving case-finding to detect as many cases of TB as possible, as early as possible. This will require a comprehensive set of activities that begin with ensuring the availability of basic, quality TB services nationwide and conducting a detailed assessment of where the missing TB cases might be found. Initiatives for engaging all health care providers, namely public-public and public-private
mix (PPM) approaches, should be further strengthened and institutionalized, together with the dissemination of the *International Standards for Tuberculosis Care*.

Each country needs to develop TB strategies for high-risk groups that are tailored to the specific characteristics of each risk group and the country’s unique environment. Approaches to minimizing access barriers, especially for the poor and vulnerable, are to be developed and promoted, including social and financial risk protection for vulnerable populations. The desired and undesired consequences of insurance schemes need to be carefully studied. Fig. 6 shows a framework for analysing and identifying potentially effective strategies to improve case detection, most of which are discussed below.

The focus on TB high-risk groups and vulnerable populations will be increasingly important in the Region because it has historically been shown that a decline in TB incidence leads to disease concentration among specific segments of the population. It is, therefore, critically important for the national TB programmes to maintain the focus on TB high-risk groups, even if TB control successes among the general population lead to decreased attention and political commitment.

### 6.1.1 Analysis on the distribution of undetected TB patients

The critical first step is a detailed review of current case-finding efforts to identify possible reasons for missing cases and for diagnostic delay. Several methodologies can be applied for this purpose. The “onion” model framework guides a programme to assess the fraction of TB cases unaccounted for in TB notification data. The analysis would include reviewing the awareness of TB in the population, as well as health-seeking behaviour of people with respiratory symptoms. Various health systems studies provide valuable information such as the coverage, accessibility and affordability of health services, and the quality of the diagnostic network.

In-depth analysis of TB surveillance data can also reveal the trend of TB notification disaggregated by geographical area, age group and sex. The cross-validation of TB surveillance data with other data sources, such as vital registration data, health insurance databases, hospital registries and the like will provide estimates of TB surveillance coverage. A systematic review of available operational research may provide crucial information to develop case-finding strategies.

### 6.1.2 Engaging all health care providers and ensuring the quality standards of care

In many countries in the Region, people with respiratory symptoms seek care from a variety of different health care providers not linked with the national TB programmes. These include private clinics, general hospitals, workplace clinics, pharmacies and traditional practitioners. Engaging these care providers to refer suspects or provide quality TB services through PPM approaches greatly expands the network of TB care through

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1 The “Onion” model: a framework for assessing the fraction of TB cases accounted for in TB notification data. [Link](http://www.who.int/tb/advisory_bodies/impact_measurement_/taskforce/resources_documents/onionmodel.pdf)
Box 2. Patient diagnostic rate: an alternative measure to assess TB case detection

The case detection rate (CDR), defined as the number of reported cases divided by the estimated incidence, has been an indicator to measure the progress in case-finding. Since TB incidence is based on estimates, the CDR is always accompanied by a significant degree of uncertainty. The patient diagnostic rate (PDR) is an alternative measure for case-finding, which is expressed as the number of reported cases per 100,000 population per year divided by the prevalence per 100,000 population. The PDR is the rate at which prevalent cases are detected by control programmes (i.e. “clearance rate” of the existing cases) and the prevalence can be measured directly through national prevalence surveys. The Western Pacific Region is fortunate to have many countries with prevalence survey data available or surveys under way.

The PDR can be a useful indicator to assess the level of case detection for the countries in which a prevalence survey has been conducted. It can be applied for subgroups if disaggregated data is available for both TB prevalence and case notification. The figure shows an application of the PDR for the Viet Nam prevalence survey 2006–2007 with disaggregation for sex, age group and geographical areas. Although its utility is still to be explored and validated, there is a great potential to use the PDR as a tool to assess both epidemiology and case-detection performance in relation to gender, age group, geographical setting and socioeconomic status.

Prevalence rate, annual case notification rate and Patient Diagnostic Rate (PDR) in Viet Nam, 2006–2007

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which high-quality TB services are provided. Experience in the Philippines shows the potential to increase case detection by as much as 20% and to significantly improve case management through the PPM approach. In China, case notification increased by 30% when general public hospitals were obliged to notify TB suspects and cases through an Internet-based infectious diseases surveillance system.¹

¹ External evaluation of public-private mix DOTS supported by the Global Fund in the Philippines. Manila, World Health Organization Western Pacific Region, 2005
Promoting the *International Standards for Tuberculosis Care* among care providers, health professionals, patients and communities will further consolidate PPM approaches and ensure quality care for all TB patients, thus improving treatment outcomes and reducing the development of drug resistance. As such, the promotion of the *International Standards for Tuberculosis Care* and PPM contributes to the prevention of M/XDR-TB. Ensuring quality standards of care is not a TB control issue alone, but rather a wider health system issue discussed in a later section of this document.

### 6.1.3 Revisiting diagnostic algorithms and methods

Four important developments in international TB control require the continuous and dynamic revision of diagnostic algorithms. First, the new regional TB control strategy advocates for intensified case-finding. Initially, TB programmes focused on detection of highly infectious, or smear-positive, patients. But clearly, more needs to be done to cut the chain of transmission. The next step is to target all forms of TB, thus addressing the need for early case-finding and the threats posed by TB-HIV co-infection and the emergence of MDR-TB. Second, new diagnostics have been developed and endorsed by WHO. These diagnostics bring increased sensitivity and facilitate the decentralization of the diagnosis of drug-resistant tuberculosis. Third, new evidence from prevalence surveys shows the need for revision of the suspect criteria. Lastly there is ample evidence for the added value of active case-finding for identified TB risk groups.

As a result of all these developments, existing algorithms and procedures need to be revised, and new ones need to be developed and evaluated to expand routine case-finding to include smear-negative/culture-positive, extra-pulmonary and childhood TB. For example, the definition of a “TB suspect” should be revisited based on findings of prevalence surveys showing that a large proportion of TB patients, including those with smear-positive disease, do not meet the usual suspect definition of a “cough for more than two to three weeks”. There is also a potential to employ additional suspect criteria, such as diabetes, smoking status, malnutrition, immuno-compromised status, substance abuse and other socioeconomic factors appropriate to a country. Regardless of other symptomatic criteria, patients attending health services with abnormal chest radiography should always have direct smear microscopy, and more sensitive diagnostics such as culture or real-time, automated nucleic acid amplification assays should be considered depending on available infrastructure and financial resources.

However, during the coming years, sputum smear microscopy remains the main diagnostic tool for pulmonary TB. To improve some of its shortcomings, particularly low sensitivity, a gradual transition to fluorescent microscopy using light-emitting diodes has been recommended (discussed in a later section of this paper). Also, the same-day diagnosis method, the so called “front-loading” procedure in which two consecutive sputum specimens are taken on the day of the first consultation, has the potential to reduce the initial drop out of patients before confirming the diagnosis. Lastly, the new definition of smear-positive TB (requiring only one smear-positive result) will contribute to increased case detection.
Diagnostic tests for TB in children have shortcomings, and the full range of tests is often not available. To overcome the difficulty in diagnosing TB in children, TB programmes are encouraged to further develop innovative approaches appropriate to the situation in their countries. These may include effective links with paediatric hospitals, collaboration with various feeding programmes for malnourished children and intensified contact tracing. Cambodia has been successfully increasing case detection among children in recent years by organizing “outreach” contact investigation in targeted districts where a relatively large number of smear-positive cases has been notified.

The currently recommended algorithm for smear-negative TB involves a course of broad-spectrum antibiotics and follow-up chest radiography. While this algorithm minimizes the risk of false-positive diagnosis, it can cause drop out and delay during the diagnostic process, which can be critical for people co-infected with TB and HIV. Priority groups for culture and drug susceptibility testing include people living with HIV and MDR-TB suspects. Ideally, these patients should have access to rapid diagnostics such as Line Probe Assay or the Xpert MTB/RIF system (see 6.2).

The gradual introduction and decentralization of far more sensitive diagnostic methods than sputum smear microscopy, such as solid or liquid culture and molecular methods, have the potential to boost the detection of TB in general, and drug-resistant TB in particular. Countries are therefore recommended to revisit case-finding strategies, in alignment with laboratory network design and the selection of diagnostic methods.

6.1.4 Intensified case-finding strategies for high-risk populations

There are a range of population groups that are at higher risk of TB than the general population. These high-risk groups deserve systematic and active case-finding approaches—one of the most prominent examples being the intensified TB case-finding among people living with HIV. An effective active case-finding strategy aims to facilitate easy access and early diagnosis and treatment for TB patients among high-risk groups. It will not only benefit the patients themselves by reducing morbidity and mortality associated with TB, but should also contribute to the greater epidemiological impact by shortening the duration of infectiousness and thus cutting the chain of transmission in the community.

One of the most rational and cost-effective strategies is TB contact investigation, particularly the active screening of close contacts of smear-positive pulmonary TB patients. There is convincing evidence for the substantial yield of TB case-finding by contact investigation in both developed and developing countries. A recent systematic review found that 4.5% of household contacts were diagnosed with active TB disease.4

Most countries in the Region have already included contact investigation in national TB guidelines. However, the routine implementation of this activity is very limited in many countries. This is a missed opportunity for the national programmes to detect and treat more cases, while protecting concerned families and communities. All TB control programmes should systematically implement TB contact investigations. TB contact investigation would also provide an excellent opportunity to facilitate the diagnosis of TB in children. The

above mentioned literature review reported an even higher prevalence (8.5%) of active TB disease among children under 5 years.

The scope of active and intensified TB case-finding can be further extended by introducing TB screening in existing clinical or non-clinical settings, such as diabetes clinics, smoking cessation clinics, feeding programmes for malnourished children, elderly people under institutional or home care, and health care workers and clerks at increased risk of TB infection.

Addressing the needs of people in special situations with an increased risk of TB, such as people in prisons and drug addiction rehabilitation centres, should be carefully planned to meet their special needs, both in diagnosis and treatment support. In some circumstances, programmes may organize active case-finding services for difficult-to-reach, high-risk groups, for example migrant workers, poor urban dwellers and people using homeless shelters. These efforts should always be accompanied by care delivery options that are tailored to the groups involved. The latter may involve cross-border TB control activities that combine improved access to diagnosis and cross-border treatment referrals.

Programmes should also work closely with community workers to enable them to actively identify and refer TB suspects in communities.

All new case-finding strategies listed above should be carefully piloted, documented and monitored. Country-specific operational research is required to study the yield and the cost effectiveness of these active case-finding methods. The WHO Regional Office for the Western Pacific will provide normative guidance by developing a framework for active case-finding that builds on experience within and beyond the Region.

6.1.5 Minimizing access barriers

National programmes should seek to minimize access barriers, especially for the poor and vulnerable, to ensure that TB treatment and care are consistent with ethics and human rights norms, as well as those of social justice. It is well recognized that the poorest of the poor, those living in remote areas, in urban slums and in conflict zones often have poor access to quality health services. Disempowered, poorly educated, marginalized or illegal residents may have difficulties both accessing care and fully utilizing the available services. Many turn to informal providers or depend on self-treatment and delay seeking formal health care. Women face special barriers in many settings, related to, among other things, disempowerment, stigma, and lack of authority and control of resources.

6.1.6 Effective advocacy, communications, and social mobilization strategy and implementation

Advocacy, communications and social mobilization (ACSM) strategies should be based on a good understanding of the knowledge and attitudes of the target audience. Active engagement of community members and civil society is of major importance for planning and implementing effective communications programmes. Increased TB awareness will ensure that people do not neglect TB symptoms, take early and appropriate action, and
turn to the right facility for care. It is also equally important that the programme is able to respond to the demands and expectations created by offering high-quality services that are accessible, affordable and do not cause stigma.

ACSM should not merely aim at promoting favourable patient behaviours. The ultimate goal of ACSM activities is to build a multi-level, multisectoral alliance of social movements to eliminate TB from communities. ACSM activities and processes should generate dynamic interactions and mutual enforcement between bottom-up demand and high-level political commitment.

6.2 Objective 2 – Strengthening TB laboratory capacity

The second objective aims for the development of external quality-assured networks of laboratory facilities to diagnose susceptible and drug-resistant tuberculosis, preferably in the context of integrated diagnostic platforms that can easily absorb new cross-cutting diagnostics. Many new diagnostic methods are based on technologies that are also used for other infectious diseases such as malaria, dengue, HIV and other emerging infectious diseases. In the near future, different disease programmes will have an opportunity to share the same diagnostic tools at the district level.

Laboratory strengthening for TB control involves a thorough analysis of the available national laboratory capacity in relation to plans to scale up the diagnosis of drug-resistant and smear-negative TB. This exercise will be repeated periodically, involve both public and private facilities, and will cover the quality and quantity of human resources, infrastructure and equipment.

Based on such a comprehensive analysis, countries need to develop national laboratory network plans that clearly describe roles and responsibilities of laboratories at all levels of the system, including external quality-control procedures and human resource development needs. These plans need to be aligned with national strategic plans for TB control to ensure that every identified TB patient has access to quality care with quality drugs. In addition, they need to take into account opportunities for collaboration with other disease programmes in the context of health systems strengthening.

At least for the next several years, sputum smear microscopy will remain the main method for TB case detection for most of the countries with a high burden of TB. To ensure access to high-quality sputum smear microscopy services, a wide network of properly equipped laboratories with trained personnel and the implementation of a quality assurance system are necessary. There has been compelling evidence demonstrating the superiority of direct fluorescent microscopy over direct light microscopy in throughput, efficiency and improved sensitivity of diagnosis. In addition, fluorescence microscopy using light-emitting diodes (LED) has been proven to be simple, inexpensive and a valid alternative for conventional fluorescence microscopy. As such it deserves wide application in resource-poor settings. WHO recommends that conventional fluorescence microscopy be replaced by LED microscopy in all settings where fluorescence microscopy is now used, and that LED microscopy be phased in as an alternative for conventional light
microscopy. Sufficient training should be provided, particularly in settings that have not previously used fluorescent microscopy, and internal quality control and external quality assurance systems should be adapted to accommodate the fading of fluorescent stains.

However, smear microscopy alone cannot serve the ambitious goals of this Regional Strategic Plan. After all, laboratory capacity-building needs to reflect intensified case-finding efforts as well as the M/XDR-TB and TB/HIV response plans. Therefore, new WHO endorsed technologies (Fig. 7) need to be introduced to increase the sensitivity of TB and MDR-TB diagnosis, while reducing the turnaround time. Some of these new tests are relatively easy to operate and offer opportunities to decentralize the diagnosis of MDR-TB to the district level and to share equipment and human resources with other disease programmes. One example is the Xpert MTB/RIF system, a real-time, automated nucleic acid amplification assay that simultaneously detects *Mycobacterium tuberculosis* and rifampicin resistance (a surrogate marker for MDR-TB) in sputum specimens in less than two hours (Box 3).

With more diagnostics in the pipeline and several new tools endorsed between 2008 and 2011, the design of laboratory networks and diagnostic algorithms has become a dynamic and challenging process (Fig. 7).
Box 3. Xpert MTB/RIF for rapid diagnosis of TB and MDR-TB

Xpert MTB/RIF is a TB-specific automated, cartridge-based nucleic amplification assay based on the GeneXpert multi-disease platform, currently unique in its simplification of molecular testing—having fully integrated and automated sample preparation, amplification and detection required for real-time polymerase chain reaction—for a wide spectrum of diseases.

- The WHO evidence synthesis process confirmed a solid evidence base to support widespread use of Xpert MTB-RIF for detection of TB and rifampicin resistance. The Expert Group that met on 1 September 2010 therefore recommended that:
  - Xpert MTB/RIF should be used as the initial diagnostic test in individuals suspected of MDR-TB or HIV-associated TB (strong recommendation);
  - Xpert MTB/RIF may be used as a follow-on test to microscopy in settings where MDR and/or HIV is of lesser concern, especially in smear-negative specimens (conditional recommendation, recognising major resource implications).

- Xpert MTB/RIF is suitable for use at district and sub-district level, outside of conventional laboratory settings, compared to conventional culture and DST which are suitable only at national or regional level in reference laboratory settings.

- Xpert MTB/RIF technology does not eliminate the need for conventional microscopy culture and DST, which are required to monitor treatment progress and to detect resistance to drugs other than rifampicin.

- Several operational conditions need to be met for successful implementation of Xpert MTB/RIF—stable electrical supply, security against theft, trained personnel, adequate storage space, and annual calibration of the instrument by a commercial supplier.

- Biosafety precautions are minimal—similar to those for direct sputum microscopy.

- A key consideration is the need for rapid access to appropriate treatment and care for all TB and MDR-TB patients who will be rapidly identified by the introduction of Xpert MTB/RIF in diagnostic and screening algorithms.

- The WHO Strategic and Advisory group for TB (STAG-TB) that met on 27–29 September 2010 endorsed the Expert Group recommendations and draft WHO policy guidance, and advised that implementation of Xpert MTB/RIF technology be phased in within the context of comprehensive national TB and MDR-TB strategic plans. STAG-TB therefore recommended that WHO:
  - Develop a global Roadmap for rapid uptake of Xpert MTB/RIF in a systematic and phased approach, including mechanisms to monitor and assess the roll-out of Xpert MTB-RIF, with a clear plan to document the impact on case detection, MDR response scale-up and cost-effectiveness.
  - Proceed with a Global Consultation on the implementation considerations for scale-up of Xpert MTB/RIF under routine programme conditions (including diagnostic algorithms, logistics, procurement and distribution, quality assurance, waste disposal, cost-effectiveness and cost-benefit considerations; and pricing strategies) to make the tool available immediately to Member States.
  - Assist countries with technical support and planning for inclusion of Xpert MTB/RIF in revised diagnostic algorithms.

As a consequence, the scale up of laboratory capacity requires massive technical assistance at all levels. The supranational laboratories should be strengthened to be able to assist countries to train laboratory technicians, to apply to donors such as the Global Fund, to select and procure appropriate equipment, to coordinate proficiency testing of national reference laboratories, and to apply sound biosafety measures. Given the high pace of development of new diagnostics, WHO and international partners have an important normative role to guide countries on the introduction of new technologies in order to optimize TB diagnosis while preventing disruption of diagnostic performance. So far, the new tools cannot replace conventional and/or liquid culture and DST methods, but the introduction of new technologies will lead to repositioning of these conventional techniques. Country-specific demonstration projects and related cost-effectiveness studies are necessary to provide the evidence and policy base for the systematic introduction of new diagnostic tools.

6.3 Objective 3 – Scaling up the programmatic management of drug-resistant TB

The third objective addresses the M/XDR-TB epidemic in the Western Pacific Region in accordance with the global M/XDR-TB response plan. The aim of this objective is to offer a framework for further development and refinement of national PMDT plans and to create an environment in which these plans can become reality.

In May 2009, the Sixty-second World Health Assembly adopted resolution WHA62.15 calling for strengthening the prevention and control of drug-resistant tuberculosis. The resolution was inspired by the Beijing Call for Action in response to M/XDR-TB, endorsed at a ministerial meeting in Beijing in April 2009. The resolution urges Member States to achieve universal access to diagnosis and treatment of drug-resistant tuberculosis to save lives and protect communities. This global momentum is reflected by increased funding and technical and managerial support through the Green Light Committee Initiative, the Global Drug Facility and the Global Laboratory Initiative. WHO guidelines on PMDT are regularly updated to provide the evidence base for PMDT. In this context, most countries in the Region have developed national MDR-TB response plans that address all the minimum requirements for implementing and expanding PMDT (Box 4).

**Box 4. Global policy on control of M/XDR-TB**

1. Strengthen basic TB control to prevent M/XDR-TB and strengthen TB/HIV collaboration
2. Expand M/XDR-TB surveillance
3. Strengthen laboratory services for adequate and timely diagnosis of M/XDR
4. Scale up programmatic management and care of M/XDR-TB
5. Ensure availability of quality drugs and their rational use
6. Ensure adequate human resources at all levels
7. Introduce infection control, especially in high-prevalence settings
8. Mobilize resources domestically and internationally
9. Promote research and development of new diagnostics, drugs and vaccines
Representative drug-resistance surveillance (DRS) needs to be intensified to adequately monitor the burden of MDR-TB to inform technical policy development and support political commitment. DRS needs to be conducted in compliance with the updated WHO DRS guidelines and should incorporate HIV testing.

Countries will also need to mobilize resources for all components of their national M/XDR-TB response plans, ensuring that all identified MDR-TB suspects have equitable access to quality-assured diagnosis and that all identified MDR-TB patients are treated with quality-assured, second-line drugs in the context of appropriate models of care. Therefore the capacity to diagnose, treat and procure quality-assured MDR-TB drugs should be well balanced. This requires careful planning among all partners involved both at national and international levels, as well as specialized electronic monitoring and evaluation systems to link up laboratories, treatment facilities and the management of second-line drugs.

PMDT is a complicated intervention requiring massive technical assistance to build capacity to implement, while also addressing human resources, infrastructure and supply-chains. Although international training opportunities need to be developed and utilized, the focus must shift to in-country training, the development of national and provincial model centres, and related training of trainers to support national scale-up.

Finally, operational research is crucial for further global, country and setting-specific guideline development and the introduction of new diagnostic tools. Countries and international partners need to collaborate to design and implement the upcoming trials that will bring the new drugs needed to facilitate PMDT and control drug-resistant TB.

6.4 Objective 4 – Expanding TB/HIV collaborative activities

The fourth objective aims at strengthening implementation of TB/HIV collaborative activities. The Region, having been relatively spared by the HIV epidemic, has so far been characterized by rather limited implementation of TB/HIV collaborative activities. In most of the countries, TB and HIV/AIDS programmes are vertical in structure, with limited cross-cutting activities.

To scale up the response, WHO Regional Office for the Western Pacific published in 2008 *A Revised Framework to Address TB-HIV co-infection in the Western Pacific Region*. The aims of the revised framework are to: (1) conduct TB/HIV surveillance as appropriate in the epidemiological context; (2) diagnose HIV and TB as early as possible through early HIV testing of TB patients and TB screening of people living with HIV; (3) ensure that people with both TB and HIV have early access to life-saving treatment; (4) improve infection control at TB and HIV care facilities; and (5) to prevent new cases of TB and HIV. A revised framework to address TB-HIV co-infection in the Western Pacific Region. World Health Organization. 2008

To facilitate implementation of this framework, especially to prevent losing patients during referrals between TB and HIV clinics, and also taking into account infection-control requirements, it was recommended that HIV tests be
Regional Strategy to Stop Tuberculosis in the Western Pacific (2011–2015)

Provided at TB clinics, and TB screening be performed at HIV clinics. To overcome the difficulties in properly screening TB among people living with HIV, a clinical algorithm based on symptoms and signs, which was field-tested in Asia, was recommended.

However, except for a few countries, implementation of the “globally recommended collaborative TB/HIV activities” (see Box 5) has been limited so far. Available evidence in the Region shows high mortality among TB-HIV co-infected patients, indicating late case detection of TB and HIV, and inadequate provision of life-saving interventions such as HIV testing, CPT and ART among TB patients, and TB screening and isoniazid preventive therapy (IPT) among people living with HIV.

Although countries in the Region are facing very different and dynamic HIV/AIDS epidemics, TB/HIV collaborative activities must be strengthened in all the countries.

Firstly, TB programmes must ensure that provider-initiated HIV testing is offered to all TB patients (target 100% in settings with HIV prevalence among TB patients >1%). CPT and ART should be provided to all TB patients with HIV co-infection, as recognized standards of care.

Secondly, HIV/AIDS programmes are encouraged to implement the “Three I’s Strategy” (Intensified TB case-finding, Isoniazid preventive therapy, and Infection control). The TB Programme should coordinate with the HIV/AIDS programme in implementing TB screening as a standard of care for people living with HIV. The newly developed WHO clinical algorithm based on symptoms and signs can be taken into account for

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**Box 5. Globally recommended collaborative TB/HIV activities**

1. Establish mechanisms for collaboration (TB and HIV programmes)
   (a) set up coordinating bodies for TB/HIV activities at all levels
   (b) conduct surveillance of HIV prevalence among tuberculosis patients
   (c) carry out joint TB/HIV planning
   (d) conduct monitoring and evaluation

2. Decrease the burden of TB among people living with HIV/AIDS (HIV programme)
   (a) establish intensified TB case-finding
   (b) introduce isoniazid preventive therapy
   (c) ensure TB infection control in health care and congregate settings

3. Decrease the burden of HIV among tuberculosis patients (TB programme)
   (a) provide HIV testing and counseling
   (b) introduce HIV prevention methods
   (c) introduce co-trimoxazole preventive therapy
   (d) ensure HIV/AIDS care and support
   (e) introduce antiretroviral therapy

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the screening of TB in those co-infected with TB and HIV (see Fig. 8). Once active TB is excluded, those co-infected with TB and HIV should be put on isoniazid preventive therapy (global target 50%).

Finally, close collaboration between TB programme and HIV/AIDS programme is crucial to carry out the above activities. Both TB and HIV programmes should develop a joint implementation and monitoring plan for TB/HIV activities.

6.5 Objective 5 – Strengthening TB programme management capacity

The fifth objective addresses a critical prerequisite for effective TB control, namely TB programme management capacity. Effective TB programmes require sufficient financing, appropriate legislation and regulatory control, and well-planned human resource development strategies. Integration of TB control within the primary health care networks should ensure that cross-cutting issues, such as infection control are being addressed. Quality surveillance systems and operational research should provide the evidence base for sound programme management.

6.5.1 Sufficient financing for TB control ensured

Expanding quality TB services and addressing emerging issues, such as TB-HIV co-infection and M/XDR-TB, require more costly interventions compared to conventional
TB control. Commitment must be made to ensure adequate and sustainable financing at all levels. At the global level, the Stop TB Partnership will play an important role as will the Interagency Coordination Committees at the regional level in sustaining partnerships and mobilizing resources. At the country level, partnership mechanisms, such as the Country Coordination Mechanism of the Global Fund and Interagency Coordinating Committees, should be sustained to ensure that all international and national aid initiatives are implemented in the context of comprehensive national TB control plans, with national governments in the driver’s seat.

World Health Assembly resolution WHA58.14 on sustainable financing for TB prevention and control encouraged Member States to fulfil the commitments made in endorsing resolution WHA53.1 and hence the Amsterdam Declaration to Stop Tuberculosis. This includes their commitment to ensure the availability of sufficient domestic and external resources to achieve the TB-related Millennium Development Goals. However, financial forecasts predict that funding received from international donors and current levels of national budget contributions will not be sufficient to sustain and scale up national TB programmes to address the new and costly challenges to TB control. Political commitment to increase the level of national contributions is crucial to closing the gap in resource needs.

6.5.2 Improved national programme management capacity

The global Stop TB Strategy includes complex and expensive interventions that require competencies that are often not readily available within the countries. Activities related to the MDR-TB response, infection control, laboratory strengthening (including validation and demonstration studies), health communications, public-private mix approaches, and financial and social risk protection, all require a high level of expertise that extends beyond the disciplines of conventional infectious disease control.

International experts often have limited experience in and understanding of unique country contexts. Likewise, international training courses are often not relevant nor applicable to a diverse set of countries. In addition, international training activities can be ineffective due to language barriers. To decrease the dependency on these methods, trainings of trainers at the national level are a preferable training model to ensure country-specific human resource development. National training capacity will also facilitate national scale up of new interventions, such as PMDT.

At the same time, international exposure and exchange visits remain important in terms of sharing experiences. Countries are, therefore, encouraged to gain field experience in certain subjects in other countries, preferably within the Region, that have more experience with implementing certain interventions.

An ever greater challenge is posed by the acquisition and management of donor grants. Too often, countries face problems with planning, budgeting, proposal writing, implementing and reporting requirements of the Global Fund and other grants. Management courses and the recruitment of staff with a business administration or accountancy background need to be considered.
6.5.3 Integrated human resource development plans

A firm political commitment is essential for strengthening human resources across all levels of programmes, health systems, government departments, partnerships and global stakeholders. Priority should be given to the development of a comprehensive national human resource development plan that covers improvements in educational policies, financial ceilings for recruitment, appropriate skill mixes and distribution, policies to improve staff recruitment, retention and accountability and budgets to ensure adequate remuneration.

The rapid scale up of quality TB control services, particularly in settings with high rates of HIV, M/XDR-TB or both, exerts high pressure on staff in national TB programmes. Currently, many countries are facing problems related to quantity, quality and distribution of staff. This presents a huge challenge as countries scale up additional and more complex interventions for TB control. For the quality of TB control to be improved and the threats of TB-HIV co-infection and M/XDR-TB to be addressed, adequate numbers of skilled and trained staff must be secured and mechanisms should be developed to maintain and further strengthen their knowledge and skills.

The Human Resources for Health Action Framework is designed to assist countries in developing and implementing strategies to achieve an effective and sustainable health workforce (Fig. 9). The application of the Framework for implementing the Stop TB Strategy has been elaborated by specifying the roles of ministries of health and national TB programmes.

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6 The Human Resources for Health Action Framework is available at www.who.int/hrh/tools/en
6.5.4 Integrating disease control, including TB, into primary health care networks

In the Western Pacific Region, most countries have embarked upon health reforms in response to changing health needs resulting from demographic and socioeconomic developments. The reforms include: (1) universal coverage reforms contributing to health equity and social justice; (2) service delivery reforms responding to people’s needs and expectations while producing better outcomes; (3) public policy reforms integrating public health actions with primary care and strengthening national and transnational public health interventions; and (4) leadership. The proposed public policy reforms intended to integrate public health actions with primary health care offer opportunities for disease control by making services more convenient, accessible and affordable to everyone, including TB suspects and TB patients. The experience in Shanghai, China in which TB control is integrated into general hospitals and urban health centres, underpins the soundness of this approach.

The Practical Approach to Lung Health is a strategy for the integrated management of patients presenting at a health care facility with respiratory conditions. In many countries, including those outside the Region, this approach has proven to be effective in improving the quality of care, especially at the primary health care level. It can contribute to increased TB case detection, and also provides an excellent venue for TB programmes to collaborate with smoking cessation programmes and other initiatives on lung health, such as those for asthma and chronic obstructive pulmonary diseases.

6.5.5 TB infection control integrated into general infection control programme

TB infection control in health care services has been largely neglected for many years. However, there is ample evidence that drug-susceptible and drug-resistant TB are important sources of nosocomial transmission among both people with and without HIV infection. While measures in response to and preparation for outbreaks of airborne infections, such as severe acute respiratory syndrome and influenza, have been promptly undertaken, little attention has been paid to TB infection control in health care settings. As such, both diagnosed and undiagnosed TB patients pose a serious threat to health care workers and hospitalized patients. In addition, the decentralized “community-based care” of TB patients requires infection control measures at the community level to protect village health care workers and treatment supporters.

In 1999, WHO published the first guidelines on TB infection control: Guidelines for the Prevention of Tuberculosis in Health Care Facilities in Resource-limited Settings. The importance of the three levels of infection control measures was highlighted: the first priority is administrative control; the second priority is environmental control; and the third priority is personal respiratory protection. In response to TB-HIV co-infection, Tuberculosis Infection-Control in the Era of Expanding HIV Care and Treatment was published in 2007 followed by the publication of the WHO Policy on...
**TB Infection Control in Health Care Facilities, Congregate Settings and Households,**
in 2009.

In order to protect the patients, their families and health care providers, especially in the context of TB/HIV and MDR-TB care services, the implementation of rational infection control measures is urgently required. Such measures should eventually be implemented in all general health care facilities, congregate settings and households. This requires sound TB infection control policy development at a higher level, establishment of a coordinating body, facility development or renovation, human resource development, advocacy and community participation. As a cross-cutting issue, TB infection control is an integral part of health system strengthening, and should be integrated into infection control programmes in general health care services.

**6.5.6 Political commitment for the effective use of regulatory approaches to support and consolidate TB control efforts**

In the last several years, major progress has been made in the field of drug management, including fewer occurrences of drug shortages both at the central and peripheral levels. Many countries introduced fixed-dose combination medicines of proven quality and patient kits to secure a full treatment course for all patients. However, the un-regulated availability of TB medicines of unknown quality in the private market—often without prescription—remains a great concern.

The resolution WHA62.15 adopted in the Sixty-second World Health Assembly in 2009 urges Member States to take action related to drug quality assurance and regulation by means of “ensuring uninterrupted supply of first- and second-line medicines for tuberculosis treatment, which meet WHO prequalification standards or strict national regulatory authority standards, and that quality-assured fixed-dose combinations of proven bioavailability are prioritized within a system that promotes treatment adherence”. It also urges action for “strengthening mechanisms to ensure that tuberculosis medicines are sold on prescription only and that they are prescribed and dispensed by accredited public and private providers”.

Drug quality assurance and regulation are among the most critical areas to “close the tap” on the MDR-TB epidemic by preventing the development of drug-resistance. It is also the area that TB programmes alone cannot effectively address without high-level coordinated efforts within and outside ministries of health. Therefore, national TB programmes, with utmost urgency, should work closely with national regulatory authorities and other relevant government departments in establishing firm political commitment and enforcing policies in this area.

TB programmes have been working on the issue of ensuring the standards and quality of health care both in the private and public sectors. Beyond TB programmes, the quality assurance of health care services is an important health systems concern, especially in those countries with a rapidly expanding private sector. The measures to control the
quality of health care may include a number of regulatory approaches, such as monitoring the adherence to guidelines, authorizing and designating health care facilities for certain medical procedures, a mandatory disease notification system, and the introduction of a mechanism of certification or accreditation with or without links to the health insurance system. TB programmes are encouraged to continue seeking ways to effectively use regulatory approaches in collaborating with other government departments to consolidate and enhance TB control efforts.

### 6.5.7 Evidence-based programme management and policy development through regular monitoring and evaluation activities and operational research

Monitoring and evaluation are essential components of programme management and performance monitoring. Monitoring and evaluation entail measuring progress in TB control programme implementation according to a set of specific objectives. They also include a periodic evaluation, often called a programme review, to determine the status of programme achievements, identify challenges, revise the plan if necessary and prioritize programme activities. As such, monitoring and evaluation should be an integral part of the national TB control plans, and the findings of monitoring and evaluation activities should be utilized to improve and inform policy changes.

Well-functioning TB surveillance systems have been a fundamental core component of TB programme monitoring and evaluation, and high quality TB surveillance data from countries are of critical importance to improving policies for TB control, as well as for reliable TB control impact measurement. Detailed country-specific epidemiological data greatly contribute to improved disease estimates, which are critical in assessing the progress towards achieving the Millennium Development Goals. Regular in-depth analysis of surveillance data, as well as formal assessments of TB data quality and cross-validation, help in identifying gaps in performance and needs for policy changes to improve TB control. TB data should be linked with vital registration systems and other sources of data, where feasible. The links with the private sector and general hospitals should be strengthened to improve data collection on cases diagnosed in all health facilities.

Operational research is a crucial tool to evaluate and study the application of various mechanisms, interventions and tools. In light of the emerging challenges and the increasing complexity of TB control, innovative approaches to delivering and further improving TB care must be pursued. These need to be carefully assessed for yield, feasibility and cost-effectiveness. In addition, operational research should be used to analyse barriers to TB control and the feasibility and effectiveness of related actions to address these barriers. Programmes undertaking active case-finding activities are encouraged to carry out cost effectiveness studies that will guide decision-making on whether or not to use these methods on a programmatic scale. The WHO Regional Office for the Western Pacific is committed to providing increased support to promote operational research.
Table 1. Targets, expected results and indicators under the five objectives

<table>
<thead>
<tr>
<th>Planning elements</th>
<th>Indicators</th>
<th>Targets and benchmarks</th>
<th>Verification source</th>
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<tbody>
<tr>
<td><strong>Overall regional goal:</strong></td>
<td><strong>To reduce TB prevalence and mortality by half by 2015, relative to 2000 level, in all countries with a high burden of TB by moving towards universal access to diagnosis and treatment of all forms of TB, including smear-negative and M/XDR-TB.</strong></td>
<td>Beyond 85%</td>
<td>Global TB estimate</td>
</tr>
<tr>
<td><strong>Objective 1. Promote universal and equitable access to quality TB diagnosis and treatment for all people</strong></td>
<td><strong>1.1 Cure Rate</strong> (Definition: In a cohort of new TB patients with a positive sputum smear registered in a given year, more than 85% are confirmed as cured.)**</td>
<td>Beyond 85%</td>
<td>Annual TB reports</td>
</tr>
<tr>
<td></td>
<td><strong>1.2 Case notification rate of all forms of TB</strong></td>
<td>A country-specific target will be set considering the epidemiological and programmatic conditions. The case-notification rate is expected to further increase as a result of intensified case-finding efforts in most countries.</td>
<td>Annual TB reports</td>
</tr>
</tbody>
</table>

**Expected results**

- Public-private and public-private mix (PPM) approaches strengthened
  1.3 Proportion of private providers engaged by the programme and proportion of additional cases notified by them
  Country specific
  Annual TB reports, PPM project report

- Intensified case-finding among high-risk populations established
  1.4 Strategies established for intensified case-finding among identified high-risk population in country
  All countries with a high and intermediate burden of TB establish the Strategy
  Country strategy
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>• TB contact investigation systematically conducted</td>
<td>1.5 Systematic contact investigation implemented with a regular standardized reporting system</td>
<td>All countries with a high and intermediate burden of TB systematically implement contact investigation</td>
<td>Report on contact investigation</td>
</tr>
<tr>
<td></td>
<td>1.6 Proportion of TB cases (all and children) identified through contact investigation and enrolled on treatment</td>
<td>Monitoring indicator (no initial target)</td>
<td>Report on contact investigation</td>
</tr>
<tr>
<td>• TB case detection among children improved</td>
<td>1.7 Proportion of notified TB cases among children (&lt;5 and 5–14)</td>
<td>At least 5% (It is estimated that paediatric TB cases account for 5%–20% of all notified cases in high burden settings.)</td>
<td>Quarterly reports, Annual TB reports</td>
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**Objective 2. Strengthening TB laboratory capacity**

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<tbody>
<tr>
<td>2.1 All countries with a high and intermediate burden of TB develop and implement a comprehensive laboratory network plan that takes into account opportunities for collaboration with other public health programmes and that includes new diagnostics.</td>
<td></td>
<td>As stated</td>
<td>National TB strategy laboratory network plan</td>
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**Expected results**

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<tbody>
<tr>
<td>• National laboratory capacity assessment conducted</td>
<td>2.2 National laboratory capacity assessment conducted</td>
<td>As stated</td>
<td>Assessment report</td>
</tr>
<tr>
<td>• Comprehensive laboratory network plan developed</td>
<td>2.3 Comprehensive laboratory network plan developed</td>
<td>As stated</td>
<td>Laboratory network plan</td>
</tr>
<tr>
<td>Planning elements</td>
<td>Indicators</td>
<td>Targets and benchmarks</td>
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<tr>
<td>Laboratory network capacity expanded</td>
<td>2.4 Laboratory network capacity expanded according to the plan</td>
<td>As stated</td>
<td>Programme Review, annual TB reports</td>
</tr>
<tr>
<td><strong>Objective 3. Scaling up the Programmatic Management of Drug-resistant TB (PMDT)</strong></td>
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<td></td>
<td>3.1 All countries with a high and intermediate burden of TB develop and implement a comprehensive PMDT expansion plan to gradually cover the whole country. (The expansion plans will include establishing the capacity for diagnosis of X/MDR-TB, ensuring the financing and availability of second-line drugs and developing systems for case-management and patient support in line with the international guidelines.)</td>
<td>As stated</td>
<td>Annual TB reports and Green Light Committee (GLC) mission report</td>
</tr>
</tbody>
</table>

**Expected results**

- Patients suspected with MDR-TB receive appropriate screening

<p>| 3.2 The proportion of MDR-TB suspects that received an appropriate diagnostic test for drug-resistant TB in areas covered by PMDT. (MDR suspects are defined according to the national guidelines and the number is calculated by using notified TB cases. At least the following three groups are included: (1) all previously treated smear-positive patients (relapses, failures, returnees after default and patients previously treated outside the NTP); (2) all new smear-positive patients, who are still smear-positive after three months treatment with first-line drugs; and (3) smear-positive contacts of known X/MDR cases.) | (Drug-resistant TB screening coverage within PMDT area) Regional target: 90% | Annual TB reports and GLC mission report |</p>
<table>
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<tr>
<td>3.3 The proportion of MDR-TB suspects that received an appropriate diagnostic test for drug-resistant TB in the whole country. (This indicator uses the same numerator as the above indicator 3.2, but the denominator is taken from case notification data for the whole country)</td>
<td>(Drug-resistant TB screening coverage for whole country) 60% by 2015 as an intermediate milestone to reach universal coverage by 2020.</td>
<td>Annual TB reports and GLC mission report</td>
<td></td>
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<tr>
<td>• All diagnosed MDR-TB patients have access to adequate treatment</td>
<td>100% (Actual enrolment could be lower due to the eligibility to treatment of certain patients. Nevertheless, at least 90% enrolment should be aimed for).</td>
<td>Annual TB reports and GLC mission report</td>
<td></td>
</tr>
<tr>
<td>• Drug Resistance Surveillance (DRS)</td>
<td>3.5 Representative DRS established/ intensified</td>
<td>As stated</td>
<td>DRS reports, GLC mission report</td>
</tr>
<tr>
<td>Objective 4. Expanding TB/HIV collaborative activities</td>
<td>4.1 All countries with a high and intermediate burden of TB develop a comprehensive policy framework for TB/HIV collaborative activities and implement critical interventions to reduce morbidity and mortality associated with TB and HIV. (Critical interventions include, but are not limited to, HIV testing among TB patients, CPT and ARV for co-infected patients, regular TB screening and isoniazid preventive therapy for people living with HIV in under a facility implementing proper infection control measures.)</td>
<td>As stated</td>
<td>National TB strategy National TB/HIV policy/framework</td>
</tr>
<tr>
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<tr>
<td>• Access of TB patients to HIV testing ensured</td>
<td>4.2 The proportion of TB patients who had an HIV test result recorded in the TB register.</td>
<td>All TB cases tested for HIV in high HIV prevalence settings, i.e. HIV prevalence among TB patients &gt;1%.</td>
<td>Annual TB report</td>
</tr>
<tr>
<td>• CPT coverage among TB-HIV co-infected patients increased</td>
<td>4.3 Number of HIV-positive TB patients who are started on or continue previously initiated CPT, during TB treatment, expressed as a proportion of all HIV-positive TB patients registered over the reporting period.</td>
<td>100% in all countries</td>
<td>Annual TB report</td>
</tr>
<tr>
<td>• ARV coverage among TB-HIV co-infected patients increased</td>
<td>4.4 Number of HIV-positive TB patients who are started on or continue previously initiated ART, during TB treatment, expressed as a proportion of all HIV-positive TB patients registered over the reporting period.</td>
<td>100% in all countries</td>
<td>Annual TB report</td>
</tr>
<tr>
<td>• People living with HIV receive periodic TB screening</td>
<td>4.5 Number of adults and children enrolled in HIV care whose TB status was assessed and recorded during their last visit during the reporting period, expressed as a proportion of all adults and children enrolled in HIV care and seen for care in the reporting period.</td>
<td>100% in all countries</td>
<td>Report from HIV programme</td>
</tr>
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### Planning elements

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>People living with HIV receive Isoniazid Preventative Therapy</td>
<td><strong>4.6 Number of adults and children newly enrolled in HIV care, who are started on treatment for latent TB infection, isoniazid preventive therapy, expressed as a proportion of the total number of adults and children newly enrolled in HIV care during the reporting period.</strong></td>
<td>Target should be set according to the national plan for scaling up isoniazid preventive therapy (The target that will be set in the revised Global Plan to Stop TB in 2010 will be 50%).</td>
<td>Report from HIV programme</td>
</tr>
</tbody>
</table>

### Objective 5. Strengthening TB programme management capacity supported by sustained political commitment and sufficient financing for TB control

| Objective 5. Strengthening TB programme management capacity supported by sustained political commitment and sufficient financing for TB control | **5.1 National TB programmes secure sufficient adequately trained human resources according to the human resources development plans** | In all countries with a high and intermediate burden of TB | National human resources development plan programme review report |

### Expected results

- **Infection control policy and practice in place and regularly monitored**

<table>
<thead>
<tr>
<th>Expected results</th>
<th>5.2 All countries with high and intermediate burden of TB develop an integrated infection control policy including TB infection control.</th>
<th>As stated</th>
<th>Programme review report</th>
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<tbody>
<tr>
<td></td>
<td><strong>5.3 Number of health care facilities providing services for people living with HIV, with demonstrable infection control practices that include TB control, expressed as a proportion of facilities evaluated. (Global TB/HIV indicator B3.1)</strong></td>
<td>Monitoring indicator (no initial target)</td>
<td>Programme review report TB/HIV reporting system</td>
</tr>
<tr>
<td>Planning elements</td>
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<td>Targets and benchmarks</td>
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<tr>
<td>5.4 Number of staff employed in health care facilities who develop TB in one year, expressed as a proportion of the total number of staff employed in the reporting facilities. (Modified from global TB/HIV indicator B3.2)</td>
<td>Monitoring indicator (no initial target)</td>
<td>TB/HIV reporting system</td>
<td></td>
</tr>
<tr>
<td>• Fixed-dose combination (FDC) medicines of assured quality introduced</td>
<td>5.5 National TB programmes continue to supply FDC of assured quality without interruption.</td>
<td>As stated</td>
<td>Global Drug Facility monitoring mission report, Programme review report</td>
</tr>
<tr>
<td>• Effective regulation on the rational use of TB drugs</td>
<td>5.6 Mechanisms in place to ensure that tuberculosis medicines are sold on prescription only and that they are prescribed and dispensed by accredited public and private providers.</td>
<td>As stated</td>
<td>Programme review report</td>
</tr>
<tr>
<td>• TB surveillance system strengthened</td>
<td>5.7 National TB programmes conduct regular in-depth analysis of surveillance data including sub-national level analyses to improve the TB surveillance system</td>
<td>As stated</td>
<td>Annual TB report</td>
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<td></td>
<td>5.8 Electronic case-based reporting system introduced/expanded preferably linking with an integrated infectious disease notification system</td>
<td>As stated</td>
<td>Annual TB report</td>
</tr>
<tr>
<td>• Operational research promoted</td>
<td>5.9 National Programmes identified priority research agenda and conduct operational research in a planned manner</td>
<td>As stated</td>
<td>Regional research workshop, Research publications</td>
</tr>
</tbody>
</table>
Table 2. Global STOP TB Strategy

<table>
<thead>
<tr>
<th>Vision</th>
<th>A TB-free world</th>
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<tbody>
<tr>
<td><strong>Goal</strong></td>
<td>To dramatically reduce the global burden of TB by 2015 in line with the Millennium Development Goals and the Stop TB Partnership targets</td>
</tr>
<tr>
<td><strong>Objectives</strong></td>
<td>Achieve universal access to quality diagnosis and patient-centred treatment</td>
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<td></td>
<td>Reduce the human suffering and socioeconomic burden associated with TB</td>
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<td>Protect vulnerable populations from TB, TB/HIV, and M/XDR-TB</td>
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<td>Support development of new tools and enable their timely and effective use</td>
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<td></td>
<td>Protect and promote human rights in TB prevention, care and control</td>
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<tr>
<td><strong>Targets</strong></td>
<td>MDG 6, Target 8: Halt and begin to reverse the incidence of TB by 2015</td>
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<tr>
<td></td>
<td>Targets linked to the Millennium Development Goals and endorsed by the Stop TB Partnership:</td>
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<td></td>
<td>- 2015: Reduce prevalence and deaths due to TB by 50%</td>
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<td></td>
<td>- 2050: Eliminate TB as a public health problem</td>
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</table>

**Components**

Pursue high-quality DOTS expansion and enhancement
- Secure political commitment with adequate and sustained financing
- Ensure early case detection, and diagnosis through quality-assured bacteriology
- Provide standardized treatment with supervision and patient support
- Ensure effective drug supply and management
- Monitor and evaluate performance and impact

Address TB/HIV, M/XDR-TB and the needs of poor and vulnerable populations
- Scale up collaborative TB/HIV activities
- Scale up prevention and management of multidrug-resistant TB
- Address the needs of TB contacts, and of poor and vulnerable populations

Contribute to health system strengthening based on primary health care
- Help improve health policies, human resource development, financing, supplies, service delivery and information systems
- Strengthen infection control in health services, other congregate settings and households
- Upgrade laboratory networks, and implement the Practical Approach to Lung Health
- Adapt successful approaches from other fields and sectors, and foster action on the social determinants of health

Engage all care providers
- Involve all public, voluntary, corporate and private providers through public-private mix approaches
- Promote the use of the International Standards for TB Care

Empower people with TB, and communities through partnership
- Pursue advocacy, communication and social mobilization
- Foster community participation in TB care, prevention and health promotion
- Promote use of the Patients’ Charter for TB Care

Enable and promote research
- Conduct programme-based operational research
- Advocate for and participate in research to develop new diagnostics, drugs, and vaccines
The Regional Committee,

Acknowledging reports that indicate that the Western Pacific Region is on track to achieve the regional goal of halving tuberculosis prevalence and mortality, thus contributing to the achievement of the Millennium Development Goals;

Appreciating that the firm political commitment of Member States and the efforts of international partners made it possible to implement the Strategic Plan to Stop Tuberculosis in the Western Pacific (2006–2010);

Realizing that further effort is needed to ensure universal access to diagnosis, treatment and care for all people suffering from tuberculosis;

Recognizing the emergence and spread of drug-resistant tuberculosis, and particularly multidrug-resistant tuberculosis, pose serious public health threats;

Expressing further concern that the HIV/AIDS epidemic may reverse gains achieved in tuberculosis control,
1. ENDORSES the Regional Strategy to Stop Tuberculosis in the Western Pacific (2011–2015);¹

2. URGES Member States:

   (1) to develop and/or update national tuberculosis strategic plans, consistent with the Regional Strategy to Stop Tuberculosis in the Western Pacific (2011–2015);

   (2) to strive for universal and equitable access to diagnosis, treatment and care for all people suffering from tuberculosis by strengthening public-private partnerships, by implementing case-finding approaches that target high-risk populations, and by addressing access barriers to tuberculosis care for vulnerable populations;

   (3) to strengthen tuberculosis laboratory capacity to diagnose susceptible and drug-resistant tuberculosis using, where appropriate, the most effective latest technologies;

   (4) to scale up the health systems management of drug-resistant tuberculosis by developing and implementing comprehensive plans with political commitment and financial support;

   (5) to develop and implement a comprehensive policy framework for collaborative TB-HIV activities;

   (6) to strengthen tuberculosis programme management capacity through sufficient financial and human resources;

3. REQUESTS the Regional Director:

   (1) to work closely with Member States and partner organizations to sustain support for tuberculosis control;

   (2) to provide support to Member States in developing and updating national tuberculosis strategic plans, using the Regional Strategy to Stop Tuberculosis in the Western Pacific (2011–2015) as a framework;

   (3) to provide technical support to Member States to strengthen evidence-based policy development.

Seventh meeting, 14 October 2010
WPR/RC61/SR/7