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**PREVENTION AND CONTROL OF TUBERCULOSIS, INCLUDING  
THE REGIONAL STRATEGIC PLAN FOR 2006–2010**

Substantial progress has been made in achieving the tuberculosis control targets set by the Regional Committee for the Western Pacific at its fifty-first session in 2000. It is clear from initial reports that the Region has met the targets set in the Stop TB Regional Strategy for 2000–2005: detection of 70% of estimated TB cases; successful treatment of 85% of those cases; and regionwide coverage of DOTS. This is an important step towards achieving the regional goal of reducing TB prevalence and mortality by one half by 2010, compared to the 2000 level. However, the analytical model developed by the Region to guide the strategic planning suggests that the current 3% decline in TB prevalence and mortality would have to increase to 8% if the Region is to achieve the regional goal by 2010. To achieve this goal, the following challenges need to be addressed: (1) increasing case detection beyond 70%; (2) controlling multidrug-resistant TB; (3) addressing the threat of TB-HIV coinfection; and (4) ensuring equitable access to TB services for all patients, as well as strengthening health systems, especially human resource capacity. To address these challenges and sustain the momentum towards achieving the regional goal, the draft Strategic Plan to Stop TB in the Western Pacific 2006–2010 (Annex) was developed after extensive consultation with stakeholders, including several Member States. This draft regional Strategic Plan provides policy and operational guidance to countries and areas to develop and implement their national TB control plans for the next five years.

The Regional Committee is requested to discuss and endorse the draft Strategic Plan to Stop TB in the Western Pacific 2006–2010.

## **1. CURRENT SITUATION**

Following the declaration of a tuberculosis crisis in the Western Pacific Region by the Regional Committee at its fiftieth session in September 1999, the Committee adopted resolution WPR/RC50.R5 establishing the Stop TB Special Project. At its fifty-first session in 2000, the Regional Committee adopted resolution WPR/RC51.R4 urging Member States to develop and implement five-year (2001–2005) Stop TB national plans to achieve the regional objective of reducing the prevalence and mortality of tuberculosis by one half by 2010 as compared to the 2000 level. As an intermediate step towards reaching this goal, three regional targets were set for 2005: the detection of 70% of estimated TB cases; successful treatment of 85% of those cases; and regionwide population coverage of DOTS (directly observed treatment, short-course).

Substantial progress was made by 2005, which was the midpoint in measuring progress towards the goal. It is clear from initial reports that the Region has met the 2005 targets for TB control. The forceful implementation of the Regional Strategic Plan to Stop TB in the Western Pacific 2000–2005 by Member States, particularly countries with high burdens of TB, has been instrumental in achieving this success. To sustain momentum and ensure that the 2010 regional goal is achieved, the Region developed the draft Strategic Plan to Stop TB in the Western Pacific 2006–2010. The draft regional Strategic Plan served as a reference for national plans for 2006–2010 that were developed by the countries with a high burden of TB and supported by the Stop TB Technical Advisory Group.

## **2. ISSUES**

Although there are encouraging signs of reduction of the TB burden, the Region must do more to achieve the impact targets of reducing TB prevalence and mortality by half by 2010. Published estimates based on 2000–2004 data suggest an overall decline of 15% in prevalence and 12% in mortality over the period. However, projections indicate that the current rate of decline of 3% must increase to at least 8% per year if the Region is to achieve the impact targets by 2010. To accelerate the decline in TB prevalence and mortality, there is a need to address four major issues: (1) further increasing the case detection rate beyond 70%; (2) controlling multidrug-resistant TB; (3) addressing the threat of TB-HIV coinfection; (4) ensuring equitable access to TB services by all patients. Strengthening health systems is a key element in achieving these goals.

## **2.1 Increasing case detection beyond 70%**

The analytical model, which the Region developed to guide strategic planning at the regional level over the next five years, suggests that the case detection rate needs to increase beyond 70% from 2006 onward in order to achieve the impact targets by 2010. To reach 70% case detection rate, enormous efforts had to be made by countries and areas through the expansion of DOTS to 100% of the population. To sustain the case detection rate beyond 70% over several years will require further intensified effort. Several constraints need to be addressed, such as improving the quality of DOTS implementation, addressing weaknesses in health systems, and human resource capacity issues. There is also a need to involve a wider range of health providers, including the private sector and general hospitals in order to reach a substantial part of the population that do not seek TB services through the existing network of the national TB programmes. The regional Strategic Plan will help catalyse efforts to improve the quality of laboratory services in the countries and areas and help scale up the Public-Private Mix DOTS approach to involve a wider range of health providers in TB control.

## **2.2 Controlling multidrug-resistant TB**

Varying levels of drug resistance prevalence were found in almost all settings in the Region. The epidemic of multidrug-resistant TB (MDR-TB) is estimated to be largest in China, with approximately 25% of the world's MDR-TB cases. MDR-TB poses a substantial threat to TB control in the Region because of its contribution to increasing TB prevalence and mortality. MDR-TB increases the number of chronic TB patients and the subsequent transmission of primary MDR-TB. The TB case fatality rate among MDR-TB patients is 10 times higher than among non-MDR-TB patients and approaches the fatality rate of untreated TB. There is increasing evidence in the Region that management of MDR-TB through DOTS-Plus, a programme to diagnose and treat MDR-TB, although rather complex, is feasible. Rapid expansion of DOTS-Plus in the next several years will have a substantial impact on curbing the MDR-TB epidemic and overall TB mortality. With funding support from the Global Fund to Fight Aids, Tuberculosis and Malaria, China and Mongolia are establishing DOTS-Plus programmes, while the Philippines is gradually expanding DOTS-Plus. WHO will continue to support Member States to continuously assess their MDR-TB situation and to implement DOTS-Plus where needed.

## **2.3 Addressing the growing threat of TB-HIV coinfection**

TB associated with HIV is a growing threat facing the Region, particularly in Cambodia, areas of China, Malaysia, Papua New Guinea and Viet Nam. Cambodia and Papua New Guinea are faced

with generalized HIV epidemics (adult HIV prevalence rate of 1% or greater), while other countries are dealing with concentrated HIV epidemics (HIV prevalence rate of 5% or greater among a specific population group), especially among injecting drug users. The TB-HIV coinfection poses a threat to TB control because it impacts TB mortality. TB case fatality among patients with HIV is about five to 10 times higher than among TB patients without HIV. Although progress has been made in the Region, particularly in Cambodia, other countries with high HIV prevalence rates in some areas or population groups have yet to strengthen their response. WHO is advocating to countries and areas to implement TB-HIV collaborative activities in line with the regional framework on TB-HIV. Member States are urged to take the first step, which is to set up an effective collaboration mechanism between the TB and HIV programmes, followed by the establishment and scaling up of collaborative activities, including surveillance of HIV among TB patients based on the level of TB-HIV prevalence.

#### **2.4 Ensuring access to TB control services by all patients**

All TB patients have the basic right to receive high-quality TB services. However, even in areas where DOTS is available, many people in poor and vulnerable populations lack access to TB services. TB programmes need to pay special attention to the poor, at-risk groups and people in special situations, such as migrants, prisoners, the homeless and injecting drug users. The poor face a much greater risk for TB, including the catastrophic effect of the illness, compared to the non-poor. Risk groups and people in special situations are more vulnerable because their social networks may be disrupted and access to health services is frequently non-existent. Lack of access to TB services by poor and vulnerable people with TB has serious implications not only for the individuals but also for the general population as TB continues to spread. For example, in the Chinese cities of Beijing and Shanghai 40%–50% of reported TB cases are among the migrant population, and management of TB in this population poses a problem for the national tuberculosis programme. Specific approaches are currently being developed or scaled up to address concerns about access to TB services by all TB patients. At the global level, International Standards of Tuberculosis Care have been developed to set the benchmark for the standard of care for all TB patients. WHO will promote these standards as a tool to engage all providers of TB services, thus increasing access.

#### **2.5 Addressing cross-cutting issues, especially health systems strengthening**

Further progress in TB control in the Region will also depend on strengthening health systems. One of the lessons learnt over the past few years is that the rapid expansion of DOTS has put enormous pressure on health systems already stretched thin and weak on human resource capacity. This undermines the quality of DOTS services, especially the quality of laboratory services,

supervision and data management. The strengthening of health systems requires work across all levels of health systems and with different stakeholders in public and non-state sector communities. For example, improving human resource capacity will require better education policies, human resource planning and recruitment, retention strategies and budgets to ensure adequate remuneration.

Strategies to address the above issues are addressed in the Strategic Plan to Stop TB in the Western Pacific 2006–2010, with an estimated funding requirement of US\$ 2.2 billion over five years. The objective of the regional Strategic Plan is to provide policy options and operational and practical guidance for Member States and WHO in addressing the issues and challenges in achieving the 2010 impact targets. The draft regional Strategic Plan was developed through broad consultations with the Stop TB Special Project Technical Advisory Group, other experts, international partners, WHO technical officers and national TB programme counterparts from several Member States. It was presented to the Stop TB Technical Advisory Group Meeting in March 2006.

### **3. ACTIONS PROPOSED**

The following actions are proposed for consideration by the Regional Committee:

- (1) Discuss and endorse the draft Strategic Plan to Stop TB in the Western Pacific 2006–2010 and renew the commitment to reaching the goal of reducing by one half the TB prevalence and mortality by 2010 from 2000 levels.
- (2) Further strengthen political commitment for TB control, ensure the availability of human resources required for TB control, and take an active role in ensuring sustainable financing for TB control.
- (3) Call on Member States to develop, finalize and implement their national TB control plans in line with the Strategic Plan to Stop TB in the Western Pacific 2006–2010, including the monitoring and evaluation of results based on agreed indicators and targets.
- (4) Implement measures in countries and areas that have not yet achieved the regional TB control targets for 2005: (a) 100% of the population with access to DOTS; (b) 70% of the estimated TB cases detected; and (c) 85% of detected cases successfully treated.

**Draft Strategic Plan to Stop TB  
in the Western Pacific**

**2006 – 2010**



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WESTERN PACIFIC REGIONAL OFFICE**

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# **Table of Contents**

List of Abbreviations

Foreword

## **Section 1: Introduction**

1.1. Regional Situation

1.2. The Rationale for a Strategic Plan for 2006–2010

## **Section 2: The Framework of the Strategic Plan**

2.1. Strategic Objectives and Targets

2.2. Expected Results

2.3. Cross-cutting Components

## **Section 3: Resource Needs and Gaps**

## **Section 4: Risk Assessment**

## **Annexes**

1. Hierarchy of Desired Outcomes of The Strategic Plan to Stop TB in the Western Pacific 2006–2010

2. Data on Main TB Indicators

3. Key Resolutions by the Regional Committee on Tuberculosis Control in the Western Pacific Region

4. References



## Acknowledgments

## List of Abbreviations

ART	antiretroviral treatment
ACSM	advocacy, communications and social mobilization
CDR	case detection rate
CR	cure rate
DOTS	directly observed treatment, short-course (the internationally recommended strategy for TB control)
DST	drug sensitivity testing
EQA	external quality assessment
HBC	high TB burden countries
HIV	human immunodeficiency Virus
IBC	intermediate TB burden countries
ISTC	International Standards of Tuberculosis Care
GDF	global drug facility
GFATM	Global Fund to Fight AIDS, Malaria and Tuberculosis
GLC	Green Light Committee
MDR-TB	multidrug-resistant tuberculosis
NTP	National Tuberculosis Programme
PAL	practical approaches to lung health
PPM DOTS	public-private or Public-Public Mix DOTS
QA	quality assurance
TB	tuberculosis
TB-HIV	Tuberculosis and Human Immunodeficiency Virus coinfection
MDG	United Nations Millennium Development Goals
VCT	voluntary counselling and testing

## FOREWORD

Tuberculosis has probably caused more suffering, impoverishment and death than any disease in human history. During the 1990s, TB re-emerged in the Western Pacific Region on an alarming scale. About one third of 8 million cases globally occurred in the Western Pacific Region alone and led to approximately 1000 deaths per day. The need for forceful action was urgent. The WHO Regional Committee for the Western Pacific, at its fiftieth session, established the Stop TB Special Project and set the goal of halving the TB prevalence and mortality by 2010 relative to 2000. This was followed by the adoption of the Regional Strategic Plan to Stop TB in the Western Pacific for 2000 to 2005.

Those major efforts resulted in the expansion of the DOTS, an internationally recommended strategy for TB control, with the number of countries and areas implementing DOTS increasing from only 17 to all 37 countries and areas of the Region within five years. The tide has definitely turned in the regional battle against TB. The Region is on its way to halting the spread and reducing the burden of one of the world's most devastating diseases. The data for 2005 is expected to show that intermediate TB control targets of detecting 70% of estimated cases, successfully treating 85% of estimated cases and reaching 100% of the population with DOTS access have already been achieved. This major accomplishment is largely due to the commitment of countries and areas in the Region, including their leaders and the health workers who have dedicated themselves to TB control, as well as the work of our partners in the Region.

Tremendous momentum has been generated, but the job is not finished. Building on the achievements of the first phase of the Stop TB Special Project, the major task over the next five years will be to achieve the eventual goal of reducing the number of cases and deaths by one half by 2010 from the 2000 level and contribute to the achievement of the Millennium Development Goals. To do this, we need a solid plan and greater support for TB control in the Region.

The Strategic Plan to Stop TB in the Western Pacific 2006–2010 has been developed within the context of the new global Stop TB strategy. The plan provides a road map with strategies clearly laid out for achieving the 2010 goal relative to 2000. Ensuring quality of TB services, responding to emerging challenges of multidrug resistant TB and TB-HIV coinfection, increasing the case detection rate, and intensifying efforts to get both the private and public health sector involved in TB control are among the priorities included in this plan.

The plan will guide countries and areas in further developing and implementing their national five-year TB control plans. The need for bolder action called for by this plan will require further strengthening of efforts and increased funding at the regional and country levels. With the successful implementation of this plan, I am confident that we can achieve yet another victory against TB in 2010 and bring us closer to our vision of a TB-free world.

Dr Shigeru Omi, MD, Ph.D.  
WHO Regional Director  
for the Western Pacific



## Section 1 – Introduction

### 1.1. Regional Situation

Following the declaration by the Regional Committee of a "tuberculosis crisis" in the Western Pacific Region in September 1999, a resolution on tuberculosis prevention and control was adopted to establish the Special Project to Stop TB (1). The Regional Committee in 2000 endorsed the regional goal of reducing by one half the TB prevalence and mortality and set the target for 2010, compared to the level in 2000 (2). As an intermediate step towards reaching this goal, three regional targets were set to be achieved by 2005—detecting 70% of estimated TB cases, successfully treating 85% of these cases and 100% DOTS coverage in the Region.

The first regional strategic plan which laid out strategies and activities for 2000 to 2005, has been instrumental in achieving this success. The cornerstone of the first part of the Strategy was based on expanding DOTS to curb the TB epidemic in the Region. With DOTS expanding rapidly, ensuring high-quality DOTS implementation became an important concern. Therefore, national TB programmes were encouraged and assisted in building technical and managerial capacity to ensure quality while continuing to expand DOTS to cover entire populations.

Achieving a 70% case detection rate, an 85% treatment success rate and regionwide DOTS coverage, or so-called "70/85/100" targets, has been the major focus of TB control efforts over the last five years. Tremendous progress has been made in achieving these intermediate targets. There has been remarkable progress in the Region in terms of case detection and DOTS expansion. From 2000 through 2004, case detection increased from 45% to 67% and DOTS coverage from 67% and 94%. The treatment success rate has been exceeding the target of 85% for several years. With the momentum generated in recent years, the Region is now poised to achieve the intermediate targets of 70% case detection and 100% DOTS coverage by 2005 (3). But achieving the "70/85/100" targets is only an intermediate step towards achieving the goals set by the Regional Committee for 2010.

*“Achieving the '70/85/100' targets is only an intermediate step towards achieving the regional goal set by the Regional Committee by 2010.”*

Achieving and sustaining these targets over a number of years should substantially cut disease prevalence and deaths.

#### ***Estimated Burden***

Based on 2004 data, the most recent available, there were an estimated 4 million prevalent cases of TB in the Western Pacific Region (236 per 100 000 population). Nearly 2 million of those cases were new. The seven high-burden countries (Cambodia, China, the Lao People's Democratic Republic, Mongolia, Papua New Guinea, the Philippines and Viet Nam) account for more than 95% of the total estimated cases in the Region. There were about 300 000 deaths due to TB in 2003. Published estimates based on 2000–2004 data showed an overall decline of 15% in prevalence and 12% in mortality, with an annual average rate of decline of 4% and 3%, respectively (4).

## ***Case Detection***

Increasing case detection was a particular concern in the last five years because, with the exception of Viet Nam, most countries with a high burden of TB were detecting less than 40% of their estimated TB cases. Several strategies were implemented, not only for accelerating DOTS expansion in public facilities, but also for improving the collaboration of a wider range of health providers for TB control. In the last three years, the Region accelerated DOTS expansion particularly in the high-burden countries. This resulted to an improvement in the regional case detection rate and overall access to TB services. The acceleration in the Region's case detection was largely due to progress in Cambodia, China and the Philippines, which together accounted for about 92% of the case detection gap. The remarkable acceleration in China, which doubled its case detection from 30% in 2002 to 65% in 2004, was mainly the result of strengthened political commitment and increased financing for TB control.

## ***Treatment Success***

The overall percentage of registered new TB patients completing anti-TB treatment has been consistently above the 85% target for the last 10 years. The Western Pacific Region was the first WHO region to achieve this target. Five of the seven countries with a high burden of TB (Cambodia, China, Mongolia, the Philippines and Viet Nam) have been able to reach and sustain the 85% treatment success target. The two remaining countries with a high TB burden (the Lao People's Democratic Republic and Papua New Guinea) are making strong progress towards the 85% target. Rapid progress has been made in the Lao People's Democratic Republic with treatment success rate increasing from 60% in 2000 to about 80% in 2003. In Papua New Guinea, efforts need to be intensified to expand DOTS and improve the treatment success rate.

## ***Multidrug-resistant Tuberculosis***

Multidrug-resistant tuberculosis (MDR-TB) is posing a substantial threat to TB control in several countries and areas in the Region. Varying levels of MDR-TB prevalence were found in almost all settings surveyed in the Western Pacific Region, ranging from 0.5% in Cambodia to 10.4% in Liaoning Province in China (5). Data from drug resistance surveillance (DRS) in nine out of 31 provinces in China reveals alarming rates of MDR-TB in more than half of these provinces. WHO estimates that China has the world's largest MDR-TB epidemic, approximately 25% of the world's cases.

DOTS-Plus<sup>a</sup>, projects which are designed to address MDR-TB, are being scaled up in the Philippines and being initiated in Mongolia. China has developed a national plan for pilot testing and scaling-up DOTS-Plus and has begun building the necessary technical capacity for implementation. However, the scope of the threat of MDR-TB in the Region needs to be matched by a systematic, progressive and quality-assured expansion of DOTS-Plus. These initiatives are currently supported by the Green Light

***"Varying levels of MDR-TB were found in almost all settings surveyed in the Western Pacific Region, ranging from 0.5% in Cambodia to 10.4% in Liaoning Province of China."***

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<sup>a</sup> DOTS-Plus - a term that refers to piloting of the management of drug resistant TB within the context of basic DOTS programmes.

Committee<sup>b</sup> (GLC) mechanism. In several more developed countries in the Region, such as the Republic of Korea, MDR-TB patients are treated with second-line drugs in a number of specialized centres, which were established outside the GLC mechanism.

### ***TB-HIV Coinfection***

TB associated with HIV infection is a growing threat in the Region, particularly in areas of China, among specific risk groups in Malaysia, and in Papua New Guinea and Viet Nam. The prevalence of HIV infection among people with TB was 13% in Cambodia and 4% in Viet Nam, but there are specific areas or groups within those countries where TB-HIV prevalence is comparable to the high rates seen in sub-Saharan Africa (5). In most countries and areas in the Region, the level of TB-HIV coinfection is not determined because surveillance has not yet been established.

To address the emerging threat of TB-HIV coinfection, a collaborative approach between the national TB and HIV/AIDS programmes was advocated. In 2004, the Region published Tuberculosis and HIV: A framework to address TB-HIV coinfection in the Western Pacific Region, (6) that provides guidance to countries and areas to establish collaborative activities between their national TB programme and the national AIDS programme. Collaboration between HIV and TB programmes has been established in Cambodia and pilots have been set up in Viet Nam. In China, a national framework to address TB-HIV has been developed. However, access to antiretroviral treatment by HIV-infected TB patients is still very much limited, as HIV/AIDS programmes have not fully embraced HIV-TB as a key component of their strategy. This will likely change because of the increasing recognition that addressing TB-HIV will contribute to reducing mortality among HIV-infected persons. The joint WHO and UNAIDS approach to "universal access" may improve access to antiretroviral therapy overall, including for HIV-infected TB patients (7).

*"TB associated with HIV is a growing threat facing the Region, particularly in Cambodia, areas of China, Malaysia, Papua New Guinea and Viet Nam."*

### ***Access of Poor and Vulnerable Populations***

TB is a disease of poverty that thrives on deprivation and inequality. Within countries, the distribution of TB is higher among the poor than among non-poor. For example, in the Philippines, where poverty prevalence is still close to 40%, the prevalence rate of sputum smear-positive TB was found to be 1.6 times higher in urban poor communities than in urban non-poor communities(8). Of the seven countries with a high burden of TB, five (Cambodia, the Lao People's Democratic Republic, Mongolia, Papua New Guinea and Viet Nam) are low-income countries. China and the Philippines are considered to be low-to middle-income countries.

China is experiencing very rapid economic development, which is leading to an unprecedented increase of internal migration with over 150 million people estimated to have relocated from poor rural areas to urban areas. Migrant populations are at higher risk for developing TB because of living conditions and limited access to health services. Their high mobility poses an enormous challenge in ensuring TB is diagnosed and treated. In some

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<sup>b</sup> Green Light Committee - a global mechanism that aims to ensure access to cheaper and quality-assured second-line drugs, to assist countries develop and implement high quality DOTS-Plus projects, and to develop evidence-based policies related to DOTS-Plus.

areas of China, the rising number of cases and the proportion of TB cases reported among migrant populations, also known as "floating populations", are threatening to reverse the historic decline in TB in those areas. For example in Beijing and Shanghai, 40%-50% of people reported to have TB are migrants (9).

Other population groups are vulnerable either because of the lack of access to health services (e.g., mobile populations, prisoners in Mongolia, and geographically remote ethnic populations in Viet Nam) or because they are not adequately reached by the conventional delivery of services (e.g. the homeless in Japan and injecting drug users in Malaysia).

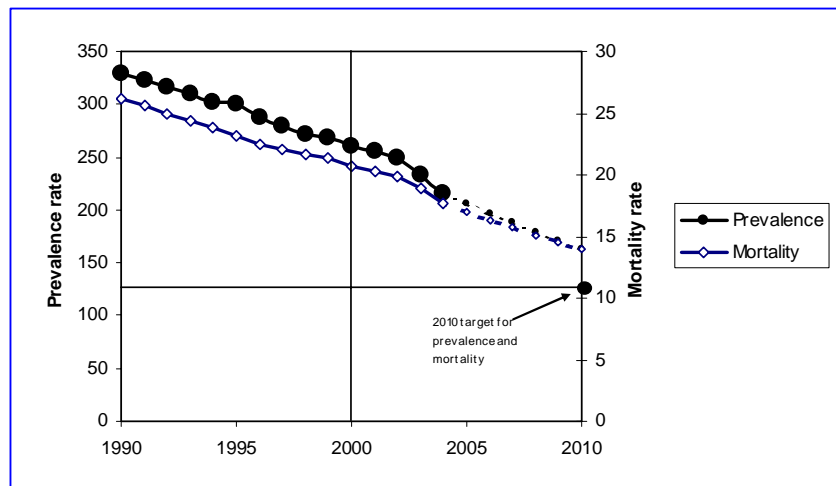
## 1.2. The Rationale for a Strategic Plan for 2006-2010

In 2000, the Regional Committee for the Western Pacific endorsed the impact targets of a 50% reduction in TB prevalence and mortality within 10 years. The Region has since achieved substantial progress in terms of expanding DOTS regionwide, detecting 70% of the cases and exceeding 85% treatment success rate. But the job is not finished. If the Region is to achieve the impact targets by 2010, it needs to accelerate the rate of decline in prevalence and mortality from the current 3% to about 8% per year over the next five years (See figure 1) (10). This means that the Region faces a tougher challenge for achieving the 2010 targets, and needs to further strengthen efforts and take a much bolder approach in TB control.

*“A continued level of a 70% case detection rate will not be sufficient to achieve the regional goal by 2010 .”*

**Figure 1.**

***Trends in TB prevalence and mortality rates of TB per 100 000 population in WPR, 1990–2005***



A strategy is therefore needed to address what issues further constrain declines in TB prevalence and mortality. There are three major areas of concern: (1) the current level of case detection will not be sufficient to achieve the impact targets; (2) MDR-TB and TB-HIV coinfection threaten to slow down the decline in prevalence or mortality; and (3) conventional DOTS service delivery does not guarantee equitable access to TB services.

The first area of concern is increasing case detection beyond 70%. A continued level of 70% case detection rate will not be sufficient to achieve the impact targets by 2010 (10). Mathematical modelling projections suggest that an increase of case detection beyond 70% is needed over the next five years, but this will require tremendous effort. It will entail enhancing laboratory capacity with specific attention to implementing external quality assessment, as well as carefully considering the Region's capacity to benefit from new tools for diagnosis. Sustaining already established mechanisms such as effective monitoring and supervision of DOTS implementation also will be important.

The second area of concern is the threat posed by MDR-TB and TB-HIV coinfection in reversing the gains in TB control. The Region needs to control the spread of MDR-TB. The MDR-TB epidemic threatens to slow the decline in prevalence and mortality because it leads to more chronic cases and increased mortality. HIV-related TB is a serious threat due to its impact on TB case fatality, which is about four times higher than among HIV-negative TB patients, even under well-performing TB programmes (11).

The third area of concern is ensuring that all TB patients have access to TB services. DOTS delivered through the conventional National TB Programme (NTP) service delivery mechanisms does not ensure that patients who seek services in general hospitals and from private providers and those in special situations, such as the homeless, drug users, migrants and prisoners, have access to quality TB services. People in these situations may not receive good quality DOTS services because they simply do not seek services through conventional health delivery mechanisms. Scaling up the involvement of a wide range of non-NTP health providers for TB control and developing and implementing special activities for poor and vulnerable populations will help ensure equitable access to these services.

Therefore, to reach the impact targets of reducing the TB prevalence and mortality by one half by 2010, The Strategic Plan to Stop TB in the Western Pacific 2006–2010 emphasizes, not only increased case detection but also control of the MDR-TB and TB-HIV coinfection and equitable access to high-quality TB services for all patients. The Strategic Plan provides a reference for actions to address these priorities. It outlines strategies that will translate into practice at the regional and country levels the new Stop TB Strategy (See Box 1) that has been developed at the global level to help achieve the United Nations Millennium Development Goals (MDGs) for TB (12).

***“To reduce by the TB prevalence and mortality by one half by 2010, the Region should go beyond 70% case detection rate, address the threat of MDR-TB and TB-HIV coinfection and ensure that all TB patients have equitable access to high-quality TB services.”***



## Box

<b>Box 1. The Stop TB Strategy (developed at the global level)</b>	
<b>Vision</b>	<b>A world free of TB</b>
<b>Goal</b>	<ul style="list-style-type: none"><li>To reduce dramatically the global burden of TB by 2015 in line with the Millennium Development Goals and the Stop TB Partnership targets</li></ul>
<b>Objectives</b>	<ul style="list-style-type: none"><li>To achieve universal access to high-quality diagnosis and patient-centred treatment</li><li>To reduce the suffering and socioeconomic burden associated with TB</li><li>To protect poor and vulnerable populations from TB, TB-HIV, and MDR-TB</li><li>To support development of new tools and enable their timely and effective use</li></ul>
<b>Components of the Strategy and implementation approaches</b>	
<b>1. Pursue high-quality DOTS expansion and enhancement</b>	
a.	Political commitment with increased and sustained financing
b.	Case detection through quality-assured bacteriology
c.	Standardized treatment with supervision and patient support
d.	An effective drug supply and management system
e.	Monitoring and evaluation system and impact measurement
<b>2. Address TB/HIV, MDR-TB and other challenges</b>	
a.	Implement collaborative TB-HIV activities
b.	Prevent and control MDR-TB
c.	Address prisoners, refugees and other high-risk groups, and special situations
<b>3. Contribute to health system strengthening</b>	
a.	Actively participate in efforts to improve system-wide policy, human resources, financing, management, service delivery and information systems
b.	Share innovations that strengthen systems, including the Practical Approach to Lung Health (PAL)
c.	Adapt innovations from other fields
<b>4. Engage all care providers</b>	
a.	Public–Public and Public–Private mix (PPM) approaches
b.	International Standards for Tuberculosis Care (ISTC)
<b>5. Empower people with TB, and communities</b>	
a.	Advocacy, communication and social mobilization
b.	Community participation in TB care
c.	Patients' Charter for Tuberculosis Care
<b>6. Enable and promote research</b>	
a.	Programme-based operational research
b.	Research to develop new diagnostics, drugs, and vaccines

## **Section 2 – The Framework of the Strategic Plan**

The framework of the Strategic Plan is based on a four-level hierarchical structure: Vision, Goal, Objectives, and Expected Results. Figure 2 provides, at a glance, the framework with all the important components of the Strategic Plan. It shows the hierarchy of desired outcomes and the specific targets and indicators that have been designed for each of the objectives and expected results.

# FRAMEWORK OF THE STRATEGIC PLAN TO STOP TB IN THE WESTERN PACIFIC 2006–2010

## VISION

Elimination of TB as a public health problem

## GOAL

To reduce prevalence and mortality by half by 2010 relative to 2000 contributing to the achievement of the overall Millennium Development Goals

## OBJECTIVES

- (1) To sustain and optimize the quality of DOTS and go beyond the "70/85" targets
- Case detection rate (beyond 70%)
  - Cure rate (beyond 85%)

- (2) To ensure equitable access to quality TB care for all people with TB.
- Proportion of facilities (inc. private or general hospitals) providing or referring to DOTS (at least 90%)

- (3) To adapt DOTS to respond to MDR-TB and TB-HIV
- Proportion of identified MDR-TB cases by DST provided with 2nd-line treatment (at least 90%)
  - Proportion of identified HIV positive TB, eligible for ART, that are provided with ART (at least 90%)

- ### CORE TARGETS
- Beyond 70% CDR
  - At least 90% DOTS-Plus Treatment coverage of MDR-TB
  - At least 90% ART coverage of HIV positive TB
  - At least 90% PPMD coverage

## EXPECTED RESULTS (ER)

- (1.1) Country capacity and quality of diagnosis for TB assured (i.e., smear microscopy, culture/DST, chest X-ray)
- 90% lab units with satisfactory performance

- (1.2) Uninterrupted supply of quality-assured TB drugs at all DOTS units
- 100% of treatment units with uninterrupted supply of drugs in a given year

- (1.3) Enhanced case management (including diagnosis and treatment) for all registered TB cases, including smear negative TB
- All HBC have developed guidelines for diagnosis and treatment of smear negative TB, e.g., children

- (2.1) Improved TB case management in non-NTP TB facilities
- At least 85% cure rate of TB cases managed by non-NTP facilities

- (2.2) Adoption of the International Standards of TB Care of all providers involved in TB control
- All countries have introduced the ISTC

- (2.3) Increased utilization of TB services by poor and vulnerable populations
- At least 10% of cases notified under pro-poor TB initiatives (or a specific underserved population, e.g. migrants)

- (2.4) Country-driven advocacy, communications and social mobilization (ACSM) strategies developed and implemented
- All HBC have implemented ACSM strategies to increase access to and use of TB services (e.g., sectorwide engagement, etc.)

- (3.1) Assessment of MDR-TB completed in targeted countries
- All targeted countries (including 14 HBC and IBC) have assessed their MDR-TB situation and trends through survey

- (3.2) Comprehensive infrastructure to diagnose and treat MDR-TB built
- At least 6 HBC have initiated or scaled up DOTS-Plus
  - At least 10% of failure cases tested by DST

- (3.3) TB-HIV Framework for collaboration developed and implemented
- All targeted countries including 14 HBC and IBC are implementing TB-HIV surveillance

- (3.4) Ensured access of TB patients to HIV services and vice versa
- At least 70% of TB patients tested for HIV in Category I and II countries
  - At least 70% of newly diagnosed HIV positive patients tested for TB

## CROSS-CUTTING (CC) ISSUES

- CCER. 1. Ensured availability of essential staff required for TB control
- CCER. 2. 90% of key positions required for TB control filled by trained staff
- CCER. 3. Sufficient financing for TB control ensured
- All HBC develop annual funding plan for NTP that incorporates all financial inputs and funding gap
- Evidence-based policy and implementation strategy development through operations research (e.g., PAL, information system, child TB, and new diagnostic modalities)

## ACTIVITIES

- Activities directed at producing expected results are to be implemented at intercountry/regional and country levels:
- Intercountry/regional activities are in the WHO plans of action
  - Country level activities are in the National TB Control Plans 2006–2010

C.C.4. Enhanced monitoring and evaluation inc. surveillance  
5 of 7 HBC conducting prevalence survey before 2010  
All 7 HBC conducting at least 2 national or programme reviews  
All HBC have conducted annual review of the TB information system

## ***Vision and Goal***

The **vision** as laid out in the Strategic Plan is to eliminate TB as a public health problem in the Region. The definition of elimination is an incidence rate of less than one TB case per one million population (12, 13).

The **goal** is to reduce the prevalence and mortality from all forms of TB by half by 2010 relative to 2000, contributing to the achievement of the Millennium Development Goals (MDGs). This goal is consistent with the targets set by the Regional Committee in 2000, which was a response to the TB crisis in the Region and the new Stop TB Strategy developed at the global level to achieve the MDGs relevant to TB.

**Box 2.**  
Millennium Development Goal. Target relevant to TB

Millennium Development Goal 6

Combat HIV/AIDS, malaria and other diseases

Target 8

To have halted by 2015 and begun to reverse the incidence of malaria and other major diseases

## ***2.1. Strategic Objectives and Expected Results***

To achieve the goal, the Region needs to meet the following three strategic objectives:

### **Strategic Objective 1**

**To sustain and optimize the quality of DOTS and go beyond the "70/85" targets**

### **Strategic Objective 2**

**To ensure equitable access to quality TB care for all people with TB**

### **Strategic Objective 3**

**To adapt DOTS to respond to MDR-TB and the TB-HIV coinfection**

Indicators to measure progress towards achieving the objectives and corresponding targets have been identified for each of the strategic plan's objectives. Four core regional targets will be monitored closely at the regional level and serve as markers of progress towards achieving the impact targets. Under each of the three objectives, expected results that represent the building blocks for achieving the objectives should be adapted according to the countries' needs. The specific activities should be formulated in the national TB control plans and the WHO action plans.

### **Strategic Objective 1**

**To sustain and optimize the quality of DOTS and go beyond the "70/85" targets**

The Region has made substantial progress since the first regional Strategic Plan was endorsed by the Regional Committee in 2000. The implementation of DOTS has accelerated with the number of countries and areas implementing DOTS doubling to 34 by 2004. This has resulted in an

increase in the population of the Region with access to DOTS from 67% in 2000 to 94% in 2004. Similar remarkable progress has been achieved in improving the case detection rate from around 40% in 2000 to 67% in 2004. In 2005, the momentum was sustained. The 2005 data are expected to show that the targets of 100% DOTS coverage and 70% case detection rate have been met.

However, the rapid scale up of DOTS coverage has resulted in challenges, including the high demand in some countries and areas on their limited health systems capacity, human resources and health infrastructure. This has compromised the quality of DOTS implementation in certain areas, including the quality of laboratory diagnosis and directly observed therapy, limited training and supervision at peripheral levels, inefficiencies in drug management in some areas, and concerns of accuracy and reliability of information systems for reporting and referral. Poor quality of DOTS implementation in some areas undermines the gains from DOTS expansion (e.g., through the creation of more drug resistance) and could hinder a further increase in case detection and improvement in case management. As emphasized in Section 1, sustaining a high level of case detection and cure rates in the next five years is critical to reducing the TB prevalence and mortality.

This will mean implementing more systematic approaches to increasing human resource competence and availability, further investing in strengthening laboratory capacity and quality in the Region, especially for sputum smear microscopy, improving drug management, programme supervision, and recording and reporting.

## **TARGETS**

### **A. Beyond 70% Case Detection Rate**

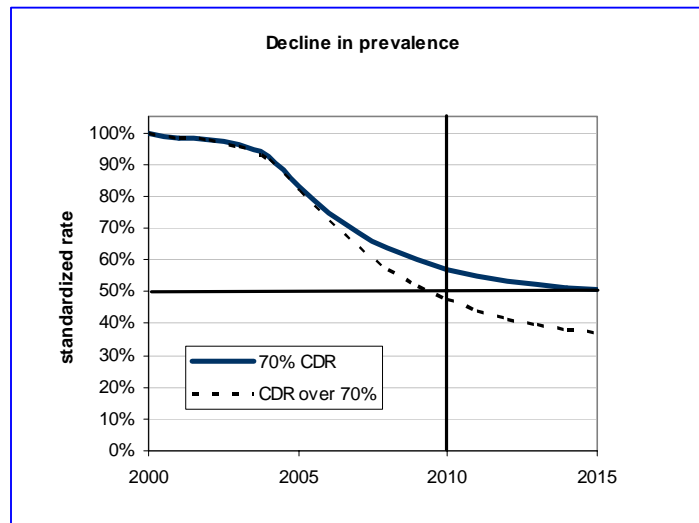
*Definition: Of the estimated incident TB sputum smear-positive cases in the Region, more than 70% are detected.*

The analytical modelling projections that guided the development of the regional Strategic Plan for 2006–2010 suggest that the average annual rate of decline in TB prevalence and mortality would have to fall further by more than twice the current level over the next five years to reach the impact targets by 2010 (See Figure 2 and Figure 3). To do this, the case detection rate must be increased to at least 80% from 2006 onward (10). With this level sustained, the TB prevalence and mortality would be reduced by more than 50% in 2010, thus enabling the Region to reach the targets set by the Regional Committee in 2000.

*"The rapid scale up of DOTS coverage has resulted in challenges, including the high demand on the countries' limited health systems capacity, human resource, and health infrastructure."*

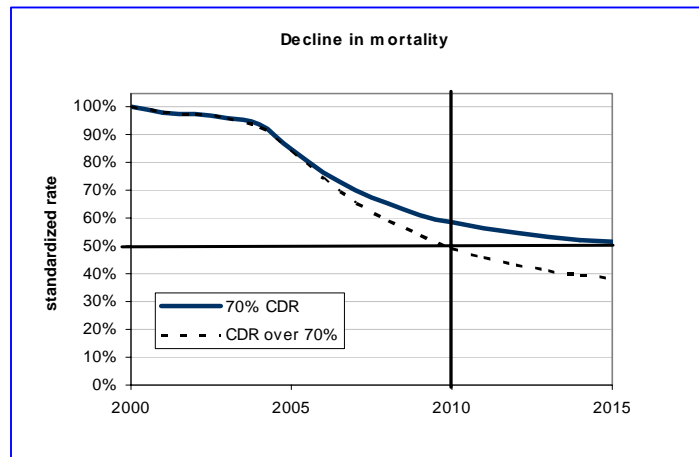
**Figure 2.**

**Impact  
of "beyond 70%"  
case detection  
rate on decline  
in TB prevalence**



**Figure 3.**

**Impact  
of 'beyond 70%'  
case detection  
rate on decline in TB  
mortality**



Enormous efforts made by countries and areas were necessary to reach the 70% case detection rate. Increasing and sustaining the case detection rate to at least 80% will require intensified efforts. The appropriate strategies will vary among countries, but implementation of high quality DOTS will be critical to further increase and sustain case detection beyond 70%. These strategies include enhancing diagnostic capacity, including the implementation of the quality assurance programmes for sputum smear microscopy. The Region should capitalize on the opportunity to explore the potential for enhancing or scaling up existing methods to improve further TB diagnosis and piloting new technologies to improve TB diagnosis as they become available.

***“To reach the 2010 impact targets, the Region must increase and sustain case detection rate to at least 80% from 2006.”***

## **B. Beyond 85% Cure Rate**

*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.*

The Region has been able to sustain a cure rate exceeding the 85% target for several years. Cure is defined as a patient with previously positive sputum smear becoming smear-negative in the last month of treatment and on at least one previous occasion(14). Sustaining a high cure rate is as crucial as increased case detection to achieve the Region's impact targets on TB prevalence and mortality. Achieving high cure rates under an environment of high case detection rate cuts TB transmission, averts deaths and prevents the occurrence of MDR-TB.

Cure is not only a measure of success for the individual, but a measure of the quality of the delivery of the TB control programme. Cure does not only depend on the efficacy of anti-TB drugs, but is also affected by a number of programmatic factors (15, 16). These factors include: (1) accessibility of treatment services; (2) awareness of TB in the community; (3) uninterrupted supply of effective TB drugs; and, (4) treatment adherence through DOTS.

Achieving this target, therefore, will involve addressing programmatic factors, which are essentially related to ensuring high quality DOTS implementation.

### **Strategic Objective 2**

#### **To ensure equitable access to quality TB care for all people with TB**

Although the 2005 target of reaching 100% population coverage with DOTS has been achieved, a substantial proportion of persons in covered populations still do not have adequate access to DOTS services. These groups include patients from non-NTP facilities, the poor, at-risk groups and persons in special situations, including slum dwellers, homeless people, migrants, people in prisons and rehabilitation centres, and injecting drug users. Providing access means being able to remove or alleviate the barriers that TB patients face in accessing high-quality TB services. For example, for the urban poor, although TB services may be available, these services are either substandard or the high indirect or direct costs, including transportation, service co-payments, and social and cultural impediments. For some groups, such as homeless people and migrants, services are not effectively available. With TB disproportionately higher in these groups, failure to provide them with high-quality and effective free services is a serious threat to reversing the gains made in reducing TB prevalence and mortality.

Addressing the needs of the poor, at-risk groups and people in special situations, such as prisoners and people in rehabilitation centres, should be carefully planned to meet their special needs. Special initiatives or activities for these groups should be built into the regular DOTS programme to ensure that all TB patients receive high-quality TB services. One strategy to provide wider access to high-quality and effective services

*"Adoption of PPMD that involved private health providers showed the potential to increase case detection by as much as 20% and to significantly improve case management."*

is the Public-Private or Public-Public Mix DOTS (PPMD), which is an approach that encourages all non-NTP providers to adopt the DOTS strategy. This approach has the potential to reach TB patients who otherwise do not access public TB facilities. In this manner, PPMD contributes to increased case detection. As a complementary strategy to PPMD, the adoption of the International Standards of TB Care, which is scheduled to be published by WHO and several international partners in TB control in 2006, will be useful to establish high standards for the quality of care for all TB patients, especially among private sector providers (17).

To promote equitable access and the utilization of TB services, strategies to influence both the supply and demand side of services need to be implemented. For example, while improving the quality of services, country activities to promote participation of communities and health-seeking behaviour that would result in early case detection are important. Advocacy activities to influence policies that promote equity in access to services by all TB patients at all levels also will be crucial. Moreover, effective approaches that address the special needs and situations of the poor and other vulnerable groups need to be developed, demonstrated and documented.

## **TARGET**

### **At least 90% of registered facilities<sup>c</sup> are referring or providing DOTS services**

*Definition: Of the total health facilities with potential to be involved in TB control, 90% are providing DOTS services or are referring to centres providing DOTS services.*

There are several ways to measure progress in improving access to DOTS services by all patients. One of the most relevant and practical is to measure the Region's progress in increasing the number and diversity of health facilities involved in TB control, either by referral or actually providing DOTS services. In many countries and areas in the Region, people suspected of having TB and TB patients currently seek health care from many different providers and facilities outside the network of the NTP. These include private clinics, non-NTP general hospitals, workplace clinics, pharmacies and traditional modes of health delivery. Enabling these facilities to refer or provide services through the PPMD approach greatly expands the network through which high-quality DOTS services are provided. Experiences with PPMD show the potential to increase case detection by much as 20% and to significantly improve case management (18). If such results can be replicated across the Region, a substantial contribution to the reduction in TB prevalence and mortality can be made.

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<sup>c</sup> Definition of 'facilities' includes private, general hospitals, and other country-specific non-NTP health providers that should be involved in TB control.



### **Strategic Objective 3**

#### **To adapt DOTS to respond to MDR-TB and HIV/TB coinfection**

Increased case detection to 80% in itself will not be enough to achieve the 2010 impact targets because of the threat of a MDR-TB epidemic (particularly in several provinces in China and in the Philippines and Mongolia) and the growing concern about TB-HIV coinfection. MDR-TB and TB-HIV coinfection present two major threats that could undermine the gains in TB control and hinder the achievement of the regional goal in 2010.

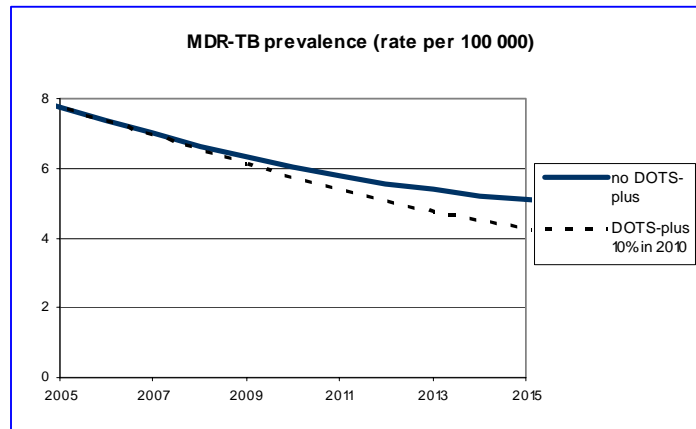
MDR-TB has been an ever-present threat in the Region, but the problem is aggravated by inadequate treatment of patients with MDR-TB and the resultant amplification of drug resistance due to the misuse of second-line drugs in some parts of the Region. MDR-TB is a threat to TB control in the Region because it increases the number of chronic cases and the subsequent transmission of primary MDR-TB. The case fatality rate among MDR-TB cases is about 10 times higher than among non-MDR-TB cases and approaches the fatality of untreated TB (19). Thus, MDR-TB has a significant impact on both TB prevalence and mortality.

*"Progressive implementation of DOTS-Plus in the next few years has a significant impact on the overall TB mortality over the long term"*

There is increasing evidence that the management of MDR-TB under programmatic conditions, although rather complex, is feasible. DOTS-Plus, a programme designed to address MDR-TB, needs to be initiated or scaled up in countries and areas where MDR-TB is an increasing problem. In the long run, the most important impact of DOTS-Plus will be to curb the MDR-TB epidemic. If 10% of the MDR-TB cases detected under DOTS programmes would also be covered under DOTS-Plus, a substantial number of MDR-TB cases could be averted in the coming decade, creating an impact both on incidence and prevalence of MDR-TB. Progressive DOTS-Plus implementation may prevent 2% of cumulative incident MDR-TB cases and 16% prevalent MDR-TB cases by 2015 (10). (See Figure 4 and Figure 5)

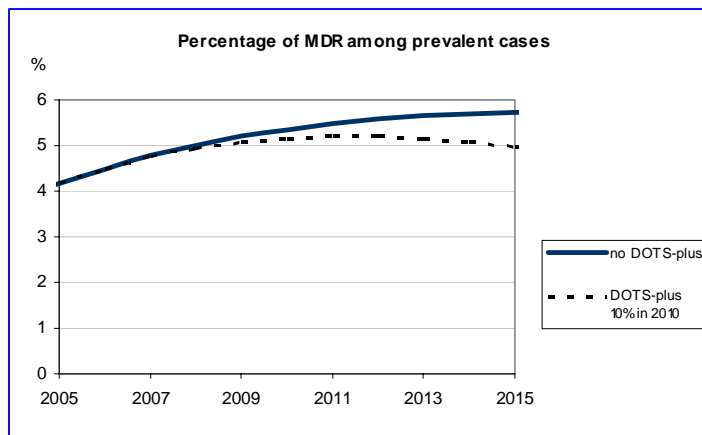
**Figure 4.**

***Impact of DOTS-Plus on MDR-TB prevalence rates in the general population***



**Figure 5.**

**Impact of DOTS-Plus on the proportion of MDR-TB among prevalent TB cases**



In several parts of the Region, HIV prevalence is threatening to reverse gains in TB control. HIV infection fuels the TB epidemic, and HIV infection and TB form a deadly combination. TB case fatality among patients with HIV is about four times higher than among HIV-negative TB patients even under a well-functioning TB programme (11). Hence, HIV infection reduces the overall cure rate because of increased mortality. Although some progress have been made to address the threat of TB-HIV coinfection in some areas in the Region, particularly Cambodia, it has not been dealt with systematically and measures taken have not been sufficient to effectively respond to the seriousness of the threat.

To reduce TB mortality among patients co-infected with TB and HIV, patients need to be identified early and provided with antiretroviral therapy if eligible. However, in the absence of effective collaboration between TB and HIV programmes, this is unlikely to happen. The first crucial step is to build an effective collaboration between the two programmes (e.g., TB-HIV task forces or TB-HIV committees), followed by the initiation and scaling up of collaborative activities according to the level of TB-HIV prevalence. This entails developing a clear and documented joint plan and mechanism for collaboration.

In the next several years, it will be important for China, Malaysia, Papua New Guinea and Viet Nam to implement collaborative TB-HIV activities through a formally established mechanism and plan. Cambodia will need to scale up its TB-HIV activities. All countries, particularly those with a high and intermediate burden of TB, should monitor the TB-HIV situation by implementing joint surveillance activities.

*"The first crucial step is to build an effective collaboration between the two programmes, followed by the initiation and scaling up of collaborative activities."*

## **TARGETS**

- (A) At least 90% of MDR-TB cases identified by drug susceptibility testing (DST) provided with second-line anti-TB drugs**

*Definition: Of the MDR-TB patients identified by DST under the DOTS-Plus programme, at least 90% are provided with quality-assured second-line treatment<sup>d</sup>.*

<sup>d</sup> The denominator could vary between high TB burden (HBC) and intermediate TB burden countries (IBC). For HBC the denominator could be restricted to MDR-TB

The mathematical modelling projections suggest that MDR-TB needs to be controlled to reach the TB targets by 2010. An increase of coverage of second-line treatment delivered effectively through DOTS-Plus contributes to reducing the TB prevalence and mortality. Without proper treatment, MDR-TB leads to more chronic cases resulting in the transmission of primary MDR-TB and increased case fatalities among MDR-TB patients. Therefore, increasing access to quality-assured second-line treatment through a DOTS-Plus programme is an essential intervention to address the threat of MDR-TB.

The above core indicator/target measures the extent to which second-line drugs are made continuously accessible to identified MDR-TB patients. Other indicators will be measured in order to determine the coverage of DOTS-Plus. For example, the percentage of re-treatment cases with DST can be used to determine the extent to which DOTS-Plus services are made available to patients who are primarily at risk for MDR-TB.

**(B) At least 90% Antiretroviral Therapy (ART) coverage of eligible patients with TB-HIV coinfection**

*Definition: Of TB patients with HIV coinfection found to be eligible for ART through collaborative TB-HIV programmes, at least 90% are provided with ART*

Antiretroviral therapy is an essential part of the intervention to reduce mortality related to TB-HIV coinfection. The Region needs to make good progress over the next five years to improve the coverage of ART among TB patients in order to reduce mortality, especially in areas with high prevalence of TB-HIV coinfection. In countries and areas with national HIV prevalence of more than 1% or with an HIV prevalence rate of at least 5% among TB patients, TB and HIV programmes should work together to regularly screen TB patients for HIV infection, and similarly try to identify people with HIV/AIDS among TB patients (6).

Patients who are identified with HIV-TB coinfection through this mechanism and are found to be eligible<sup>e</sup> for antiretroviral therapy should be provided with it. TB programmes will be relying on effective collaboration with HIV programmes to improve access to ART for TB patients. Ideally, all eligible TB patients should receive ART, but the limitations as to the pace of expansion of ART in the Region may constrain the achievement of 100% coverage.

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patients identified in DOTS-Plus programmes; for IBC, it could include those identified in the public and private sector collaborating with NTP.

<sup>e</sup> The WHO guideline entitled, *Scaling Up Antiretroviral Therapy in Resource-limited Settings: Treatment Guidelines For A Public Health Approach*, defines eligibility and includes the timing of ART initiation based on CD4 cell counts. Recommendations are also made when CD4 testing is not available

### **Box 3. Core Regional Targets by 2010**

Four core targets have been drawn from the objectives of the Strategic Plan. These represent the strategic areas in which progress is critical to achieve the impact targets of a 50% reduction in TB prevalence and mortality by 2010 relative to 2000, and which will be monitored closely over the period of the plan. These new process targets represent a strategic shift from the "70/85/100" targets of the first regional strategic plan for 2000–2005 to the "50/50" targets of the second regional strategic plan for 2006–2010. The core targets provide bold yet measurable focus for the Region towards achieving the eventual goal for TB control.

#### **CORE TARGET 1: Beyond 70% case detection**

*Definition: Of the estimated incident TB sputum smear positive cases in the Region, greater than 70% are detected.*

Mathematical modelling projections indicate that maintaining the regional case detection rate at 70% will not be sufficient to reach the impact targets to reduce the TB prevalence and mortality by 2010. The case detection rate should be increased to over 80% starting 2006 and be sustained until 2010 to achieve the impact targets by 2010. Increasing case detection rate to this level will be the single most important contributing factor to accelerating the average annual rate of decline in prevalence and mortality.

#### **CORE TARGET 2: At least 90% PPMD coverage**

*Definition: Of the total health facilities with potential to be involved in TB control, 90% are providing DOTS services or are referring to facilities providing DOTS services.*

Many TB suspects and patients access services from a range of providers outside the NTP network. Increasing the involvement of non-NTP health providers and facilities in providing or referring to DOTS services through the PPMD approach widens the base through which high quality TB services can be delivered to all TB suspects and patients.

#### **CORE TARGET 3: At least 90% DOTS-Plus coverage**

*Definition: Of the MDR-TB patients identified by DST under the DOTS-Plus programme, at least 90% are provided with quality-assured second-line treatment.*

Increasing coverage of DOTS-plus programmes is essential to address the threat that MDR-TB poses to slowing down the decline in prevalence and mortality, thus preventing the Region from achieving the impact targets by 2010. DOTS-Plus increases access to quality-assured second-line drugs and provides a mechanism to deliver the complex treatments for MDR-TB patients, including ensuring adherence to treatment.

#### **CORE TARGET 4: At least 90% ART coverage**

*Definition: Of the TB patients with HIV infection and found to be eligible for ART through collaborative TB-HIV programmes, at least 90% of them are provided with antiretroviral treatment.*

Mortality among TB patients with HIV/AIDS is much higher than among TB patients without HIV/AIDS. Ensuring access and promoting adherence to ART is perhaps the most essential intervention to reduce mortality among patients with TB-HIV coinfection. However, access of TB patients to ART has been very limited until recently. Achieving a high coverage of TB-HIV collaborative activities, especially in areas with high TB-HIV prevalence will be essential.

## 2.2. Expected Results

The following chapter presents a series of expected results related to the three strategic objectives. Indicators and targets have been created for each expected result to monitor progress. The expected results are building blocks towards achieving the objectives. They describe the specific desired results of actions needed in order to achieve the objectives. However, the list of expected results is not exhaustive. The context and level of importance of some of the intermediate results required to achieve the objectives vary among countries and areas. The expected results with its proposed indicators and targets are subject to adaptation as per country needs. Specific activities that will be implemented to achieve these expected results are to be formulated in the national TB control plans and the WHO action plans.

### **Strategic Objective 1. To sustain and optimize the quality of DOTS and go beyond the "70/85" targets**

The following table shows the three expected results under this objective and their corresponding indicators and targets, which are discussed in detail below.

	<b>DESCRIPTION</b>	<b>INDICATORS AND TARGETS</b>
<b>Expected Result 1.1</b>	Country capacity and quality of diagnosis for TB assured	At least 90% laboratory units with satisfactory performance
<b>Expected Result 1.2</b>	Uninterrupted supply of quality assured anti-TB drugs at all DOTS units	100% of treatment units with uninterrupted supply of drugs in a given year
<b>Expected Result 1.3</b>	Enhanced case management for all registered TB cases, including smear-negative TB	All HBC have developed guidelines for diagnosis and treatment of smear negative TB, e.g. children

#### ***Expected Result 1.1***

##### ***Country capacity and quality of diagnosis for TB assured***

In the absence of new and more practical TB diagnostic tests, high-quality sputum smear microscopy remains the recommended method for TB case detection. 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. Many countries and areas in the Region have gradually expanded their quality assurance activities in the last two years, but not all aspects of a good quality assurance programme have been implemented. Based on unpublished data reported to WHO, some countries with more than 10% of laboratories showing poor performance have not taken sufficient corrective action.

It is crucial that countries and areas intensify their efforts to implement quality assurance and pursue improvement of laboratory network capacity to respond to the increasing demands of the expanding TB services in the next five years. Increasing case detection and addressing the emerging

*"To ensure access to high quality sputum smear microscopy services, a wide network of properly equipped laboratories with trained personnel and the implementation of quality assurance system are necessary."*

threats of MDR-TB and TB-HIV put increased pressure on existing laboratory capacity. In high MDR-TB and TB-HIV prevalence settings, culture and DST can be an important diagnostic tool and should be introduced in a phased manner at appropriate referral levels of the health system. For the use of culture for routine diagnosis, many countries in the Region face resource constraints and may not meet the required conditions for the rational use of culture. National guidelines need to be developed on use of culture and DST, including the potential use of diagnostic committees to contribute to ensuring the accuracy of diagnosis.

### ***Expected Result 1.2***

#### ***Uninterrupted supply of quality-assured anti-TB drugs at all DOTS units***

An uninterrupted supply of high quality, affordable, first-line anti-TB drugs is critical to the effective implementation of DOTS. Increasingly, countries provide adequate budget support to procure these drugs. In addition, the supply of quality-assured and affordable first-line TB drugs through the Global Drug Facility (GDF) by means of direct procurement or grant assistance has been used in several countries in the Region. To ensure maximum benefit of the available anti-TB drugs countries need to introduce and sustain an effective drug management system.

For second-line drugs, the Green Light Committee (GLC) provides a rigorous mechanism through which quality-assured, second-line drugs can be made available in countries to treat MDR-TB in DOTS-Plus programmes.

### ***Expected Result 1.3***

#### ***Enhanced case management for all TB cases, including smear-negative TB***

The countries and areas in the Region continue to report almost the same number of smear-negative TB and extra-pulmonary TB as smear-positive TB cases. In 2004, about 481 000 smear-negative and extra-pulmonary TB cases were reported compared to about 580 000 new smear-positive cases. From a public health point of view, priority in TB control is given to the diagnosis and treatment of smear-positive TB only as they represent the highly infectious TB cases. Smear-negative pulmonary TB and to a lesser extent, extra-pulmonary TB, contributes significantly to the impact of TB on morbidity and mortality (20).

Among people with HIV, smear-negative TB and extra-pulmonary TB are more common and more difficult to diagnose. TB in children is frequently not recognized and can therefore contribute to a higher mortality. To improve the diagnosis and management of smear-negative TB, extra-pulmonary TB and TB among children, evidence-based diagnostic algorithms, CXR and sputum cultures may play a role. Specific recommendations on the use of these tools were made at the global level (21). The countries and areas in the Region may consider the application of these recommendations after careful assessment of the situation. Developing relevant policies, guidelines and practical activities to strengthen the management of smear-negative and extra-pulmonary TB will entail wide consultations, and should be supported by operational research.

**Strategic Objective 2 - To ensure equitable access to quality TB care for all people with TB**

The following shows the four expected results under this objective and their corresponding indicators and targets, which are discussed below in more detail.

	<b>DESCRIPTION</b>	<b>INDICATORS AND TARGETS</b>
<b>Expected Result 2.1</b>	Improved TB case management in non-NTP TB facilities.	At least 85% cure rate of TB cases managed by non-NTP facilities.
<b>Expected Result 2.2</b>	Adoption of the International Standards of Care (ISTC) of all providers involved in TB control.	All countries and areas have introduced the ISTC.
<b>Expected Result 2.3</b>	Increased utilization of TB services by poor and vulnerable populations.	At least 10% of cases notified under pro-poor TB initiatives (or a specific underserved population, e.g., migrant).
<b>Expected Result 2.4</b>	Country-driven advocacy, communications and social mobilization (ACSM) strategies developed and implemented	All HBC are implementing ACSM strategies for TB control on a national scale.

***Expected Result 2.1***

***Improved TB case management in non-NTP TB facilities***

Currently, the overall cure rate in the non-NTP facilities, including the private sector, is much lower than in NTP facilities. Furthermore, the quality of diagnosis and treatment in non-NTP facilities in general is not standardized and not quality assured. Poor TB case management contributes to unnecessary suffering for patients, diagnostic delays, the continuous spread of TB, high health care costs for patients and society, and the development of MDR-TB.

To address these issues, PPM DOTS approach is increasingly advocated in the Region. This approach targets a wide range of private and non-NTP public health providers who are dealing with TB. However, improved efforts are needed to strengthen the implementation of technical capacity and the coordination of PPM DOTS at the country level, since there are still large numbers of public and private health care providers that have not adopted the DOTS strategy.

***Expected Result 2.2***

***Universal adoption of the International Standards of TB Care of all providers involved in TB control***

The adoption of the recently published International Standards of TB Care (ISTC) complements the implementation of the PPM DOTS approach to ensure the quality of TB service delivery. The ISTC describes a widely accepted standard of TB care that all practitioners, public or private, should follow in dealing with patients who have, or are suspected of having, TB (17). The ISTC presents a set of principles and actions, covering three categories of activities including diagnosis, treatment and

the public health responsibilities of all providers. In countries and areas where the ISTC will be adopted, it is expected that the engagement of all care providers in delivering high-quality care for TB patients of all ages will be facilitated through the development and implementation of guidelines and policies based on these standards. It is envisaged that the ISTC will be endorsed and promoted by all countries, especially among professional organizations and other health care entities.

### ***Expected Result 2.3***

#### ***Increased utilization of TB services by the poor and vulnerable population***

There are three main reasons for TB programmes to focus on increasing access to DOTS by the poor, at-risk groups and people in special situations who are more vulnerable to TB. Firstly, TB among these groups may comprise many of the undetected cases. Therefore, it is expected that strategies to increase access to DOTS by the poor and vulnerable populations will contribute to increasing case detection. For example, there is sufficient evidence of low TB case detection and low treatment success rates in the large migrant or so-called floating populations in China (estimated at more than 150 million people). Therefore, there is an urgent need to control TB within this group, particularly as internal migration continues to increase. Secondly, strategies to improve access are necessary to resolve inequity in the burden of TB and access to TB control. Thirdly, improving equitable access to TB services will also ensure that the basic human right to health is enjoyed by all. Context-specific and need-responsive actions, such as developing specific policies at local levels and innovative service delivery mechanisms, would be needed to address these issues.

*"Improving equitable access to TB services ensures that the basic human right to health is enjoyed by all."*

### ***Expected Result 2.4***

#### ***Country-driven Advocacy, Communications and Social Mobilization (ACSM) strategies developed and implemented***

ACSM is an essential supporting element of TB control that can make a measurable contribution to mobilizing and sustaining necessary political, social and financial resources for TB control. ACSM can influence policy and health services from the supply side, and behaviour and social change on the demand side. Furthermore, ACSM can assist in combating stigma and discrimination and in raising awareness and commitment in directing attention to the often-neglected issue of access to TB services for poor and vulnerable populations.

Social mobilization strategies that will lead to more meaningful participation of affected communities in TB control can play an important role in achieving actual and equitable access to TB services. Advocacy represents an important means of engaging policymakers, local government officials, public and private health professionals, community leaders, patients and affected communities in bringing about sustained behavioural and social changes that will in turn contribute to TB control efforts. Because country settings and needs are different, ACSM strategies need to be country specific and country driven. In the Western Pacific Region, ACSM strategies can make a relevant contribution to more



effectively reach the poor and vulnerable populations and ensure equitable access to services by all TB patients.

**Strategic Objective 3 - To adapt DOTS to respond to MDR-TB and TB-HIV coinfection**

The following table shows the four Expected Results under Objective 3 and their corresponding indicators and targets, which are discussed in detail below.

	<b>DESCRIPTION</b>	<b>INDICATORS AND TARGETS</b>
<b>Expected Result 3.1</b>	Assessment of MDR-TB completed in targeted countries	All targeted countries (including 14 HBC and IBC) have assessed their MDR-TB situation and trends through drug resistance surveillance
<b>Expected Result 3.2</b>	DOTS-Plus initiated/scaled up in targeted countries	At least 6 HBC initiated or scaled up DOTS-Plus At least 10% of failure cases tested by DST
<b>Expected Result 3.3</b>	TB/HIV Framework for collaboration developed and implemented	All targeted countries including 14 HBC and IBC are implementing TB-HIV surveillance
<b>Expected Result 3.4</b>	Ensured access of TB patients to HIV services (including treatment, referral, VCT), and similarly access to TB services for persons with HIV/AIDS	At least 70% of TB patients are tested for HIV in Category 1 and Category 2 countries/areas  At least 70% of newly diagnosed patients with HIV tested for TB

***Expected Result 3.1***

***Assessment of MDR-TB completed in targeted countries***

Continuous monitoring of trends of anti-TB drug resistance, especially in settings with high prevalence of MDR-TB, is essential to assess current interventions and their impact on the TB epidemic. Drug resistance surveys (DRS) conducted between 1995 and 2004 provided useful information on anti-TB drug resistance levels in some countries in the Region. It will be useful to repeat DRS in most settings to assess trends or to obtain data on resistance patterns in the different categories of re-treatment cases. In China, while province-specific surveys will continue, a national DRS is planned that is expected to provide a comprehensive picture of TB drug resistance situation of the country. In other countries, assessment of MDR using routine surveillance data may be more efficient (e.g., intermediate TB burden countries and the Pacific island countries and areas). All countries that plan to begin or are implementing DOTS-Plus programmes should use drug resistance surveillance as a monitoring tool.

### ***Expected Result 3.2***

#### ***DOTS-Plus initiated or scaled up in targeted countries***

Patients with identified MDR-TB should have access to quality-assured, second-line anti-TB drugs. Implementation of DOTS-Plus, designed to manage MDR-TB under programme conditions, will be necessary in countries and areas where MDR-TB is a serious threat to TB control. Several countries in the Region are at varying stages of DOTS-Plus implementation. Viet Nam is planning a DOTS-Plus programme, while China and Mongolia are at the initial stages of implementation. The Philippines is scaling up its DOTS-Plus project. Funding of DOTS-Plus implementation in all these countries, with the exception of Viet Nam, has been secured from the Global Fund to Fight AIDS, Malaria and Tuberculosis (GFATM) for the next several years.

The long-term impact of DOTS-Plus depends on its expansion beyond pilot projects. More proactive scaling up of DOTS-Plus is necessary. Countries will need to address obstacles to scaling up, such as: (1) the need for wider access to quality-assured culture and DST alongside the expansion of second-line TB treatment; (2) lack of technical capacity for DOTS-Plus implementation; and (3) weakness of health systems, including the lack of human resources to deliver complex interventions in a DOTS-Plus programme.

### ***Expected Result 3.3***

#### ***TB-HIV Framework for collaboration developed and implemented***

Collaboration between TB and HIV programmes is an essential first step to initiate surveillance activities, which in turn is the starting point for intensified case-finding and other collaborative TB-HIV activities. So far, ensuring collaboration between the two programmes continues to be a challenge. Only Cambodia has successfully expanded collaborative TB-HIV activities. In view of the relatively low HIV prevalence, many countries in the Region may not need to implement all collaborative TB-HIV interventions. HIV prevalence rates at the national and subnational levels should guide countries in determining the types of collaborative TB/HIV activities to implement<sup>f</sup>. TB-HIV collaborative activities should be led by a national TB-HIV committee or a working group that comprises the national TB and HIV/AIDS programmes and substantial representation from partner agencies and communities affected by the diseases.

### ***Expected Result 3.4***

#### ***Ensured access of TB patients to HIV services (including voluntary counselling and testing, or VCT), and people with HIV regularly screened for TB***

Early detection of HIV infection among TB patients or of TB among HIV-infected patients followed by access to cotrimoxazole prophylaxis, ART and anti-TB treatment is necessary to reduce mortality among TB-HIV co-

*"HIV testing should lead to care and support, especially treatment with ART, as this is the most effective way to prevent mortality."*

<sup>f</sup> See Regional Framework P.22 Box 6-Thresholds for Commencing Collaborative TB/HIV Activities

infected patients. The timely provision of counselling and testing services by both TB and HIV programmes is important. For TB patients, identification of HIV status is usually done in VCT centres. However, in many countries in the Region, VCT services are available only at a limited number of locations, thus limiting access to these services. One of the major constraints of expanding VCT and promoting its utilization is the lack or insufficiency of HIV/AIDS treatment and care and support, preventing people from acknowledging and appreciating the benefits of VCT. Countries should take on the challenge of providing regular screening of persons infected with HIV to be able to diagnose TB as early as possible and provide treatment, care and support, including ART and anti-TB treatment, as this is the most effective way to prevent TB mortality.

## **2.3. Cross-cutting Components**

Four cross-cutting issues have been identified: the strengthening of human resources; sufficient financing for TB control; operations research; and monitoring and evaluation. These issues do not fall uniquely under one of the three objectives, but rather span the overall broad concerns of TB control and for this reason, have been labelled "cross-cutting". Each of these four issues is discussed in detail in this section.

### **2.3.1**

#### ***Ensured availability of essential staff required for TB control***

The rapid scale up of quality DOTS, particularly in settings with high rates of HIV or MDR-TB, increased pressure on staff members in national TB programmes. Currently, many countries face problems related to quantity, quality and distribution of staff. This, of course, presents a huge challenge as countries scale up additional and more complex interventions for TB control. For the quality of DOTS to be improved and the twin threats of TB-HIV coinfection and MDR-TB to be addressed, adequate numbers of skilled and trained staff will need to be secured and mechanisms should be developed to maintain and further strengthen their knowledge and skills.

To ensure that there are sufficient numbers of quality staff in TB control, political commitment is essential from the side of the NTP. However, this only represents one component, since concerns about the quantity and quality of staff is an issue, which is not specific to TB control programmes and often dependent on factors outside the scope of the NTP. Strengthening human resources requires action across all levels of programmes, health systems, government departments, partnerships and global stakeholders. Priority should be given to the development of national and comprehensive human resource development plans that cover improvements in educational policies, financial ceilings for recruitment, and human resource planning including skills mix and distribution, policies to improve staff recruitment, retention and accountability, and budgets to ensure adequate remuneration.

***"Strengthening human resources requires action across all levels of programmes, health systems, government departments, partnerships and global stakeholders."***

### 2.3.2

#### ***Sufficient financing for TB control ensured***

Expanding quality DOTS and addressing emerging issues, such as TB-HIV coinfection and MDR-TB, require more costly interventions compared to conventional DOTS. Commitment to ensure adequate financing is needed at all levels. In view of the challenges that lie ahead, financing by governments should be sustained at a minimum or, preferably, increased. In addition, sustaining partnerships and resource mobilization is essential as stated in resolution WHA53.1 on sustainable financing for TB prevention and control as adopted by the Fifty-third World Health Assembly<sup>9</sup> (22). At the global level, the Stop TB partnership will play an important role. At the regional level, the role of the Interagency Coordination Committee (ICC) will be important in sustaining partnerships. At the country level, various mechanisms of partnerships should be sustained, including the Country Coordinating Mechanism (CCM) established for the Global Fund to Fight AIDS, Malaria and Tuberculosis.

### 2.3.3

#### ***Evidence-based policy and implementation strategy development through operations research***

Operations research is a useful tool to evaluate and study the application of various mechanisms, modalities and tools. In view of the emerging challenges and the increasing complexity of TB control, innovative approaches of delivering or further improving TB care must be pursued. A careful assessment through operational research of the benefits from the application of already available but so far underused interventions or expected new tools will be useful. Various approaches, as well as implementation and operational issues that are likely to impede progress, need to be carefully studied to develop appropriate actions.

#### **Practical Approach to Lung Health**

Approaches to improve quality and access to DOTS include the Practical Approach to Lung Health (PAL), which is a primary health care strategy for the integrated management of respiratory conditions in patients aged 5 years and over. The aim of PAL is to improve the quality of care for every respiratory patient and improve the efficiency of TB Primary Health Care (PHC) services. PAL has the potential of increasing case detection and reducing the delay of care for TB patients. The Region may pilot this approach in some areas of China and other selected countries to improve or strengthen TB case detection, the quality of TB diagnosis and the integration of TB control activities within PHC services.

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<sup>9</sup> This World Health Assembly Resolution, which was adopted in May 2000 urges the Member States to fulfil the commitments under the Amsterdam Declaration to Stop TB, including their commitment to ensure the availability of resources to achieve the goals relevant to TB contained in the MDG.

## **Other operational research priorities**

Other areas where operations research may benefit TB control programmes include the diagnosis of childhood TB and extra-pulmonary TB; improvement of information systems to secure the efficient transfer of patient information between different geographical areas and various types of providers; further investigation of new diagnostic modalities, such as those for sputum smear-negative TB; and application of new tools that may become available within the next few years as a result of ongoing global initiatives.

### **2.3.4**

#### ***Enhanced surveillance and monitoring and evaluation***

Monitoring and evaluation will be an integral part of TB work in all areas over the next five years. Current monitoring and evaluation systems are designed to collect information on the intermediate targets of 2005, such as the case detection rate, treatment success rate and DOTS coverage, as well as other performance indicators for DOTS implementation. With the focus expanding to other areas, the M&E system needs to adapt to better monitor programme performance and to measure the achievement of the core targets and the eventual goal.

Tracking programme performance or evaluating programme implementation will continue to involve country programme reviews, at least twice for each of the high burden countries over the next five years. Surveillance activities will be improved to feed into adjusting strategies, planning and implementation. Another crucial tool for M&E will be an enhanced TB information system that can meet the information needs of the programme in view of the new focus of the The Strategic Plan to Stop TB in the Western Pacific 2006–2010. Good models of enhanced TB information systems exist in the Region, such as the TB information system of China and the Republic of Korea. Both systems are case based and use the Internet for reporting, recording and verification of TB cases, providing real-time information on individual cases. Such systems need to be evaluated thoroughly. Meanwhile, countries will need to adopt a revised data collection tool to generate information on the new concerns in the Strategic Plan.

The second area of focus of M&E is measuring the impact targets on prevalence and mortality. Population-based surveys, such as prevalence surveys of disease, can provide good estimates of prevalence and assess prevalence trends in countries that had prior surveys conducted, including China, the Philippines and the Republic of Korea. Technical and financial support to countries will be crucial as prevalence surveys are technically demanding and resource-intensive. Measuring mortality accurately remains a challenge because of limitations of current vital registration systems in high-burden countries. Efforts will need to be pursued to improve the quality of information on mortality.

*"The M&E system needs to adapt in order to monitor the programme performance better and to measure the achievement of the core targets and the eventual goal."*

## **Section 3 — Resource Needs and Gaps**

### **3.1. Resource needs of the Region**

The total investment required to implement planned TB control activities in the Region is estimated at US\$ 2.2 billion over five years from 2006 to 2010 (See Figure 6 for detailed breakdown of resource needs). This total includes all required investments for TB control in the Region, which include contributions by governments, partners, technical agencies and private entities. This figure is based on estimates provided by the Global Plan to Stop TB 2006–2015(23), in which cost estimates were generated through detailed and systematic analysis of existing data and projections on cost and outcomes for each of the regions. There are four main areas for which required resources were estimated: (1) basic delivery of DOTS; (2) improving the quality of DOTS and new approaches for DOTS delivery; (3) activities to address MDR-TB; and (4) TB-HIV collaborative activities.

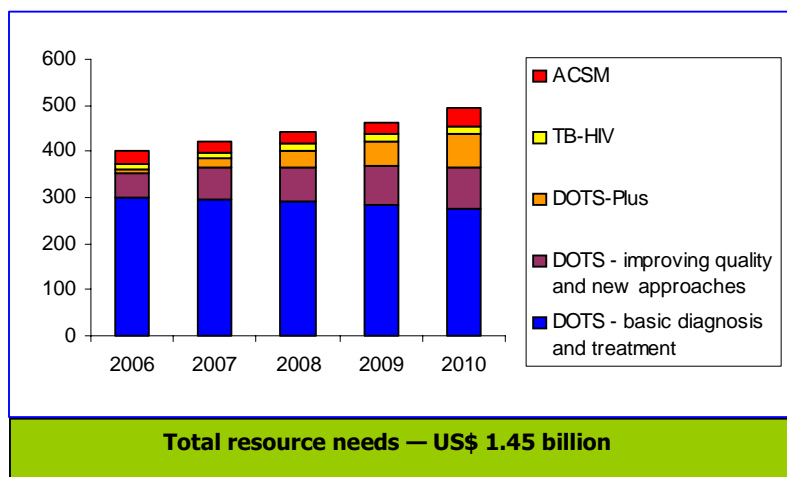
About US\$ 1.45 billion will be needed to sustain basic DOTS delivery. This includes the basic TB control activities that the national TB programmes are already implementing. The cost was estimated based on financial data submitted by NTP in 2005 that included cost components of existing NTP budgets and the use of general health system resources in basic DOTS delivery. After adjusting for inflation, it is assumed that the resource needs by the TB programme to deliver basic DOTS will be the same in the next five years. Improving the quality of DOTS and implementing new approaches have been costed separately. This main cost area includes enhancing laboratory capacity and quality, and implementing new approaches, such as PPMD, community care, advocacy, communication and social mobilization, and PAL, which will be implemented in several areas in the Region.

The estimated cost of addressing MDR-TB in the next five years (US\$ 210 million) appears to be small in comparison to the total resource needs. Activities will be started in a few areas and gradually expanded. Progressive implementation is justified because of the current limited capacity in countries and the complex preparation needed for implementing DOTS-Plus. Thus, once at the scale-up phase, the required resources will increase significantly over time and will continue to do so beyond 2010.

The required resources for TB-HIV collaborative activities will substantially increase in the next several years. The Region will intensify efforts to get collaborative activities started in China, Malaysia, Papua New Guinea and Viet Nam, and further scaled up in Cambodia. About US\$ 64 million will be needed to implement necessary activities outlined in the Regional Framework for Addressing TB-HIV Coinfection. As a full range of activities will be needed in only a few countries that have a significant TB-HIV problem, the proportion of the estimated cost for TB-HIV activities is small compared to the total resource needs of the Region. In most countries, joint TB-HIV surveillance will be the essential activity.

In summary, over the next five years, the Region will require US\$ 400 million to US\$ 500 million per year for TB control. The cost increases over time within the next five years because of the progressive scale up of activities to address MDR-TB.

**Figure 6.**  
*Estimated resource needs for 2006–2010*

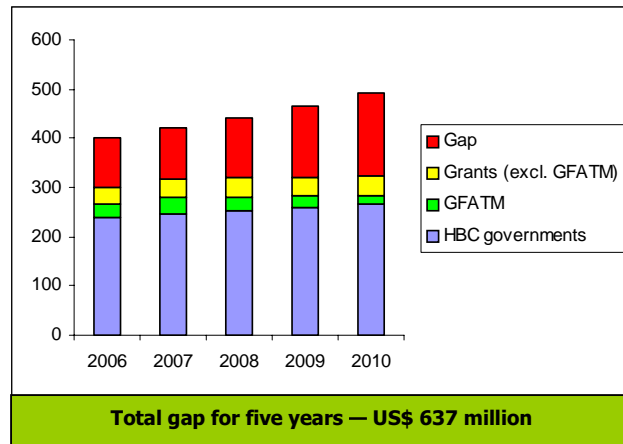


## Section 3.2. Funding Gap

There are three main sources of funding for TB control, namely domestic financing (both local and national budgets), funding from the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM), and funding from other partners. Total projected available domestic financing for TB is around US\$ 1.26 billion, which was estimated based on the financing data submitted in 2005 by the seven high-burden countries. Additional US\$ 130 million is expected from the GFATM based on the five-year budgets of the approved grants in all previous rounds for five high-burden countries and the Pacific.

With the assumption that domestic financing will be sustained until 2010 and that no major reduction will be made in the budgets for proposals already approved by GFATM, the funding gap is estimated to be around US\$ 637 million over five years. The gap increases over time because of increasing resource needs while financing remains constant, and grants from future GFATM rounds have not been projected (See Figure 7). Nonetheless, future GFATM grants alone are not expected to be able to bridge the gap. Closing the funding gap will be crucial as a large proportion of this will be needed to finance the scale up of DOTS-Plus and TB-HIV and for new approaches to improve the quality of DOTS implementation. While there is no existing funding for activities in these areas, the scale up of these activities is critical to achieving the 2010 regional goals.

**Figure 7.**  
**Estimated financing gap for**  
**2006-2010**





## **Section 4: Risk Assessment**

There are a number of risk factors that may impede progress towards achieving the objectives laid out in this regional Strategic Plan. These factors exist at different levels and are of different magnitudes. They reflect the fact that TB control services are delivered in the context of the overall political, cultural, health, economic and social environment.

The risks factors are most relevant to countries with a high burden of TB in the Region.

### **(1) Decentralization of TB control activities to lower levels**

Reforms in the overall health sector tend to decentralize a major part of the responsibilities of delivering health services to lower level governance. This does not necessarily lead to more effective delivery of TB services and better outcomes for TB control. The increased responsibilities that come with decentralization are quite often unaccompanied by systematic capacity strengthening. The lack of capacity at lower levels to absorb more intensified actions required for TB control in the next five years poses a serious threat to achieving the regional goal for TB. A comprehensive plan for strengthening lower-level capacity to deliver health care and increasing the involvement of communities and other non-NTP health providers will be important to mitigate the risks.

### **(2) Loss or decline in commitment to TB control.**

As has been shown in the last several years, political will at all levels of health governance makes a huge difference in ensuring successful TB control. At the lower levels (i.e., provincial or district), TB will increasingly compete with other priorities, not only with other health priorities, but also with other projects that are perceived to generate greater political mileage (e.g., infrastructure projects). With TB services increasingly being decentralized in most high burden countries in the Region, there is a risk for a decline in commitment for TB control. TB programmes must not fail to sustain political commitment, especially at the lower levels of governance through effective advocacy and by ensuring optimum programme performance.

### **(3) Social and economic conditions**

Progress in TB control is very much dependent on the social and economic condition of the country. If widespread poverty and the resultant social problems continue to persist in many countries in the Region, they will present a huge barrier to achieving meaningful progress in TB control. In countries experiencing rapid economic development, new problems arise that are related to the rising vulnerabilities of the population related to the increasing pace of urbanization and mobility. These problems need serious attention to reduce people's vulnerability to TB and to ensure that TB services are accessible to all patients, especially migrant or floating populations.

### **(4) Shifting TB control responsibilities outside the public sector.**

A new focus on the involvement of the private sector and civil society may result in a less prominent role of the government sector in TB control. There is a need to strongly advocate for increased resources to continue to

strengthen the public sector as a core condition for involving other sectors. If health systems, including health infrastructure and human resource capacity, continue to be weak, expansion of services, intensified implementation of activities, particularly with the necessary focus on quality improvement, will be challenged.

**(5) Reduced funding levels.**

With the implementation and scale-up of the new strategies, TB control in the next five years will require increased investments. Without additional resources, expansion and scale-up of strategies will be seriously compromised. It will be crucial to continue stressing the need for high quality basic DOTS functions as a prerequisite to the expansion to other components, while raising the additional resources needed for expanding and scaling up of other components of the Strategy and promoting efficiency in the use of resources for TB control.

## Annex 1

### Hierarchy of desired outcomes of the Strategic Plan to Stop TB in the Western Pacific 2006-2010

THE STRATEGIC PLAN TO STOP TB in the WESTERN PACIFIC 2006–2010	
<b>Vision</b>	Elimination of TB as a public health problem
<b>Goals</b>	To reduce prevalence and mortality by half by 2010 relative to 2000 contributing to the achievement of the overall United Nations Millennium Development Goals
STRATEGIC OBJECTIVES AND EXPECTED RESULTS	
<p><b><u>Objective 1.</u> To sustain and optimize the quality of DOTS and go beyond the "70/85" targets</b></p> <p><b>Target 1.</b> Beyond 70% case detection rate (<i>core target</i>)  <b>Target 2.</b> Beyond 85% cure rate</p> <p><b>Expected Results:</b></p> <ol style="list-style-type: none"> <li>1.1. Country capacity and quality of diagnosis for TB assured</li> <li>1.2. Uninterrupted supply of quality assured anti-TB drugs at all DOTS units</li> <li>1.3. Enhanced case management for all registered TB cases, including smear-negative TB.</li> </ol> <p><b><u>Objective 2.</u> To ensure equitable access to quality TB care for all people with TB</b></p> <p><b>Target 3.</b> At least 90% of facilities including private or general hospitals providing or making referrals for DOTS (<i>core target</i>)</p> <p><b>Expected Results:</b></p> <ol style="list-style-type: none"> <li>2.1. Improved TB case management in non-NTP TB facilities through PPM DOTS approach</li> <li>2.2. Adoption of the international Standards of TB Care (ISTC) of all providers involved in TB control</li> <li>2.3. Increased utilization of TB services by poor and vulnerable populations</li> <li>2.4. Country-driven advocacy, communications and social mobilization (ACS) strategies developed and implemented.</li> </ol> <p><b><u>Objective 3.</u> To adapt DOTS to respond to MDR-TB and TB-HIV</b></p> <p><b>Target 4.</b> At least 90% of identified MDR-TB cases by DST are provided with quality-assured, second-line treatment (<i>core target</i>)  <b>Target 5.</b> At least 90% of identified HIV-infected TB patients eligible for ART that are provided with ART (<i>core target</i>)</p> <p><b>Expected results:</b></p> <ol style="list-style-type: none"> <li>3.1. Assessment of MDR-TB completed in targeted countries</li> <li>3.2. DOTS-Plus initiated/scaled up in targeted countries</li> <li>3.3. TB-HIV framework for collaboration developed and implemented</li> <li>3.4. Ensured access of TB patients to HIV services (including VCT) and people with HIV persons regularly screened for TB.</li> </ol>	

**ANNEX 2: DATA ON MAIN TUBERCULOSIS INDICATORS IN THE WESTERN PACIFIC REGION, 2004**

	Population thousands	DOTS coverage %	New and relapse (WHO total)				Notified TB cases				Incidence and case detection rates				Cure/success		HIV-TB prevalence in adult incident TB cases (%)	MDR-TB		Prevalence		Morality					
			Number		Rate		SS+		SS- / unk.		Estimated incidence		Case detection rate		2003 ss+ cohort			Re-treat DST number	Re-treat MDR number	2000		2004		2000		2004	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	all forms number	SS+ number	new and relapse %	new SS+ %	Cured %	Success %				All forms rate	All forms change* rate	All forms rate	All forms change* rate	All forms rate	All forms change* rate		
American Samoa	63	100	5	8	2	3	1	18	8	28	25	100	100	0	0	0	0	62	49	75%	7	5	81%	81%			
Australia	19 942	63	1 059	5	285	1	337	1 132	507	94	56	17	82	5	2	6	6	6	6	97%	1	1	97%	97%			
Brunei Darussalam	366	100	176	48	115	31	15	197	89	89	129	45	60	0	0	0	0	56	63	112%	4	5	125%	125%			
Cambodia	13 798	100	30 838	223	18 978	138	5800	70 370	31 118	44	61	90	93	0	0	0	0	789	709	90%	105	94	90%	90%			
China	1 307 989	96	790 603	60	384 866	29	284 433	1 324 633	595 381	60	65	91	94	0	0	0	0	271	221	82%	20	17	84%	84%			
Cook Islands	18	98	1	6	1	6	0	5	2	19	43	76	76	0	0	0	0	57	51	90%	6	5	83%	83%			
Fiji	841	100	134	16	62	7	38	239	107	56	58	86	86	0	0	0	0	1	1	82%	6	5	83%	83%			
French Polynesia	263	100	60	24	30	12	12	72	32	84	93	83	83	0	0	0	0	41	56	137%	5	5	93%	93%			
Guam	167	100	51	31	22	13	9	98	44	52	50	96	96	0	0	0	0	113	91	81%	12	10	86%	86%			
Hong Kong (China)	6 663	100	6 143	88	1 694	24	3073	5223	2349	118	72	73	78	0	0	0	0	86	77	89%	7	6	89%	89%			
Japan	127 923	71	29 736	23	10 471	8	12 384	37 814	17 006	79	62	50	76	0	0	0	0	46	39	86%	4	4	87%	87%			
Kiribati	97	100	310	318	142	146	59	57	26	540	550	74	88	0	0	0	0	75	59	79%	5	4	79%	79%			
Lao PDR	5 792	98	3 173	55	2 241	39	472	9 019	4 056	35	55	70	79	0	0	0	0	357	318	89%	28	25	90%	90%			
Macao (China)	457	100	323	71	128	28	129	373	167	87	76	85	88	0	0	0	0	22	2	105%	7	10	134%	134%			
Malaysia	24 894	100	14 986	60	7 943	32	5 136	25 327	11 449	59	69	69	72	0	0	0	0	139	133	98%	17	16	97%	97%			
Marshall Islands	60	100	119	199	39	65	38	35	16	338	246	90	90	0	0	0	0	87	59	68%	10	4	43%	43%			
Micronesia	110	90	118	108	35	32	51	65	29	183	120	27	92	0	0	0	0	94	59	63%	11	4	40%	40%			
Mongolia	2 614	100	4 570	175	1 808	69	866	5 018	2 257	91	80	84	87	0	0	0	0	265	209	73%	36	24	67%	67%			
Nauru	13							4	2					0	0	0	0	52	35	67%	4	4	100%	100%			
New Caledonia	233	100	61	26	15	6	14	137	62	45	24	75	75	0	0	0	0	105	117	112%	12	12	98%	98%			
New Zealand	3 989	100	373	9	112	3	86	424	191	88	59	36	36	0	0	0	0	10	11	100%	1	1	100%	100%			
Niue	1	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68	57	84%	7	6	84%	84%			
Northern Mariana Islands	79	100	53	67	14	18	34	46	21	114	67	75	75	0	0	0	0	75	68	91%	5	8	144%	144%			
Palau	20	95	5	25	5	25	0	12	5	43	95	80	80	0	0	0	0	149	91	61%	11	7	64%	64%			
Papua New Guinea	5 772	47	12 743	221	1 896	33	5 234	13 455	6 025	95	31	41	58	0	0	0	0	638	448	71%	56	42	75%	75%			
Philippines	81 617	100	130 530	160	78 163	96	47 937	239 459	107 738	55	73	81	88	0	0	0	0	554	463	84%	58	48	83%	83%			
Rep. Korea	47 645	100	34 671	73	11 501	24	16 446	43 029	19 339	81	59	81	82	0	0	0	0	278	139	125	11	10	91%	91%			
Samoa	184							52	24					0	0	0	0	43	43	99%	5	5	97%	97%			
Singapore	4 273	100	1 516	35	506	12	660	1 691	757	90	67	77	77	0	0	0	0	46	41	89%	5	4	89%	89%			
Solomon Islands	466	100	340	73	152	33	107	274	123	124	123	68	87	0	0	0	0	82	59	72%	10	4	45%	45%			
Tokelau	1							0	0					0	0	0	0	68	57	84%	7	6	84%	84%			
Tonga	102							29	13					0	0	0	0	44	42	98%	4	5	125%	125%			
Tuvalu	10							3	1					0	0	0	0	68	57	84%	6	5	84%	84%			
Vanuatu	207	100	115	55	59	28	32	122	55	94	107	70	75	0	0	0	0	94	64	69%	8	5	65%	65%			
Viet Nam	83 123	100	98 389	118	58 389	70	17 106	146 855	65 745	67	89	90	92	0	0	0	0	251	232	92%	24	22	94%	94%			
Wallis & Futuna	15							4	2					0	0	0	0	68	28	42%	7	2	30%	30%			
<b>Western Pacific Region</b>	<b>1 740 899</b>	<b>94</b>	<b>1 161 201</b>	<b>67</b>	<b>579 594</b>	<b>33</b>	<b>400 509</b>	<b>1 925 332</b>	<b>864 745</b>	<b>60</b>	<b>67</b>	<b>87</b>	<b>91</b>	<b>1 009</b>	<b>80</b>	<b>261</b>	<b>216</b>	<b>83%</b>	<b>20</b>	<b>18</b>	<b>88%</b>	<b>88%</b>					

ss+ indicates sputum smear-positive; ss-; sputum smear-negative; unk., sputum smear result unknown; re-treat, re-treatment; pulm.lab.

\* 2004 value / 2000 value, expressed as a percentage.

## **Annex 3: Key Resolutions by the Regional Committee on Tuberculosis Control in the Western Pacific Region**

### **TB Resolution during the Fiftieth Session of the Regional Committee WPR/RC50.R5**

#### **Tuberculosis Prevention and Control**

The Regional Committee,

Noting that tuberculosis kills more youths and adults than any other infectious disease in the world;

Noting further that tuberculosis is re-emerging as a major public health problem in the Region, as demonstrated by the steady increase in notified tuberculosis cases during the last decade and the fact that 29% of global tuberculosis cases are found in the Western Pacific Region;

Noting that political commitment has not yet been translated into increased resources for tuberculosis control;

Recognizing that tuberculosis is also a serious public health problem in newly industrialized and developed countries;

Acknowledging that the directly-observed treatment, short course (DOTS) strategy is the most cost-effective way of controlling tuberculosis, saving the lives of patients and preventing the emergence of drug resistance;

Expressing concern that only 46% of notified tuberculosis cases in the Region were enrolled in DOTS programmes in 1998;

Expressing further concern at the negative impact of HIV on tuberculosis in some countries of the Region;

DECLARES a ' Tuberculosis crisis ' in the Western Pacific Region;  
URGES Member States:

- (1) to give high priority, and to allocate sufficient resources, to strengthening tuberculosis control;
- (2) to aim to increase the percentage of tuberculosis patients enrolled in DOTS programmes so that the regional targets of 60% of notified cases to be treated by DOTS by 2001 and 100% by 2005 are achieved;
- (3) to achieve and maintain a cure rate of at least 85% by ensuring high-quality DOTS implementation, as a minimum;
- (4) to implement surveillance for drug-resistant tuberculosis by 2001;
- (5) to establish regular surveillance and reporting of the impact of HIV on tuberculosis by 2001, if this is appropriate;

REQUESTS the Regional Director:

- (1) to give tuberculosis control high priority and to make "Stop TB in the Western Pacific Region" a special project of the Western Pacific Regional Office;
- (2) to take all possible steps to raise awareness of the tuberculosis problem based on evidence from epidemiological studies and cost-benefit and socioeconomic analysis and to take all necessary measures to influence leading political figures to translate political commitment into increased financial resources;

- (3) to strengthen technical collaboration with Member States in order to introduce and expand the DOTS strategy in the Region in the context of health sector reform and poverty alleviation;
- (4) to strengthen partnerships with other technical and funding agencies in the Western Pacific Region;
- (5) to report annually in progress in tuberculosis control to the Regional Committee.

17 September 1999

## **TB Resolution during the Fifty-first Session of the Regional Committee WPR/RC51.R4**

### **Tuberculosis Prevention and Control**

The Regional Committee,

Concerned that tuberculosis is a major cause of premature death and human suffering in the Western Pacific Region;

Recognizing that tuberculosis is strongly associated with social and economic inequalities;

Recognizing further that the regional burden of tuberculosis is also a major impediment to socio-economic development, especially in developing countries, where most cases and deaths occur among the poorest and most vulnerable;

Noting that an uninterrupted drug supply has not yet been secured in many of the countries in the Region with a high tuberculosis burden;

Expressing concern that only 44% of the total estimated new smear-positive cases in the Region were detected in 1998;

Expressing further concern at the emergence, and potential for expansion, of multidrug-resistant tuberculosis in the Region;

Acknowledging that the WHO recommended tuberculosis strategy, directly observed treatment, short-course (DOTS), is a very cost-effective health intervention that has already achieved high treatment success rates in the Region;

Acknowledging further that the effective implementation of DOTS programmes can reduce the prevalence and mortality of tuberculosis in the Region by half by 2010;

Welcoming, in response to resolution WPR/RC50.R5, the establishment of the Stop TB special project in collaboration with Member States and the international community;

Welcoming further the holding of the first tuberculosis Technical Advisory Group meeting and the establishment of a Pacific Stop TB Initiative;

ENDORSES the 'Regional strategic plan to Stop TB in the Western Pacific', which was finalized at the first meeting of the tuberculosis Technical Advisory Group;

URGES Member States:

- (1) to develop and implement five year (2001-2005) Stop TB national plans to achieve the regional objective of reducing prevalence and mortality of tuberculosis by half by 2010;
- (2) to increase the case detection rate to 70% of estimated new smear-positive cases by 2005;
- (3) to increase the enrolment rate in DOTS programmes for new detected smear-positive tuberculosis cases to 100% by 2005;
- (4) to establish or strengthen partnerships at the country level through the information or enhancement of national Interagency Coordinating Committees;
- (5) to strengthen health systems to effectively implement Stop TB national plans;
- (6) to include case detection, DOTS implementation and treatment success rates in the performance indicators for overall health system development;

REQUESTS the Regional Director:

- (1) to strengthen technical support to Member States to develop and implements Stop TB national plans with the framework of health system development and the healthy settings approach;
- (2) in partnership with Member States and partner agencies to improve access to antituberculosis drugs, paying particular attention to disadvantaged groups, including people living in poverty;
- (3) to enhance partnerships to support the Stop TB special project in the Region in collaboration with the global Stop TB partners;
- (4) to enhance technical collaboration with Member States to implement surveillance for drug-resistant tuberculosis and to establish regular surveillance of HIV-associated tuberculosis;
- (5) to support Member States, particularly those with a high burden of tuberculosis, to conduct prevalence surveys in order to evaluate progress in tuberculosis control.

22 September 2000



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