TUBERCULOSIS PREVENTION AND CONTROL

Approximately 2 million people in the Western Pacific Region develop tuberculosis every year and approximately 355,000 people in the Region die every year from the disease. In response, the Regional Committee declared a “Tuberculosis crisis” in the Western Pacific Region at its fiftieth session in September 1999.1 The Regional Committee also requested the Regional Director to make “Stop TB in the Western Pacific Region” a special project of the Western Pacific Regional Office. Since the fiftieth session, the foundations of the Stop TB in the Western Pacific Region special project have been laid. In particular, a technical advisory group (TAG) has been established and has set a target of reducing tuberculosis prevalence and mortality in the Western Pacific by 50% by 2010. At the first meeting of the TAG, a regional Inter-agency Coordinating Committee meeting was also established, consisting of leading partner agencies.

This document identifies the key issues in tuberculosis prevention and control in the Region and the actions proposed to address them, for the information of the Committee and for discussion at its fifty-first session. The Committee is also asked to endorse the Regional strategic plan to Stop TB in the Western Pacific as a framework for the Stop TB in the Western Pacific Region special project.

1 Resolution WPR/RC50.R5.
1. CURRENT SITUATION

1.1 Stop TB special project: foundation building

A "Tuberculosis crisis" in the Western Pacific Region was declared by the Regional Committee for the Western Pacific at its fiftieth session in September 1999. At the same session the Regional Committee requested the Regional Director to make "Stop TB in the Western Pacific Region" a special project of the Western Pacific Regional Office. Concern about the global burden of tuberculosis was also expressed at the Fifty-third World Health Assembly, which adopted a resolution welcoming the establishment of the global Stop Tuberculosis Initiative (Annex 1).

Since the Committee's fiftieth session, the foundations of the Stop TB in the Western Pacific Region special project have been laid:

- A Regional strategic plan to Stop TB in the Western Pacific and a Pacific strategic plan to Stop TB have been drafted. The Regional strategic plan is attached as Annex 2 for endorsement by the Regional Committee.

- A tuberculosis Technical Advisory Group (TAG) has been formed in association with Member States and other partners. The first meeting of the TAG was held in the Regional Office on 22–24 February 2000.

- A regional Inter-agency Coordinating Committee (ICC) was formed at the first TAG meeting. Members of the ICC include the Australian Agency for International Development (AusAID), the Department for International Development of the United Kingdom (DFID), the Government of Japan, the Japan International Cooperation Agency (JICA), the United States Agency for International Development (USAID) and the World Bank. There are already some positive indications that international support for tuberculosis control in the Region is increasing.

- ICCs are being formed or enhanced at the national level.

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2 Resolution WPR/RC50.R5.
3 Resolution WHA53.1.
The Pacific Stop TB Initiative was established at the first Stop TB meeting in the Pacific islands, held in Noumea on 26–29 June 2000. The meeting was jointly organized by WHO and the Secretariat for the Pacific Community and endorsed the Pacific Strategic Plan to Stop TB.

The Regional Office took an active role in the preparations for the global Ministerial Conference on TB and Sustainable Development held in Amsterdam on 22–24 March 2000. As part of these preparations, the Regional Office coordinated closely with the governments of four of the countries in the Region with a high burden of tuberculosis regarding their participation at the meeting.\(^4\)

- At the Regional Office, a Stop TB Task Force has been formed. The Task Force includes staff from the themes on Combating communicable diseases, Health sector development and Reaching out.

- WHO is collaborating with Member States to develop five-year Stop TB national plans as a part of health system development.

- A regional Stop TB advocacy kit, *Tuberculosis control in WHO Western Pacific Region, 1999 Report* and *Burden and impact of tuberculosis in WHO Western Pacific Region (2000)* have been published.

2. ISSUES

Approximately 2 million people in the Western Pacific Region develop tuberculosis every year and approximately 355,000 people in the Region die every year from the disease. In China alone, about 700 people die from tuberculosis every day. For a more extensive discussion of the tuberculosis burden in the Region, see *The Work of WHO in the Western Pacific Region: 1999–2000* (pp. 26–32).

The first meeting of the tuberculosis TAG set a target of reducing tuberculosis prevalence and mortality in the Western Pacific by 50% by 2010. It recognized that to achieve this, the following key issues needed to be addressed.

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\(^4\) Cambodia, China, the Philippines and Viet Nam.
2.1 Inadequate DOTS coverage in the Region

Recognizing that directly observed treatment, short-course (DOTS) is the most effective way of treating tuberculosis, the TAG urged countries to ensure that the DOTS strategy is incorporated into country plans for health system development. It also established the following targets to be achieved by 2005:

- ensure that at least 70% of estimated sputum smear-positive pulmonary cases are enrolled in DOTS programmes and that 85% of them are treated successfully; and

- include DOTS indicators in health system performance indicators.

2.2 Irregular supply of anti-tuberculosis drugs

National tuberculosis control programmes need to secure a regular supply of anti-tuberculosis drugs. However, adequate financing mechanisms for a regular supply of anti-tuberculosis drugs are not in place in most highly endemic countries in the Region. A secure supply of drugs for all infectious patients is needed.

3. ACTIONS PROPOSED

In order to achieve the target of reducing tuberculosis prevalence and mortality by 50% by 2010, the following actions are proposed.

3.1 Expand and sustain the DOTS strategy

Achieving the targets set by the TAG will require:

- Political and financial commitment from Member States;

- Enhanced technical support from WHO to Member States to implement and sustain the DOTS strategy as a part of overall health system development. This should include an increase in the number of technical personnel working for Stop TB at regional and country levels.
3.2 Improve the supply of anti-tuberculosis drugs

Ensuring a secure supply of drugs for all infectious patients will require:

- The involvement of other sectors, including Ministries of Finance, in ensuring adequate resources for the procurement of anti-tuberculosis drugs. The critical role of governments’ financial commitment to ensuring sufficient resources for tuberculosis control was stressed by the Amsterdam Declaration to Stop TB adopted by the Ministerial Conference on TB and Sustainable Development in Amsterdam in March 2000.

- Strengthened partnership for tuberculosis control at regional and country levels.

3.3 Country-specific approaches for stopping tuberculosis

The epidemiology of tuberculosis and the control mechanisms that are required vary from country to country. In order to implement the Regional strategic plan in each country or area’s specific context, the following priority measures will be required:

- Group 1 (countries with a high burden of tuberculosis): secure funding for an uninterrupted supply of TB drugs.

- Group 2 (countries with an intermediate burden of tuberculosis): increase political commitment for tuberculosis control and to analyse why tuberculosis is no longer decreasing or is increasing, in particular by improving information systems and tuberculosis control among such high-risk groups as older persons, homeless people and immigrants.

- Group 3 (Pacific island countries): introduce the DOTS strategy in all Pacific island countries by 2002.

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1 The seven countries in the Region with a high tuberculosis burden are: Cambodia, China, the Lao People’s Democratic Republic, Mongolia, the Philippines, Papua New Guinea and Viet Nam.

5 Seven countries with intermediate tuberculosis burden and good health infrastructure: Brunei Darussalam, Hong Kong (China), Japan, Malaysia, Macao (China), the Republic of Korea and Singapore.

6 Pacific island countries with a population of less than 1 million.
3.4 Surveillance and programme monitoring

In order to monitor the progress of the *Regional strategic plan*:

- information systems should be established for joint tuberculosis and HIV surveillance in countries with a significant prevalence of tuberculosis/HIV coinfection;

- drug resistance surveillance should be carried out in countries with high tuberculosis prevalence; and

- prevalence surveys should be carried out in selected countries.
FIFTY-THIRD WORLD HEALTH ASSEMBLY

WHA53.1

Agenda item 12.1

19 May 2000

Stop Tuberculosis Initiative

The Fifty-third World Health Assembly,

Concerned that the global burden of tuberculosis is a major impediment to socioeconomic development and a significant cause of premature death and human suffering;

Being mindful of the fact that most countries with the greatest burden of disease will not meet global targets for tuberculosis control for 2000 set by resolutions WHA44.8 and WHA46.36;

Welcoming the establishment, in response to resolution WHA51.13, of a special Stop Tuberculosis Initiative to accelerate action against the disease and to coordinate activities across WHO,

1. ENCOURAGES all Member States:

(1) to endorse the Amsterdam Declaration To Stop Tuberculosis, as an outcome of the Ministerial Conference on Tuberculosis and Sustainable Development (Amsterdam, March 2000), and to note and apply as appropriate the recommendations from that meeting, paving the way for creation of broad and long-lasting high-level political support to tackle tuberculosis within the broader context of health, social and economic development;

(2) to accelerate tuberculosis control by implementing and expanding the strategy of directly observed treatment, short course (DOTS) and to commit themselves politically and financially to achieving or to exceeding as soon as possible the global targets set by resolutions WHA44.8 and WHA46.36;

(3) to ensure that sufficient domestic resources are available, especially in developing countries, to enable them to meet the challenges of stopping tuberculosis, and that the capacity to apply them exists;

(4) to give high priority to intensifying tuberculosis control as an integral part of primary health care;

2. RECOMMENDS that Member States should:

(1) participate with WHO in the global partnership to stop tuberculosis, and establish and sustain country-level partnerships for:

(a) study of antituberculosis drug resistance and means of its containment;

(b) improvement of diagnostic laboratories;
Annex 1

(c) access to antituberculosis drugs for the poorest populations;
(d) education and monitoring of patients to ensure better compliance with the treatment regimen;
(e) training of health workers in the DOTS strategy;
(f) integration of tuberculosis control into primary health care institutions and activities at the central and peripheral level;

(2) include case detection and treatment success rates – the basic outcome measures for tuberculosis – among performance indicators for overall health sector development;

(3) continue to assess the magnitude of the impact of the AIDS epidemic on the tuberculosis epidemic and develop strategies to better address tuberculosis in persons with AIDS and in HIV-infected populations, to speed up coordination between prevention and treatment programmes for the two epidemics so as to foster an integrated approach at all levels of the health system, and to the maximum extent possible, to monitor for multidrug-resistant tuberculosis and address issues leading to its containment;

3. CALLS ON the international community, organizations and bodies of the United Nations system, donors, nongovernmental organizations and foundations:

(1) to support and to participate in the global partnership to stop tuberculosis by which all parties coordinate activities and are united by common goals, technical strategies, and agreed-upon principles of action;
(2) to increase organizational and financial commitment towards combating tuberculosis within the context of overall health sector development;

4. REQUESTS the Director-General to provide support to Member States, particularly those with the highest tuberculosis burden, by:

(1) applying, as appropriate, the recommendations of the Ministerial Conference in Amsterdam;
(2) exploring partnerships and options for enhancing access to safe, high-quality curative drugs;
(3) promoting of international investment in research, development and distribution of new diagnostics to speed up case detection and strengthen epidemiological surveillance, including support to Member States for community-based prevalence surveys or among high-risk subpopulations, the poor and those who are vulnerable to infections, new drug formulations to shorten duration of treatment, and new vaccines and other public health measures to prevent disease, reduce suffering and save millions from premature death;
(4) sustaining an active and participatory partnership with external organizations throughout the development and implementation of the Stop Tuberculosis Initiative and its activities;
(5) supporting regional programmes intended to coordinate tuberculosis control programmes.

Seventh plenary meeting, 19 May 2000
A53/VR/7
Prepared by

Taskforce for Stop TB in the WHO Regional Office for the Western Pacific in collaboration with
Dr Pierre-Yves Norval and Dr Leopold Blanc.

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Design: Graham Dwyer
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REGIONAL STRATEGIC PLAN TO STOP TB IN THE WESTERN PACIFIC

LIST OF ABBREVIATIONS

AIDS - acquired immune deficiency syndrome
CIDA - Canadian International Development Agency
DOT - directly observed treatment
DOTS - directly observed treatment short-course
DRS - drug resistance surveillance
FDC - fixed dose combination
GMP - good manufacturing practice
HIV - human immunodeficiency virus
HSR - health sector reform
ICC - interagency coordinating committee
IUATLD - International Union Against Tuberculosis and Lung Diseases
JICA - Japan International Cooperation Agency
KNCV - Royal Netherlands Anti-tuberculosis Association
MDR - multidrug resistant
NGO - nongovernment organization
PIC - Pacific Island country
RIT - Research Institute of Tuberculosis (Japan)
SPC - Secretariat of the Pacific Commission
TB - tuberculosis
TBTAG - Tuberculosis Technical Advisory Group
USAID - United States Agency for International Development
WHO - World Health Organization

Note: “$” denotes US dollars unless otherwise specified
PREFACE

The Regional Committee for the Western Pacific at its last meeting in September 1999 adopted a resolution to make “Stop TB in the Western Pacific Region” a special project of the Western Pacific Regional Office. The reasons for such an approach are forceful and urgent: Out of the 8 million new cases of tuberculosis worldwide, about one third occur in this Region alone, translating into 1000 unnecessary deaths every day. And the problem is still growing, as there was a 33% increase in the notification rate for infectious cases between 1994 and 1998.

Most cases occur among the poorer segments society; and about 70% are young adults in their most productive years.

The objectives of the Stop TB special project in the Western Pacific are twofold:

- to reduce the prevalence and mortality of tuberculosis in the Region by half by 2010; and
- to ensure that the directly observed treatment short-course (DOTS) strategy is incorporated in the country plans for health sector development.

The Regional Strategic Plan relies on the expansion and implementation of the DOTS strategy, which has proven to be the most effective measure for controlling the tuberculosis epidemic. This kind of treatment can cure at least 90% of all tuberculosis patients and prevents the emergence of resistant strains. It is also quite affordable, which makes it particularly cost-effective.

DOTS strategy has five key components, involving the following:

- government commitment to tuberculosis control;
- use of sputum smear microscopy among symptomatic patients;
- implementation of the standard DOTS regimens of treatment;
- regular supply of anti-tuberculosis drugs; and
- standard recording-reporting system.

Furthermore, DOTS strategy strongly promotes and requires well-functioning health care systems. As a result, DOTS programme and health sector development will be mutually enhancing.

Developing DOTS strategy in the context of health sector development requires flexibility and adaptation to various contexts, depending on the prevailing conditions in each of the 37 countries and areas of the Region. In this regard, the strategic plan has made provision for different approaches to the DOTS strategy according to the tuberculosis burden and the specific situation at national level.

As a first step of the Stop TB special project in the Region, the First Technical Advisory Group (TAG) meeting, held in Manila on 22-24 February 2000, endorsed the
Regional Strategic Plan to stop tuberculosis. It also recommended that some activities should be achieved by 2001. Among these is the development of a comprehensive five-year National Stop TB Plan based on the Regional strategic plan to Stop TB, reflecting the specific problems and the commitment to find the necessary solutions.

I hope that the Regional Strategic Plan will be adopted and implemented extensively in the Western Pacific Region, taking into account the existence of wide differences in the national tuberculosis situation between the countries.

Dr Shigeru Omi
Regional Director
WHO Regional Office
for the Western Pacific
INTRODUCTION

Tuberculosis is the leading infectious killer of youth and adults in the Western Pacific Region, despite the existence of a highly cost-effective strategy known as directly observed treatment short-course (DOTS), which can cure the disease. In the Region, all high endemic countries have adopted the DOTS strategy within the last six years. The cure rate improves from 50% in non-DOTS areas to 93% in areas where DOTS is implemented. In 1998, 59% of the notified tuberculosis patients (all forms) were treated with DOTS. But among the 1.96 million estimated tuberculosis cases (all forms) in the Region, only 25% (495,979) were notified and started treatment with DOTS.

Aware that the expansion of the strategy requires more “effective political commitment”, the 51st World Health Assembly accepted a resolution in May 1998 (WHA51.13) (see Annex 1) urging all Member States to turn policy into action. A few months later, the Stop TB Initiative was launched as a special project of the Communicable Disease Cluster in the World Health Organization (WHO) Headquarters. In September 1999, the Regional Committee for the Western Pacific adopted resolution WPR/RC50.R5 (see Annex 2), which declared a “tuberculosis crisis” in the Western Pacific and urged Member States to give high priority to and to allocate sufficient resources for strengthening tuberculosis control. The resolution also requested the Regional Director to make “Stop TB in the Western Pacific Region” a special project of WHO in the Region.

Tuberculosis is a public health concern not only in developing countries but also in developed and newly industrialized countries. In Australia; Hong Kong, China; Japan; Malaysia; and Singapore, the number of cases has not decreased for several years. Moreover, the number of tuberculosis cases increased in 1997 in Japan for the first time in 38 years. In response, Japan declared a “tuberculosis emergency” in July 1999.

The regional Stop TB special project aims to stimulate social and political commitment for action to control tuberculosis. This Regional strategic plan to Stop TB in the Western Pacific details the proposed Stop TB special project, emphasizing activities to expand DOTS in the context of health sector reform, surveillance, laboratory services, supporting activities and estimated budget requirements. The document is intended for policy makers with health policy and budget authority, tuberculosis programme managers, committee members of the Tuberculosis Technical Advisory Group (TBTAG) and members of the Interagency Coordinating Committee (ICC), which includes all partners agencies in the Region.
MISSION, OBJECTIVES AND TARGETS

Mission statement

To significantly reduce morbidity and mortality due to tuberculosis by promoting accessibility and sustainability of the DOTS strategy as part of health system development.

Objectives

The objectives of the Stop TB special project in the Western Pacific are to:

- reduce the prevalence and mortality of tuberculosis in the Region by half within ten years (by 2010); and
- ensure that the DOTS strategy is incorporated into country plans for health sector development.

Targets to be reached by the end of 2005

1. DOTS implementation

- To ensure a treatment success rate of at least 85% for smear-positive pulmonary cases in the DOTS programme.
- To ensure that at least 70% of estimated smear-positive pulmonary cases are enrolled in the DOTS programme, i.e., 70% DOTS case detection.

2. Health sector development

- To expand implementation of the DOTS strategy by making it available to country-wide populations.
- To include DOTS indicators among health sector performance indicators in the seven high burden tuberculosis countries.

3. Drug supply and quality of drugs

- To strengthen National Drug Regulatory Authorities for better quality assessment of anti-tuberculosis drugs at least in the seven high burden countries.
- To sustain free treatment to all smear-positive tuberculosis patients enrolled in DOTS by obtaining an increase of in-country resources to provide at least 80% of the needs of quality anti-tuberculosis drugs.
4. Monitoring and evaluation

- To develop and implement a surveillance system to assess DOTS expansion and quality.
- To develop tuberculosis prevalence surveys in at least six high tuberculosis burden countries, including interim surveys in the People’s Republic of China (henceforth, “China”) and the Philippines.
- To establish tuberculosis/human immunodeficiency virus (HIV) co-infection surveillance in six countries.
- To monitor drug resistance in six countries.

Notes

1 DOTS case detection is the notified new smear-positive tuberculosis cases in DOTS areas over estimated new smear-positive tuberculosis cases. To attain a 70% DOTS case detection rate, it is necessary to detect 70% of estimated smear-positive cases and to enroll all detected cases in DOTS strategy.
STRATEGY

Overall strategy

OTS, the basic strategy of the Stop TB special project in the Western Pacific Region, has proven to be the most effective strategy for controlling the tuberculosis epidemic. It has five key components:

- Government commitment to sustaining tuberculosis control;
- Case detection by sputum smear microscopy among symptomatic patients;
- A standardized treatment regimen of six to eight months for at least all confirmed sputum smear-positive cases, with directly observed treatment (DOT) for at least the initial two months;
- A regular uninterrupted supply of all essential anti-tuberculosis drugs; and
- A standardized recording and reporting system that allows assessment of treatment results for each patient and of the overall tuberculosis control programme.

The five components of DOTS represent the minimum package that is necessary for tuberculosis control. Implementation of the strategy requires flexibility and adaptation to a wide variety of contexts. In the Stop TB special project for the Western Pacific Region, the main aspects of DOTS will be adapted in order to meet the specific challenges of the different countries in the Region.

For this purpose, countries will be grouped according to level of priority, which reflects their differing tuberculosis burdens, the status of DOTS implementation and the type of activities that need to be implemented. The highest priority will be given to group 1 (See Table 1).

TABLE 1:
Grouping of countries

<table>
<thead>
<tr>
<th>GROUP 1</th>
<th>GROUP 2</th>
<th>GROUP 3</th>
<th>GROUP 4</th>
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<tbody>
<tr>
<td>High TB burden</td>
<td>Intermediate TB burden, good health infrastructure</td>
<td>Populations smaller than 1 million</td>
<td>Low TB burden, low incidence</td>
</tr>
<tr>
<td>Cambodia*</td>
<td>Brunei Darussalam</td>
<td>Pacific Island countries (excluding Papua New Guinea)</td>
<td>Australia</td>
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<td>China*</td>
<td>Hong Kong, China</td>
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<td>New Zealand</td>
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<td>The Philippines*</td>
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<td>Viet Nam*</td>
<td>Singapore</td>
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</table>

* Countries belonging to the top 22 high-burden countries in the world
Group 1

Seven countries with high tuberculosis burden: Cambodia, China, the Lao People’s Democratic Republic, Mongolia, the Philippines, Papua New Guinea, and Vietnam.

Group 2

Seven countries with intermediate tuberculosis burden and good health infrastructure: Brunei Darussalam; Hong Kong, China; Japan; the Republic of Korea; Malaysia; Macao, China; and Singapore.

Group 3

21 Pacific Island Countries (PIC) with populations smaller than 1 million: American Samoa, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, the Commonwealth of the Northern Mariana Islands, the Marshall Islands, the Federated States of Micronesia, Nauru, New Caledonia, Niue, Palau, the Pitcairn Islands, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, and Wallis and Futuna.

Group 4

Industrialized countries with low tuberculosis burden and low incidence: Australia and New Zealand.

Key aspects of DOTS strategy in the Western Pacific Region

Political commitment and partnership development

DOTS coverage in the Region is still expanding (only 59% of notified cases were enrolled in DOTS in 1998), although several countries have achieved nationwide coverage. DOTS expansion requires national budget expenditure, which is often not planned.

Partner support to provide technical input, training and equipment is essential for the expansion of the DOTS strategy in all countries and areas of the Region. Only few partners are now supporting tuberculosis control. Many needs are not being met because of lack of resources.

Advocacy will be strengthened to ensure adequate national financial resources and to increase partners’ interest in tuberculosis control. Social mobilization for control of tuberculosis will be promoted through national nongovernment organizations (NGOs). National financial resources and support from the community are the best ways of sustaining effective tuberculosis control.

The main constraints to achieving progress in control of the tuberculosis epidemic are lack of political will or even where political will exists, lack of action. Therefore effective advocacy and social mobilization must remain core functions of the DOTS strategy in the Region. Activities proposed for developing advocacy and building partnership for tuberculosis control are:
At country level

- National ICC meetings and National Stop TB Committee meetings.
- National action plans as a component of Health Sector Development plans and beyond health, a component of the country development.
- Yearly reports on tuberculosis in every country of group 1, translated into English and posted on the WHO/Western Pacific Regional Office web site.
- Publication of DOTS success stories.
- Promotion of the involvement of tuberculosis associations and other groups beyond the health sector in social mobilization.
- World TB Day guided by country context.

At regional level

- TBTAG meetings.
- ICC meetings.
- Stop TB meetings for PICs.
- Publication of epidemiological review and drug resistance surveys results, to be posted on the WHO/Western Pacific Regional Office web site;
- Develop indicators to measure economic impact, stability and awareness of staff, and political commitment.

Sustainable tuberculosis control in the context of health sector reform/development

Health sector reform/development (HSR) poses both threats and opportunities to the success of tuberculosis control in the region.

- As a threat, HSR challenges the integrity of the management system, which is inherent in the DOTS strategy. Reduction in personnel, integrated drug procurement, integrated reporting systems and cost recovery schemes often accompanying health system reform may hinder some of the key components of DOTS. These may include maintaining the skill of health workers to detect and treat tuberculosis cases, uninterrupted drug supply, free tuberculosis drugs or specific monitoring of treatment results.
- As an opportunity, HSR may offer potential for an expanded network and an increased capacity for providing DOTS closer to the patients. Moreover, sustainability of effective tuberculosis control programmes may be also enhanced when the overall financing mechanism of the health system is improved.

Collaboration between National TB programmes and planning units in Ministries of Health during the planning and implementation processes can ensure that the fundamentals of tuberculosis control are maintained in the context of the health system development. Tuberculosis control is strengthened rather than threatened in the process. Indicators of a successful TB programme, such as a high cure rate of new and retreatment tuberculosis patients, can become indicators of a successful health system development.
The aim has to be to develop a national plan synchronized with the country’s general health system plan and policy.

**Tuberculosis drugs**

The Stop TB special project is aiming to:

- promote free access to tuberculosis treatment;
- strengthen national regulatory authorities; and
- encourage use of fixed dose combination (FDC)/blister packs.

Key issues in achieving its objectives include the following:

- free access to tuberculosis treatment can ensure complete treatment of more tuberculosis patients and contribute to poverty alleviation. Easy access will also ensure patient and doctor compliance to appropriate regimens. Treatment costs, even minimal, can hinder early treatment and affect compliance, thereby increasing the spread of infection. Care fees should not jeopardize access for all to the health facilities that provide DOTS;
- FDC tablets prevent mono-therapy, reduce the emergence of drug-resistant tuberculosis, increase patient and doctor compliance, simplify drug management and distribution, and also reduce the risk of rifampicin being prescribed for conditions other than tuberculosis; and
- strengthening the national regulatory authority will limit the use of tuberculosis drugs to tuberculosis only and ensure their quality. A proactive role by the WHO Western Pacific Regional Office and other partner agencies and drug manufacturers will help to promote a quality assessment process for all anti-tuberculosis drugs and fast track registration with the National Regulatory Authority. Registration of FDC tablets, including rifampicin bio-availability, is included in the quality assessment process. Registration of pharmaceutical products should ensure not only that the product itself is of good quality, but also that the pharmaceutical industry adheres to recognized good manufacturing practices (GMP) and proper quality control.

The Western Pacific Regional Office will provide technical support to selected countries for procurement, distribution and improvement of quality assessment for tuberculosis drugs. An overview of the situation concerning procurement, suppliers, manufacturers and financing sources of tuberculosis drugs for each country could be developed. The Regional Office could also act as a supplier to small countries or groups of countries, especially PICs, if needed.

In special cases, careful assessment of the rate of multidrug resistant (MDR) tuberculosis could lead to innovative strategies using second or third line drugs.
Monitoring and surveillance

To measure the special project’s achievements and to monitor HIV/tuberculosis co-infection and drug resistance, the following special activities will be carried out:

- development of a set of indicators to monitor DOTS expansion and the quality of DOTS;
- assessment of DOTS impact on poverty alleviation and its social-economic impact (schooling, education, employment);
- prevalence surveys: WHO Western Pacific Regional Office will provide technical support for prevalence surveys in selected high endemic countries. Several countries in the Region have extensive experience of such surveys. These surveys will be limited to highly endemic countries in order to keep down the cost. They will provide baseline data and will be repeated every ten years to assess whether the Stop TB objective of reducing tuberculosis morbidity by half within 10 years has been achieved. Guidelines for conducting prevalence surveys will also be developed;
- drug resistance surveillance (DRS): Accelerating DOTS expansion in the Region will help to maintain the current low level of MDR tuberculosis. However, drug resistance surveys should become more systematic in order to monitor the threat posed by increasing MDR tuberculosis;
- HIV/tuberculosis co-infection monitoring: the worsening HIV epidemic is causing an increased load of tuberculosis cases and presents a new challenge to the implementation of DOTS. HIV/tuberculosis co-infection surveillance in countries or areas with high prevalence of HIV/Acquired Immune Deficiency Syndrome (AIDS) will be reinforced. Tuberculosis treatment and AIDS care will also be developed in close collaboration in these countries; and
- update projections and modeling for tuberculosis epidemiology in the Region.

Capacity building for DOTS management

Capacity for an effective management of the DOTS strategy needs to be strengthened, including diagnosis by microscopy and directly observed treatment of patients at all levels. Skilled human resources are still needed at provincial or district levels that have not been implementing DOTS and in DOTS areas that are experiencing high turnovers of staff. In addition, HSR often calls for additional training and on-the-job training of multipurpose staff. Training of postgraduates and undergraduates needs to be covered by adjusting the traditional curriculum in medical, nursing and laboratory schools to accommodate the DOTS strategy. The following activities need to be organized.

At country level

- Assessment of training needs and identification of specific trainers.
- Training workshops for managerial teams at central and peripheral level, to nurses, laboratory technicians, pharmacists and community volunteers in the public and private sectors.
• Training workshops on specific issues (advocacy, drugs management and quality, programme reviews, data analysis, social mobilization, etc.).
• Development of curricula including the DOTS strategy in medical, nursing and laboratory schools.
• Annual peer meetings at central, intermediate and district levels.
• Annual national conferences (especially in groups 1 and 2).

At regional level:
• International Union Against Tuberculosis and Lung Diseases (IUATLD) courses in Viet Nam.
• Research Institute of Tuberculosis/Japan International Cooperation Agency (RIT/JICA) courses in Japan.
• Stop TB meetings in the Western Pacific Region (ICC meetings, TBTAGs, National Tuberculosis Control Programme [NTP] managers meetings, etc.).
• Stop TB meeting for PICs in collaboration with the Secretariat of the Pacific Community (SPC).
• IUATLD regional conferences.

Research
Research and development in the areas of treatment delivery, tuberculosis control in health systems, and monitoring and evaluation will be promoted in collaboration with WHO headquarters and partners. Progress in improving the tools for epidemiology, diagnosis, treatment and prevention of tuberculosis has been slow. Research into epidemiological models applicable and affordable in the Region, and especially in group 1 countries, will be encouraged.

The Stop TB special project provides numerous opportunities to build capacities at national level in areas of operational research that are not specific to tuberculosis. Such areas include:
• guidelines for prevalence surveys;
• alternatives to prevalence surveys to assess tuberculosis epidemiological trends;
• tuberculosis mortality surveys;
• public/private DOTS models in one country in each of groups 1, 2 and 3;
• preventive therapy in HIV infected individuals (ProTest);
• guidelines for health sector reform and public health priorities;
• guidelines for costing tuberculosis control activities and funding tuberculosis control;
• DOTS plus in areas of high rate of MDRTB; and
• Socio-economic impact of tuberculosis.

WHO Western Pacific Regional Office and other partners could assist countries to establish their own research agendas and to identify financial sources for research.
4 SPECIFIC ASPECTS OF THE DOTS STRATEGY BY GROUPS

Group 1
Cambodia, China, the Lao People’s Democratic Republic, Mongolia, Papua New Guinea, the Philippines, Viet Nam

This group represents the highest tuberculosis burden in the Region. The success of Stop TB special project in these countries will depend mainly on their capacity to reach DOTS case detection rates and maintain those success rates. All countries in this group have adopted the DOTS strategy and have proved that DOTS can cure tuberculosis in urban and rural areas - even when they are remote. But they have unequal political, financial and technical commitments to increase the availability of DOTS.

To move towards countrywide DOTS coverage in China, the Lao People’s Democratic Republic, Papua New Guinea, and the Philippines requires more political commitment at central, provincial and district levels, together with an increase in resources for tuberculosis control.

Countries that have implemented DOTS countrywide face constraints in the maintenance of DOTS. Politicians and decision makers must be convinced that important economic returns justify long-term investment in tuberculosis control. However, external support is essential to consolidate achievements and ensure an adequate transition towards regular national budget funding of tuberculosis control.

Four countries in this group (Cambodia, China, the Philippines and Viet Nam) are among the 22 highest-burden countries in the world and represent about 90% of the tuberculosis burden of the Region.

DOTS expansion and DOTS sustainability

- Expand DOTS throughout China, the Lao People’s Democratic Republic, Papua New Guinea, and the Philippines through adapted approaches to geography, health infrastructure and resources, culture and social behaviour.

- Sustain DOTS strategy and good performance of tuberculosis control, especially in Cambodia, Mongolia and Viet Nam, through a gradual increases in national budgets for all tuberculosis control components, including tuberculosis drugs as a priority, laboratory supplies, training, supervision and staff. Tuberculosis control requires long-term effort, which means that it must be planned for and funded as a core component of public health policy. External support can facilitate expansion but cost of essential components such as drugs, labo-
ratory material, training and supervision must be gradually absorbed by the country’s regular budget for health or covered by other mechanisms such as social security system or health insurance.

- Advocate adequate national budgets for tuberculosis drugs and all components of tuberculosis control in order to transform political commitment into action. Advocate free drugs for tuberculosis cases to ensure patient and doctor compliance and better access to health care, as contributions to poverty alleviation.

- Develop initiatives to strengthen international and bilateral partnerships, and to bring on board local partners, including private practitioners, to control tuberculosis with a national strategy.

- Ensure adequate training of central and intermediate staff involved in tuberculosis control in DOTS areas. Revision of the traditional curriculum for medical, nursing and laboratory staff should be initiated in order for health training institutions to respond to the needs of tuberculosis control.

**Tuberculosis control financing and Health Sector Development.**

- Assess the current levels of funding going to tuberculosis control at country level from different contributors, focusing on patients and community inputs to the public and private sectors; government, insurance, NGOs and donor inputs. Conduct operational research to evaluate impact on quality of tuberculosis control activities through varied financing schemes. Derive policy recommendations.

- Develop cost analysis studies to compare effectiveness and cost-effectiveness of DOTS and non-DOTS strategies in selected countries.

- Assess the status of HSR and its implications for tuberculosis control in two priority countries. Collaborate with the countries to develop strategic plans for incorporating tuberculosis control in the emerging health system. Plans should include operational research and activities to ensure that tuberculosis programme managers are involved in the HSR process to protect key elements of tuberculosis control, such as free tuberculosis drugs at least for infectious patients, regular on-site visits, reports of treatment outcomes and effective case detection.

- Develop indicators to monitor tuberculosis control during the process of health sector development. Evaluate these indicators in two countries, proposing policy modifications as necessary.

**Quality tuberculosis drugs and fixed dose combination drugs**

- Develop a quality assessment system for tuberculosis drugs through strengthening the National Drug Regulatory Authority to ensure that quality drugs are given for tuberculosis control.
Use of FDC or blister packs will ensure prevention of inadequate combination of drugs, thus preventing selection of drug resistant strains. It will also help logistics for the management and distribution of drugs.

**Monitoring and surveillance**

- Share information at Regional level by sending reports on case notifications and treatment results to WHO Western Pacific Regional Office every quarter.
- Conduct regular evaluations, and national and international reviews of tuberculosis control activities.
- Conduct baseline prevalence surveys to assess the first objective of the Regional plan, which is to reduce by half prevalence, and mortality due to tuberculosis in the Region within ten years.
- Conduct regular drug resistance surveys using the standard protocol recommended by WHO and IUATLD.
- Establish tuberculosis/HIV co-infection surveillance in countries with HIV epidemics.

**Tuberculosis control and HIV/AIDS**

The increasing impact of HIV/AIDS on the incidence of tuberculosis may overwhelm the currently effective programme. The principles of the DOTS strategy are the same for HIV positive and HIV negative tuberculosis patients. However, health services will have to cope with a rising number of tuberculosis patients. This situation will need the following two responses:

- detailing diagnostic criteria, for pulmonary and extrapulmonary tuberculosis; and.
- coordinating with other services providing support and care for HIV-positive individuals to improve referral systems between services.

**Laboratory services**

Implement quality assurance systems for laboratories to improve efficiency and reliability of their services. The quality assurance system comprises quality control as an internal process performed by all laboratory workers, quality improvement based on problem-solving during onsite supervisory visits and external quality assessment (or proficiency testing) through cross-checking tests (sets of slides sent to or from laboratory technicians).
Group 2

Brunei Darussalam; Hong Kong, China; Japan; the Republic of Korea; Macao, China; Malaysia; Singapore

This group of countries is able to allocate more human, technical and financial resources to health care than developing countries and are equipped with good health infrastructures. However, tuberculosis incidences are still high and tuberculosis burden has not decreased during recent years, except in the Republic of Korea. In this group, the majority of tuberculosis cases occur among the elderly or in specific risk groups such as homeless, foreign-born persons from high-prevalence countries or HIV-infected patients. The five components of the DOTS policy package, as defined above, remain the framework of the strategy in this group. Interventions that supplement the essential components of the DOTS strategy may be appropriate to tackle specific problems.

More attention should be given to the three following issues.

- Analyse reasons for the stagnation of tuberculosis incidence and identify the relevant factors that may explain the epidemiological trends, such as birth cohort effect or special groups effect.
- Introduce systematic and adapted recording/reporting systems that include treatment outcomes.
- Introduce recording/reporting systems in the private sector through adapted strategies such as the legal process or insurance schemes.

Adapted DOTS strategy

- Strengthen government commitment to control and eventually eliminate tuberculosis.
- Develop regular active case findings in identified high-risk groups. Detect cases among symptomatic patients in the general population and perform systematic contact tracing. Confirm cases through routine cultures and perform drug susceptibility tests, especially in groups at high risk of drug resistance. Manage outbreaks by active case identification and contact tracing.
- Apply DOT using a strict mechanism to trace patients in high-risk groups and where the success rate is low. Provide preventative therapy for newly infected persons and for some high-risk groups such as those infected with HIV. Provide specialized treatment, including second line drugs for MDR tuberculosis.
- Ensure that second line drugs for MDR tuberculosis are used only in highly qualified centers.
- Base surveillance on recommended and uniform reporting systems able to provide case notification and treatment outcomes. Include sputum smear examinations and cultures for complete assessment of treatment outcomes. Quality assurance of data should be part of the process.
Group 3

**Pacific Island Countries and areas:** American Samoa, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, the Commonwealth of the Northern Mariana Islands, the Marshall Islands, the Federated States of Micronesia, Nauru, New Caledonia, Niue, Palau, the Pitcairn Islands, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Futuna.

DOTS implementation in the PICs is lower than in the Region as a whole and little is known about their epidemiological situation although many islands have achieved high notification rates. Health staff in small countries and remote islands are scarce and people live in scattered places and isolated households and therefore are often difficult to reach. Communications are limited and health services are usually concentrated in the capital of the main island with often no or limited primary health care services in outer islands. The five components of the DOTS policy package as defined above remain the framework of the strategy for this group. The essential components of the DOTS strategy need to be adapted to operational aspects according to two most frequent situations: big islands with DOTS centre; and small islands without DOTS centre. Adapted strategies for outer islands should be developed according to the WHO guidelines published by the Western Pacific Regional Office.2

**Adapted DOTS strategy**

- Strengthen government commitment to expanding DOTS in all countries and areas and sustain tuberculosis control.

- Implement case detection by sputum smear microscopy among symptomatic patients that self-report to health services. In islands without DOTS centres, the tuberculosis suspect or three sputum samples are referred to the nearest DOTS centre by boat or aircraft. Carry out contact tracing and eventually preventive chemotherapy in selected islands to eliminate tuberculosis. Address the overreliance on X-rays and excess case detection of smear-negative patients in most countries of this group. A tuberculosis diagnostic committee should be introduced in each hospital applying DOTS to discuss every diagnosis of sputum smear-negative cases.

- Apply standardized six-month treatments to at least all confirmed sputum smear-positive cases, with directly observed treatment for at least the initial two months. Supervision of the treatment can vary from hospitalization in the DOTS centre during the intensive phase (first two or three months), to domiciliary treatment observed by an outreach health worker. The continuation phase for outer islands should be performed for four (or five) months with the aid of treatment kits3 given to patients through health workers or in case where there is no aid post, through community volunteers or village/religious leaders or store keepers. At the end of the treatment, all sputum-positive patients should visit a DOTS centre bringing with them their treatment cards. Smear examina-
tions (X-ray eventually), final clinical consultations and updating of the tuberculosis register should be performed at the DOTS centre.

- Ensure regular uninterrupted supplies of anti-tuberculosis drugs. Bulk purchases of drugs might be considered for several PICs through a common supplier.

- Use standardized recording and reporting systems that allow assessment of treatment results for each patient and of the tuberculosis control programme, through quarterly reports on notifications and treatment outcomes.

In addition to the speeding up of tuberculosis control in all islands, the first STOP TB meeting in the PICs planned in June 2000 will address three issues

- Defining adapted methodologies to better estimate the tuberculosis burden in island settings.

- Defining more intensive case detection strategies in islands that attain high success rates.

- Improving drug supply systems.

**Group 4**

**Australia, New Zealand**

The two industrialized countries in this group have lower incidences than those in group 3. However, the DOTS strategy should also be applied to the countries in this group, but adapted to their needs. Attention should be paid to surveillance and appropriate interventions in high-risk groups such as HIV-infected patients, foreign-born persons from high-prevalence countries and immigrants. Regular high-risk group screening, contact tracing, outbreak management and preventive chemotherapy should be continued to maintain the low incidence of tuberculosis in this group.

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**Notes**

2 Guidelines for the Control of Tuberculosis through DOTS strategy in Pacific Island Countries, WHO, Western Pacific Regional Office, 1999.

3 Ibid. p 22.
5 PLANNING AND COORDINATION

Country level

Country plan of action

Most of countries in group 1 have prepared a plan of action for tuberculosis control. These plans need to be updated in close collaboration with WHO and participating multilateral and bilateral agencies, and need to be approved by national authorities. Involvement of all agencies and organizations at the time of preparation will encourage their active participation. Plans should be target oriented towards achieving the national and regional goals for 2003 and should include a section on all resources available, staffing, funds and the requirements to achieve the goal. Plans should identify and prioritize additional resources and inputs required from WHO and other partners.

Coordination within ministries of health and among other Government sectors

Regular coordination meetings at national level must be held in countries of group 1. Coordination will be essential with other departments and units in the ministries/departments of health. These include planning, budget and finance; human resource development; drugs supply and distribution; disease surveillance; laboratory services; statistics; hospitals; medical and nursing schools; as well as other ministries/departments, such as finance, education and communication.

Stop TB Committee

A Stop TB Committee should be established among domestic agencies, associations and representatives of society to form a coalition against tuberculosis. One of the important roles of the Committee is to raise public awareness and social mobilization to fight against tuberculosis.

WHO collaboration

WHO will reinforce its technical collaboration by placing advisers in selected countries of group 1 and at Regional level (see Annex 5). At country level, only one long-term staff member has been posted in China since November 1999. There is a need for additional international professional staff. The requirements are one tuberculosis adviser in the Philippines, one in Papua New Guinea and one for Cambodia, the Lao People’s Democratic Republic and Viet Nam. These advisers will collaborate with ministries/departments of health in planning and implementing the Stop TB strategic plan. The WHO Regional Office will also initiate activities in countries that have necessary resources.
Estimated funding requirements for selected countries to Stop TB

Cost estimates and shortfalls are presented in Annex 4 (Tables 1 to 5)

Regional level

WHO Technical support

The WHO Regional Office for the Western Pacific will coordinate all activities related to the Stop TB special project in the Region. WHO will provide technical cooperation to the countries in all areas of tuberculosis control, if required. WHO staff distribution in the Regional Office and countries is presented in Annex 5. At the Regional Office, one full-time tuberculosis position and one part-time position already exist. In view of the anticipated increase in activity, there is a need for three additional medical and technical officers at the Regional Office. An adequate number of general service staff will also be required to support the professional staff.

Stop TB task force in the Western Pacific Regional Office

A task force will be formed at the Regional Office to coordinate activities and to call on other expertise within WHO, as required. The Stop TB task force will ensure a wider approach to tuberculosis control and close coordination with other WHO activities in areas such as health sector development, economic analysis, surveillance of HIV/AIDS, drugs quality and management, and social mobilization. The Western Pacific Regional Office task force will also have responsibility for coordination with neighboring WHO Regions. Close collaboration with WHO Headquarters, the Stop TB Global Initiative and with WHO country representatives will be reinforced.

Tuberculosis Technical Advisory Group

The TBTAG composed of international experts and government officers is being formed to provide technical guidance to the Stop TB special project in the Western Pacific Regional Office. The core group of members will call on additional experts as needed to address special problems as they arise. The Stop TB task force will serve as the secretariat for the TBTAG. Terms of reference of the TBTAG are as follows:

- to review and finalize the Regional strategic plan to Stop TB in the Western Pacific;
- to review and monitor the current tuberculosis and tuberculosis control situations in the Region;
- to monitor the implementation of Regional and national plans of action to stop tuberculosis and make recommendations;
- to propose mechanisms for coordination among international partners to ensure that adequate technical and financial support for the Stop TB special project is obtained; and
- to advise the WHO Regional Director for the Western Pacific on the above points.
Regional Interagency Coordination Committee

To ensure the coordination of all international agency inputs, at country and regional levels, ICCs with representatives from all agencies collaborating in the Stop TB special project will be formed. The committee will meet as frequently as required to review progress and the needs for partner inputs. The first meeting of the regional ICC will be held during the TBTAG meeting to review the Regional Stop TB strategic plan and identify the type of assistance that each of the agencies can provide for the Stop TB special project. The Stop TB task force in the Western Pacific Regional Office will serve as secretariat to the ICC.

National Interagency Coordination Committee

National ICCs will need to be formed, if not already existing at national level, to ensure the consistency in direction and policies in implementing the Stop TB strategic plans at country level, to ensure optimal coordination among partners and to secure necessary funds. The ICC will be composed of representatives of key agencies working in the tuberculosis field and NGOs interested in tuberculosis control. The ministries of health should play a key role in a national ICC.
In the last ten years, national and international resources to develop and expand the DOTS strategy have been limited, and this has hampered expansion of the initiative. Major contributors to tuberculosis control in the Region are currently national budgets and World Bank loans. However, five out of the seven countries of group 1, which currently rely on World Bank loans or external funding to implement and expand DOTS, will face major problems to sustain tuberculosis control at the end of the loan period or when external support is terminated.

Combined support from JICA, the Danish International Development Agency (DANIDA), KfW, the New-Zealand Overseas Development Agency (NZODA) through the SPC, Dutch Government through The Royal Netherlands Tuberculosis Association (KNCV), Damien Foundation Belgium (DFB) through IUA TLD, Canadian International Development Agency (CIDA) through World Vision, US Agency for International Development (USAID), the World Bank and WHO is small compared to the needs.

Additional funds for the Stop TB special project will be needed to achieve the Stop TB Regional goal by 2005. The DOTS strategy has been shown to be cost-effective, as demonstrated by the cases of China and the Philippines. In order to achieve the Stop TB goals by 2005, immediate action is required. The countries themselves must allocate more funds for sustaining tuberculosis control. The estimated budget and international support required for the Stop TB special project from 2000 to 2003 (not adjusted for possible increases in the price of tuberculosis drugs) are shown below.

Table 2:
Estimated budget and shortfall for Tuberculosis control in Western Pacific Region, 2000-2003 (Unit: $x1000, Salaries of health workers not included)
The overall requirement for 100% implementation of DOTS in the Region is about $46 million per year. However, only $17 million seems to be available. Therefore, the expected shortfall is about $29 million per year, of which the tuberculosis drugs cost is estimated to be about $12 million, and operational costs for implementing DOTS $17 million.

These estimates will vary as drug and other prices change. The challenge is for Member States to increase their contributions from the regular national budget, starting with tuberculosis drugs. Countries must come to regard tuberculosis control as a national problem, rather than relying on international agencies.

The breakdown of costs and the shortfall of funds by country and year are shown in Annex 4. Estimates will need to be refined as national plans and budgets are prepared or revised. National plans detailing funding requirements will need to include tuberculosis drugs; other supplies and equipment; operational costs for personnel and transport to implement DOTS; advocacy, social mobilization and meetings, salaries, and technical support (external staff). General costs to health service packages including tuberculosis will be broken down according to magnitude of tuberculosis activity. WHO and TBTAG will coordinate with all partner agencies to obtain adequate funding. Contingency funds will also be required to fill unforeseen needs.
Tuberculosis

The Fifty-first World Health Assembly,

Aware that tuberculosis is strongly associated with social and economic inequalities, especially those related to low income and gender;

Aware also that tuberculosis remains one of the most important causes of death in adults despite the existence of the highly cost-effective strategy known as “directly observed treatment, short-course (DOTS)” to control the disease, and that poor treatment and inadequate control of anti-tuberculosis drugs will result in the development of drug-resistant strains that may make tuberculosis incurable;

Recognizing that the already serious situation is worsening in many countries that have been slow to implement the strategy, and that in some the disease is rapidly spreading owing to HIV infection, itself facilitated by sexually transmitted diseases;

Convinced that tuberculosis can be controlled using the DOTS strategy even under difficult conditions, although the strategy presupposes strong political commitment;

Appreciating WHO’s leadership in persuading more countries to adopt the DOTS strategy (from ten in 1990 to nearly 100 in 1997);

Acknowledging that many countries will achieve the global targets for the year 2000 set by resolutions WHA44.8 and WHA46.36;

Concerned that most of the countries with the greatest disease burden will be unable to meet the targets;

Aware that the delay in introducing the DOTS strategy will lead to significant increase in tuberculosis prevalence and cause millions more preventable deaths,

1. URGES all Member States:

   (1) to give high priority to intensifying tuberculosis control as an integral part of primary health care;
   (2) to improve social and economic conditions for vulnerable groups in their communities;
   (3) to ensure before the year 2000 the effective introduction of the strategy known as “directly observed treatment, short-course (DOTS)” as an integral part of primary health care if it has not yet been implemented;
   (4) to monitor implementation of the strategy and establish an effective disease surveillance system;
   (5) to take the necessary steps, especially in those 17 countries with the highest burden of disease that are not expected to meet the targets by the year 2000:
       (a) to improve and sustain political commitment at national and local levels;
       (b) to review the constraints faced in meeting the targets, if necessary with support from WHO, development agencies or nongovernmental organizations;
       (c) to meet the targets through implementation and expansion of the DOTS strategy;
(d) to develop a detailed plan to meet the targets as soon as feasible after 2000, clearly specifying the type, amount and phasing of support to be provided by their governments, WHO, donors or nongovernmental organizations as appropriate;

(6) to coordinate the observance of World Tuberculosis Day on 24 March of each year as an opportunity throughout the world for organizations concerned to raise public awareness of tuberculosis as a major urgent public health problem and for countries to assess progress in tuberculosis control;

2. CALLS ON the international community, organizations and bodies of the United Nations system, donors, nongovernmental organizations and foundations:

(1) to mobilize and sustain external financial and operational support;

(2) to encourage cooperation from other organizations and programmes for health systems development, and prevention and control of HIV/AIDS and sexually transmitted diseases and lung diseases;

3. REQUESTS the Director-General:

(1) to use all appropriate existing fora where Member States, including those 17 with the highest burden of disease, may present problems faced in implementation of the DOTS strategy and other strategies in order to overcome these problems and mobilize external technical, financial and other support needed;

(2) to encourage the accessibility of poor countries to an adequate supply of good quality medication and diagnostic equipment;

(3) to encourage the establishment of networks for the surveillance of multidrug resistance at country level or in groups of poor countries;

(4) to encourage research to ensure sustainable, cost-effective programme implementation, as well as action to prevent multidrug-resistant tuberculosis, including the development of tools to monitor multidrug resistance, and to develop new tools to supplement the DOTS strategy (including vaccines);

(5) to intensify collaboration and coordination with UNAIDS and other programmes and agencies;

(6) to take all possible steps to maintain WHO’s regular budget contribution for global tuberculosis control;

(7) to keep the Executive Board and Health Assembly informed of progress.

Tenth plenary meeting, 16 May 1998
A51/VR/10
RESOLUTION

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 has far-reaching socioeconomic impacts, especially in developing countries, because the disease mainly affects the poor and people of productive age;

Recognizing further 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 were enrolled in DOTS programmes in 1998;

Expressing further concern at the negative impact of HIV on tuberculosis in some countries of the Region;
1. DECLARES a ‘Tuberculosis crisis’ in the Western Pacific Region;

2. 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;

3. 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 on progress in tuberculosis control to the Regional Committee.
# Annex 3

## Targets and expected results for 2005 and milestones in 2001 and 2003

<table>
<thead>
<tr>
<th>Targets</th>
<th>end 2001</th>
<th>end 2003</th>
<th>end 2005</th>
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<tbody>
<tr>
<td><strong>DOTS expansion</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Detection of estimated smear-positive tuberculosis cases, i.e., DOTS detection rate (see page 2)</td>
<td>50%</td>
<td>60%</td>
<td>70%</td>
</tr>
<tr>
<td>Treatment success rate in DOTS areas</td>
<td>85%</td>
<td>85%</td>
<td>85%</td>
</tr>
<tr>
<td>Proportion of detected cases under DOTS</td>
<td>60%</td>
<td>80%</td>
<td>100%</td>
</tr>
<tr>
<td>Countries adopting DOTS</td>
<td>all</td>
<td>all</td>
<td>all</td>
</tr>
<tr>
<td><strong>Health sector reform</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment of HSR impact on tuberculosis control</td>
<td>In 4 countries</td>
<td>In 7 high burden countries</td>
<td>All high/interim burden countries</td>
</tr>
<tr>
<td>Indicators for DOTS as indicator for HSR</td>
<td>Set developed</td>
<td>Indicators measured</td>
<td>Indicators used routinely</td>
</tr>
<tr>
<td>Plan to ensure DOTS sustainability as part of HS development</td>
<td>Plans developed</td>
<td>Plans implemented</td>
<td></td>
</tr>
<tr>
<td><strong>Drugs</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Regional Quality Control (QC) network for anti-tuberculosis drugs</td>
<td>Design quality control system</td>
<td>Implement QC in 2 countries</td>
<td>Implement QC in the 7 high burden countries</td>
</tr>
<tr>
<td>Free drugs for smear + patients</td>
<td>In DOTS areas</td>
<td>In DOTS areas</td>
<td>All Sm+ patients</td>
</tr>
<tr>
<td>Increase national resources for drugs</td>
<td>Yes over prior year</td>
<td>Yes over prior year</td>
<td>At least 80% drugs from national resources</td>
</tr>
<tr>
<td><strong>Monitoring and evaluation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surveillance system to assess DOTS expansion and quality</td>
<td>System developed</td>
<td>System used routinely</td>
<td>System used routinely in all countries</td>
</tr>
<tr>
<td>TB prevalence survey</td>
<td>3 countries</td>
<td>2 more countries</td>
<td>1 more country + 2 re-surveys</td>
</tr>
<tr>
<td>HIV/TB surveillance established</td>
<td>3 countries</td>
<td>2 more countries</td>
<td>1 more country</td>
</tr>
<tr>
<td>Drug resistance surveillance (surveys)</td>
<td>4 countries</td>
<td>3 more countries</td>
<td>Re-surveys 4 countries</td>
</tr>
</tbody>
</table>
Expected results

To help monitor progress, expected results for every biennium of this plan are presented below.

2000–2001

1. DOTS expansion
   - 50% detection or more among estimated smear-positive tuberculosis cases.
   - 85% success rate or more (cured patient and treatment completed) among detected smear-positive patients in DOTS areas.
   - All countries and areas in the Region to adopt the DOTS strategy.
   - 60% of detected smear-positive patients or more to be enrolled in DOTS.

2. Health Sector Reform
   - Assessment of status of HSR and identification of issues for tuberculosis control in three priority countries.
   - Set of indicators for DOTS strategy as indicators of success of health sector reform developed.

3. Drug supply and quality of drugs
   - Quality tuberculosis drugs free of charge for smear-positive patients secured in DOTS areas without shortage and with sufficient buffer stock at every level.
   - National resources for quality tuberculosis drugs increases compared to previous year.

4. Monitoring and evaluation
   - Drug resistance surveillance including surveys in Cambodia, Mongolia, the Philippines and four provinces in China conducted;
   - HIV/Tuberculosis surveillance established in Cambodia, Malaysia and Papua New Guinea.
   - Prevalence survey conducted in Cambodia, China and Viet Nam;

2002–2003

1. DOTS expansion
   - 65% detection or more among estimated smear-positive tuberculosis cases.
   - 85% success rate or more (cured patient and treatment completed) among detected smear-positive patients in DOTS areas.
   - 80% of detected smear-positive patients or more to be enrolled in DOTS.

2. Health Sector Reform
   - Indicators for DOTS strategy as indicators of success of health sector reform measured.
   - Operational research initiated and technical support for policy development provided in three countries (those previously assessed) to strengthen role of tuberculosis control in health system development.

3. Drug supply and quality of drugs
   - Quality tuberculosis drugs free of charge for smear-positive patients secured in DOTS areas without shortage and with sufficient buffer stock at every level.
   - National resources for quality tuberculosis drugs increased compared with previous year.
4. Monitoring and Evaluation

- Drug resistance surveillance including surveys in Cambodia, Papua New Guinea, Fiji; and four additional provinces in China performed.
- HIV/Tuberculosis surveillance established in selected provinces in China and Viet Nam in addition to previous countries;
- Prevalence survey conducted in the Lao People’s Democratic Republic and Mongolia.
Table 1: Estimated budget and additional needs for TB control (total Western Pacific Region 2000)

(Budget figures in $ X 1000, as of November 1999)

<table>
<thead>
<tr>
<th></th>
<th>Cambodia</th>
<th>China</th>
<th>Lao PDR</th>
<th>Mongolia</th>
<th>Philippines</th>
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<th>Viet Nam</th>
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<th>WPRO**</th>
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<td><strong>200</strong></td>
<td><strong>290</strong></td>
<td><strong>870</strong></td>
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**Remarks**

Drugs supported by Govt and other agencies

WB loan to expire in June 2001. Drugs to be funded by Govt?

Damien Foundation to support drug supply

Govt to find solution to fund TB drugs

Govt to increase budget for drugs? Long-term post needed

Long-term post needed

Govt to study drug procurement after WB loan completed

Need to organize bulk purchase of drugs

Funds for 3 additional posts needed

* PIC = Pacific Island countries

**Total requirement of Western Pacific Regional Office budget is $2 950 000 if 3 long-term posts in China, Papua New Guinea and the Philippines are included.
### Regional Strategic Plan to Stop TB in the Western Pacific

**Table 2:** Estimated budget and additional needs for TB control (total, Western Pacific Region 2000-2003)

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<thead>
<tr>
<th>Region</th>
<th>Year</th>
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<th>2003</th>
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<td>9700</td>
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<td>Viet Nam</td>
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**Remarks**
- WB loan termination in 2002
- Drug procurement likely to be an issue
- IEDC Project still needs external support after its termination in June 2001
- Support of Damien Foundation up to 2000
- Support from DANIDA to stop after 2001
- Expansion of programme will take at least 5 years
- DOH plans to increase Govt budget for drug procurement
- WB loan to terminate in 2003
- Does not include support from NZODA through SPC
## Table 4: Estimated budget and additional needs for TB control (other needs excluding drugs, Western Pacific Region 2000-2003)

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<th>2003</th>
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Table 5: Estimated budget and additional needs for TB control (summary, Western Pacific Region 2000-2003)

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<td>42 030</td>
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32
### WHO staff distribution at country and Regional offices

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<tr>
<th>Name of Country</th>
<th>Number of staff/posts required</th>
<th>Number of current staff/posts</th>
<th>Current or possible funding</th>
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<td>2 - posts from WHO</td>
</tr>
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<td></td>
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<td>2 - posts from Japan</td>
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<td></td>
<td>1 - post from USAID (?)</td>
</tr>
<tr>
<td>China</td>
<td>1</td>
<td>1</td>
<td>Funds not secured beyond 2000 (WHO)</td>
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<tr>
<td>Papua New Guinea</td>
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<td>AusAID (?)</td>
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<td>Philippines</td>
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<td>0</td>
<td>USAID (?)</td>
</tr>
<tr>
<td>Cambodia/Lao PDR/ Viet Nam</td>
<td>1</td>
<td>0</td>
<td>?</td>
</tr>
<tr>
<td>Pacific Island countries</td>
<td>1</td>
<td>0</td>
<td>?</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>10</strong></td>
<td><strong>3 (5)</strong></td>
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</tr>
<tr>
<td>Activities</td>
<td>2000</td>
<td>2001</td>
<td>2002</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td>TB TAG meeting</td>
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</tr>
<tr>
<td>STOP TB meeting (TB managers meeting group 1, 2, 3)</td>
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<tr>
<td>STOP TB meeting (TB managers meeting group 4 - Pacific Island countries)</td>
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<td>X</td>
<td>X</td>
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<tr>
<td>ICC meeting</td>
<td>X</td>
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<tr>
<td>Revision of national plan</td>
<td>X</td>
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<tr>
<td>Adapted strategy to group 3</td>
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<tr>
<td>Adapted strategy to group 4</td>
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<tr>
<td>Quarterly report to WPRO (case notification and treatment outcome)</td>
<td>X</td>
<td>X</td>
<td>X</td>
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</tbody>
</table>

Western Pacific Regional Office, tuberculosis control timetable 2000-2003
LIST OF PARTNERS

Asian Development Bank (ADB)
Australian Agency for International Development (AusAID)
Canadian International Development Agency (CIDA)
Centers for Disease Prevention and Control (CDC)
Community Health and Anti-Tuberculosis Association (CHATA)
Damien Foundation Belgium
Danish International Development Agency (DANIDA)
Department for International Development (DFID)
German Technical Cooperation (GTZ)
Hong Kong Chest and Heart Diseases Association
International Union Against Tuberculosis and Lung Diseases (IUATLD)
Japan Anti-Tuberculosis Association (JATA)/Research Institute of Tuberculosis (RIT)
Japan International Cooperation Agency (JICA)
Korean National Tuberculosis Association (KNTA)/Korean Institute of Tuberculosis (KIT)
Medicine Sans Frontieres (MSF)
Ministries of Health in all countries
National Tuberculosis Control Center in Beijing
New Zealand Overseas Development Agency (NZODA)
Philippine Coalition against Tuberculosis (Philcat)
Royal Netherlands Tuberculosis Association (KNCV)
Secretariat of the Pacific Commission (SPC)
UNICEF East Asia and the Pacific Regional Office
US Agency for International Development (USAID)
The World Bank
World Vision
### WHO Western Pacific Regional Office budget for tuberculosis control in 2000

<table>
<thead>
<tr>
<th>Source</th>
<th>Budget ($)</th>
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<tbody>
<tr>
<td>WHO Western Pacific Regional Office</td>
<td>312 000</td>
</tr>
<tr>
<td>WHO Headquarters</td>
<td>220 000</td>
</tr>
<tr>
<td>Japanese Government</td>
<td>950 000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1 482 000</strong>*</td>
</tr>
</tbody>
</table>

* Total will be $2 232 000 if $749 000 of WHO country budget is included.