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REGIONAL STRATEGY FOR THE CONTROL OF TUBERCULOSIS FOR 2005-2015

Tuberculosis is preventable and curable, however, it continues to be an important public health problem in the Americas. In 2003, 227,551 cases of tuberculosis were reported in the region, 130,877 of which corresponded to lung forms with positive sputum-smear microscopy. For that same year, it was estimated that 53,800 people died from tuberculosis. TB/HIV coinfection and multidrug-resistant tuberculosis represent a challenge for tuberculosis control and are present in all the countries. In addition to these threats, one must bear in mind the weakening of health sectors in the poorest countries and the impact of health sector reforms.

During the last decade, the internationally recognized strategy for tuberculosis control (DOTS) has been implemented progressively in the Americas, reaching a level of coverage of 78% of the population in 2003. This strategy has made it possible to improve the detection and cure of cases. The Region is well on its way to reaching the indicators and targets set forth under the Millennium Development Goals; however, current results primarily correspond to countries with medium- or high-income levels and with successful, long-standing national tuberculosis programs.

Due to the different development dynamics of the countries and the appearance of new challenges, technical cooperation should address the range of epidemiological, operational, and development situations of the national tuberculosis programs. It should prioritize the more vulnerable programs, in keeping with poverty conditions, incidence and burden of tuberculosis, sanitary response, and the impact of HIV/AIDS and multidrug-resistant tuberculosis. It is in this context that the *Strategic Plan of the Regional Program of Tuberculosis 2005-2015* has been prepared. This Plan provides the framework for differentiated cooperation actions so as to optimize the control approach, which is designed to improve the quality of care, promote community participation and mobilization, and facilitate compliance with the Millennium Development Goals. The Plan is an attempt on the part of Member States and Partners to expand and consolidate the DOTS strategy, and to apply initiatives within the framework of the DOTS, including multidrug-resistant tuberculosis and HIV/AIDS-associated tuberculosis, in order to reverse the incidence, prevalence, and mortality patterns of tuberculosis.

The *Regional Strategic Plan for Tuberculosis Control 2005-2015* is submitted for the consideration of the Executive Committee.

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"**Launching the Strategic Plan of the Regional Tuberculosis Program 2005–2015**"

Introduction

1. Tuberculosis, a disease produced by the *M. tuberculosis,* is preventable and curable; however, it continues to cause pain, suffering, and death among the peoples of the Americas. Diagnosing patients in a timely fashion and treating them until they are cured is all that needs to be done in order to reduce transmission of the bacillus in the community. However, tuberculosis control faces difficulties related to the population's access to a cost-free network of health services, the opportunity for office visits and diagnosis, patients adherence to the treatment, and access to family and community support, which are both frequently lacking due to the social stigma associated with the disease.

2. The situation of tuberculosis patients who do not have access to health facilities is poor, with 80% of them facing the risk of death, suffering and pain for several years of the illness, and the appearance of new cases of tuberculosis in the family and community. On average, an untreated patient infects one person per month, resulting in a scenario in which a single patient can lead to 24 to 96 new cases, 10% of which will develop the disease in their lifetime.[1] This situation is exacerbated by HIV/AIDS, which increases the risk of developing tuberculosis disease by 5% to 15% per year[2]. If patients seek care at health services that do not apply National Tuberculosis Programs (NTP) regulations, they are often subjected to irregular, high-cost treatments and run the risk of developing Multidrug-Resistant Tuberculosis (MDR-TB).

3. It should be pointed that tuberculosis is closely associated with social determinants of health that are generated by the various social and economic dynamics pertaining to countries' development and that lead to significant inequities between and within countries, as a result of poverty, social exclusion and discrimination, among others. These are factors that predispose the most disadvantaged populations of a community to becoming infected with and sick from tuberculosis, and create barriers to gaining access to quality health care.

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[1] Caminero Luna, Jose A. Guía de la Tuberculosis para Médicos Especialistas. International Union against Tuberculosis and Respiratory Diseases. France, 2003.

[2] Raviglioni MC, Harries AD, Msiska R, Wilkinson D, Nunn P. Tuberculosis and HIV: current status in Africa. AIDS 1997; 11 (Suppl B): S115-S123.

Situation of Tuberculosis and Its Control around the World and in the Americas

Global Situation

4. Tuberculosis continues to be a significant public health problem around the world. WHO[3] estimated that in 2003 there were 8.8 million cases of tuberculosis and 1.7 million deaths from tuberculosis.

5. The global average treatment success rate of patients treated in 2002 was 82%, which is higher than the rate reported in Africa and Europe, partly attributed to TB/HIV coinfection and drug resistance.

6. The tuberculosis incidence rate is on a downward or stable trend in *five* of the six regions of WHO, but has increased globally at a rate of 1.0% annually. This increase was attributed to Africa because of HIV infection rates. If it weren't for the trends observed in Africa, prevalence and mortality rates would be diminishing in the world.[3]

Situation in the Americas

7. In the Region of the Americas, 227,551 cases of tuberculosis were reported in 2003, 130,877 of which corresponded to pulmonary forms with positive sputum-smear microscopy (SS+), with case reporting rates of 26 and 14 per 100,000 respectively. In accordance with WHO estimates, 61% of all the tuberculosis cases were detected and 76% of SS+.

8. For that same year, it was estimated that 53,800 people died from tuberculosis, corresponding to a rate of 6 per 100,000 in the Region, with variations from 71/100,000 deaths in Haiti to less than 1 per 100,000 in the United States of America[4]. In the most affected countries tuberculosis represents one of the leading causes of death.

9. From 1994 to 2003, a slightly downward trend was recorded in the incidence of tuberculosis corresponding to 1.6% annually for all forms of tuberculosis and to 2.6% annually for SS+ (Figure 1). This trend is essentially attributed to fewer cases in Brazil, Chile, Costa Rica, Cuba, Peru and the United States. Brazil and Peru represent 50% of the total of all tuberculosis cases. [3]

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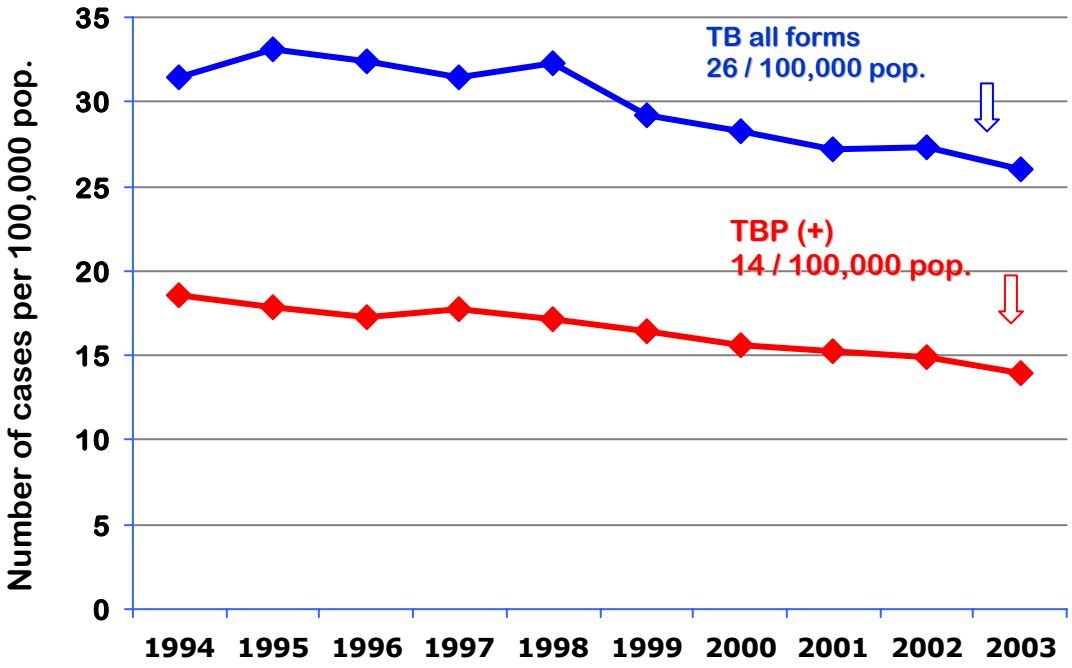
[3] Global tuberculosis control: surveillance, planning, financing. WHO 2005 Report. Geneva, World Health Organization (WHO/HTM/TB/2005.349).

[4] CDC. Reported Tuberculosis in the United States, 2003. Atlanta, GA: U.S. Department of Health and Human Services, CDC, September 2004.

Figure 1. Tuberculosis Incidence Rate Reported in the Region of the Americas *(1994–2003)*



10. The analysis by countries illustrates the range of the tuberculosis burden:

Table 1. Estimated Tuberculosis Incidence Rate per 100,000 pop. (2003)

> 85	>50-84	25-49	<24
Bolivia Ecuador Guyana Haiti Peru Dominican Republic	Belize Brazil Colombia El Salvador Guatemala Honduras Nicaragua Paraguay Suriname	Argentina Bahamas Mexico Panama Uruguay Venezuela	English-speaking Caribbean Chile Costa Rica Cuba Canada USA Puerto Rico

11. The incidence of SS+ by age and sex in the region, since 1994, is predominantly among the young male population, with 60% of the cases within the age group of 15 to 44.

12. TB/HIV coinfection and multidrug-resistant tuberculosis (MDR-TB) are present in all the countries:

- Countries with generalized HIV/AIDS epidemic and high tuberculosis burden, such as, Dominican Republic, Guatemala, Guyana, Haiti and Honduras, have an increased HIV rate among tuberculosis patients (range:5-20%). English Speaking Caribbean countries have the highest coinfection rates in the Region.

- Primary MDR-TB becomes a serious problem, mostly in countries such as Ecuador, Dominican Republic, Guatemala, and Peru that have MDR rates greater than 3% of new tuberculosis cases.[5.]

The DOTS Strategy

13. The DOTS strategy (Directly Observed Treatment Short Course Therapy) is the internationally accepted strategy for tuberculosis control and has been identified as one of the most cost-effective public health interventions.[6] It consists of five technical-managerial elements.[7]

- Political commitment for tuberculosis control;
- Access to quality-assured tuberculosis sputum microscopy;
- Uninterrupted supply of quality-assured drugs;
- Standardized short-course treatment and directly-observed taking of medication;
- Recording and reporting system enabling outcome assessments.

14. By 2003 the strategy had been implemented in 33 countries, with different levels of coverage (Figure 2), as a result of which case reporting and success of treatment improved. Treatment success rate for SS+ cases in DOTS areas has increased from 77% (1994 cohort) to 81% (2002 cohort).

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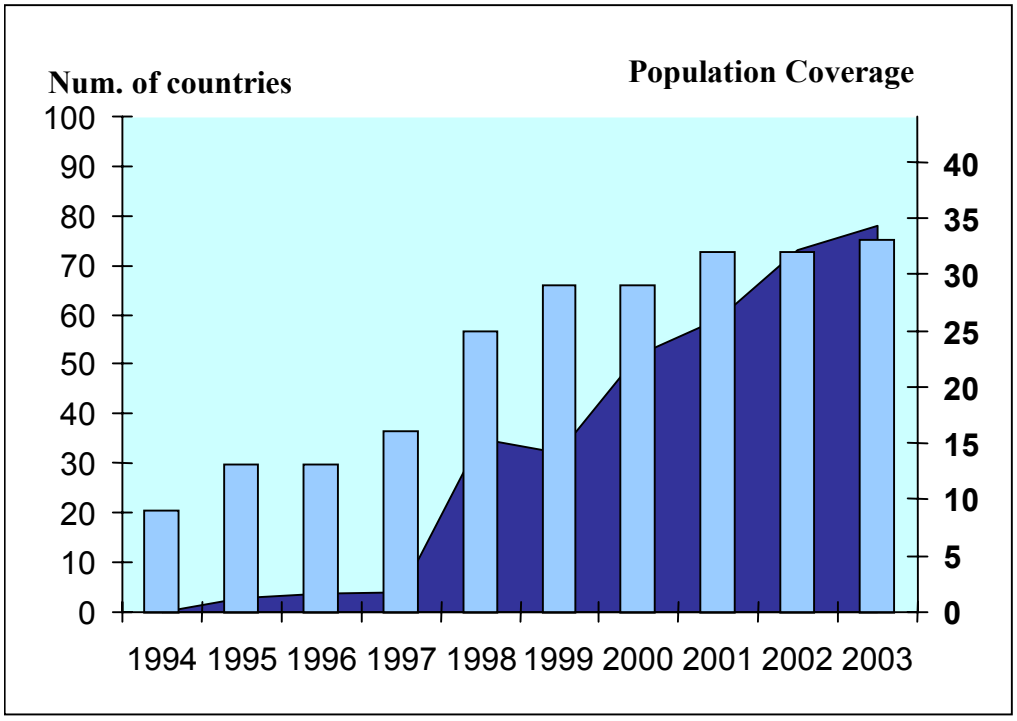
[5] TB-MDR Surveillance Report, Anti-tuberculosis Drug Resistance in the World, Report No. 3, Geneva, World Health Organization (WHO/HTM/TB/2004.343).

[6] Murray CJL, Styblo K, Rouillon A. Tuberculosis in Developing Countries: burden, intervention, and cost. Bull Int Union Tuberc Lung Dis, 1990, 65:2-20.

[7] What is DOTS? A Guide to Understanding the WHO-Recommended Tuberculosis Control Strategy known as DOTS. Geneva, World Health Organization (WHO/CDS/CPC/TB/99.270)

Figure 2. Expansion of the DOTS Strategy in the Americas, Percentage of Population Coverage and Number of Countries Applying the Strategy, 1994-2003.



Impact of Tuberculosis Control on the 2005 WHO targets and the Millennium Development Goals

15. WHO has continuously alerted the world to the negative impact of tuberculosis on the economic and social development of countries, through resolutions arising from the *World Assemblies*, for example WHA44.8 of 1991, that requested the Member States to grant "high priority to the control of TB" and launched the targets of: detecting 70% of cases with positive sputum-smear microscopy and curing 85% of them; WHA46.36 in 1993, that recommends the DOTS Strategy with its five components as a control tool.

16. The latter were backed by *Resolutions of the PAHO Directing Council and the WHO Executive Board,* among which CD39.R20 in 1996 which declared tuberculosis as a "health priority," convening and committing the governments of the countries to give priority to its control, and the 114th Session of the Executive Board of WHO in 2004 that drew attention to speeding up the progress toward achieving the goals: to detect 70% of new infectious cases and to successfully treat 85% of these in order to reach the MDGs;

to improve collaboration among HIV and TB programs; and to implement and strengthen strategies for the effective control of TB-MDR.

17. Resolutions that have contributed to developing the Millennium Development Goals.

Millennium Development Goals

18. In September 2000, all Member States of the United Nations agreed to eight basic development objectives with the desire to reach them in 2015. Goal 6, intended to "Combat HIV/AIDS, malaria, and other diseases," establishes Target Eight: "Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases" with specific indicators for tuberculosis: Indicator 23, to reduce by half the prevalence and death rates associated with tuberculosis, and Indicator 24; to detect 70% of new bacilliferous cases and successfully treat 85% them under DOTS.

Situation of the Region of the Americas regarding the Goals

19. Regarding the WHO global goals that were launched at the 44th Assembly and are to met in 2005:

- By 2003, 76% of the contagious cases were detected, however, only 50% are under DOTS, with 26% remaining under non-DOTS public services. Eighty-one percent of these cases are successfully treated, under DOTS.

  It is estimated that the treatment goal will be reached in 2005, and close to 70% of all cases under DOTS will be notified.

20. With regard to the goals for 2015, the Millennium Development Goals: "Have halted by 2015 and begun to reverse the incidence of malaria and other serious diseases."

- In accordance with WHO estimates[3], there has already been a decrease in TB incidence since 1990, from 66 to 43 per 100,000 for 2003.

21. A slight decline in incidence has been observed in the following countries: Belize, Bolivia, Colombia, Ecuador, Haiti, Paraguay, and Venezuela.

22. With regard to the *targets of prevalence and death rates associated with tuberculosis*, in 2003 the situation in the Region was as follows:

	Base line (1990)	2003	Target (2015)
TB prevalence *	100	58	50
TB death rate *	10	6	5

* Rate per 100,000 pop.

23. Although the Region is close to meeting the targets under the MDGs, it should be emphasized that current results essentially corresponded to achievements reached in countries with high or medium incomes, with successful, long-standing (NTPs), and a sustained reduction of their indicators.

24. The reduction required to reach the MDGs, from 2003 to 2015, will depend on achievements in the medium- or low-income countries and those with a high prevalence or burden of tuberculosis, bearing in mind of course that some of them are subject to political/social instability, impoverishment, and the rapid spread of HIV/AIDS.

25. Data analysis makes it possible to conclude that although the great strides made from 1996 to 2003 must be preserved, some tasks remain unfinished and others are still pending; therefore, the Regional Strategic Plan will focus its 2005-2015 control policies on:

a) **Protecting** the *sustainability of the successful expansion of the DOTS strategy* in 16 countries of the Region. Protection should prioritize low- or middle-income countries with a high risk of TB such as Bolivia, Guatemala, Nicaragua, and Peru.
b) **Protecting** an uninterrupted supply of drugs in all the countries;
c) **Expanding** the DOTS strategy in countries with low coverage;
d) **Expanding** initiatives within the DOTS aimed at *improving the access of neglected populations to tuberculosis control;*
e) **Expanding** collaboration activities between *tuberculosis* and *HIV* programs;
f) **Expanding** treatment of MDR-TB within the DOTS framework;
g) **Strengthening** development of *human resources* and increasing epidemiological and operations research:
h) **Facing new challenges** such as the *weakening of the health sector*, health reforms, changing social determinants, and the heterogeneity of the tuberculosis situation in the Americas, by:

- Implementing the DOTS strategy in countries that still do not have DOTS;
- Implementing other initiatives that make it possible to improve the quality of care, such as the PAL (Practical Approach to Lung Health),[§] and

[§] To introduce standardized treatment of respiratory diseases in primary health care to improve the TB diagnosis.

incorporating all public and private health care providers (Public-Private Mix Initiative);
- Implementing and/or strengthening mass communication to secure community participation and mobilization, and political commitment.

"Strategic Plan of the Regional Tuberculosis Program, 2005–2015"

Purpose

26. Major progress has been made in tuberculosis control in the Region; however, due to the different development dynamics of the countries and the appearance of new challenges, technical cooperation should be framed by the range of epidemiological, operational, and development situations of the NTPs. It should prioritize the more vulnerable programs in the different contexts such as: poverty conditions, incidence and burden of tuberculosis, sanitary response, and the impact of HIV/AIDS and MDR-TB.

27. To that end, a Regional Strategic Plan is prepared, in agreement with the experts from all the countries of the Region (NTPs Managers). It frames the differentiated cooperation actions in order to optimize the control approach with initiatives within the DOTS strategy that might improve the quality of care, community participation and mobilization, *en route* toward achieving the Millennium Development Goals.

General Objective

28. Member States and Partners expand and consolidate the DOTS strategy and apply initiatives outlined within the DOTS, including MDR-TB and tuberculosis associated with HIV/AIDS, in order to reverse the incidence, prevalence, and death rates associated with tuberculosis.

Specific Objectives

- Extend, consolidate, and/or intensify the DOTS/TAES strategy;
- Decrease the incidence of tuberculosis and HIV in populations affected by both diseases;
- Strengthen tuberculosis laboratory networks in order to guarantee timely and adequate diagnosis and follow up;
- Facilitate implementation of comprehensive management of MDR-TB within DOTS (DOTS-PLUS strategy);
- Promote the use of Behavioral Change Communication strategies (BCC) by NTPs;

- Promote the preparation and application of human resources development strategies in tuberculosis control in the countries.

Main Targets

- The Region reports more than 70% of new SS+ cases and an 85% cure rate of those cases for 2005 (WHO targets).
- The Region reverses the incidence of tuberculosis in all the countries and decreases mortality and prevalence by 50% in 2015 vis-à-vis the 1990 figures.

Regional Plan Strategies

Extend, Consolidate, and Strengthen the DOTS S*trategy in the Countries of the Region.*

29. This line of work aims to implement, expand, strengthen, and/or sustain the DOTS strategy. Work is to be implemented with a multisectoral approach, and based on the stratification of the countries in accordance with the Tuberculosis incidence rate and degree of DOTS coverage. New already-described initiatives will be introduced, including horizontal cooperation between countries and the incorporation of new partners and stakeholders.

Implement and/or Strengthen Collaborative Activities among the NTPs and NAPs including Surveillance of TB/HIV C*oinfection.*

30. Cooperation will be provided in accordance with stratification based on the HIV epidemic and TB burden, in order to identify immediate- and medium-term actions. Implementing comprehensive management of TB/HIV in primary and community care (Building Blocks Strategy), facilitating access to antiretrovirals (3”x5”), and systematically monitoring coinfection within regular surveillance of TB/HIV.

Strengthen the Laboratory Network and Drug-resistance Monitoring in the Countries of the Region.

31. This line of work is designed to ensure that the tuberculosis laboratory remains a priority. They will work on standardization, compliance with technical-operating standards in the networks, and certification of the countries’ national laboratories. Improving management and the use of cultures will be addressed; new techniques and MDR-TB surveillance will be introduced. At a supranational level, the “Supranational Laboratory Network” will be formed with participation by supranational laboratories and collaborating centers.

Implement and/or Extend the DOTS-PLUS Strategy, Especially in Countries with High Prevalence of MDR- TB.

32. This refers to comprehensive management of MDR-TB patients under DOTS (high quality standards of patient care) as the most effective way of preventing MDR-TB.

Encourage and Advise on the Implementation of Behavioral Change Communication Strategies in the Population, as well as Community Participation and Mobilization.

33. This is essentially intended to improve the quality of health care (at office visits and early diagnosis, and adherence to treatment plans), and promote the de-stigmatization of the disease, the involvement of the community in order to achieve community mobilization, and advocacy that makes tuberculosis control a priority in health policies.

Support Human Resources Education Policies

34. Supporting human resources policies and building capacities aimed at increasing the supply of quality services, thereby contributing to strengthening the health sector.

Institutional, Economic, and Human Resources

35. The resources available to the Region in 2005 are:

Institutional Resources

(a) *Supranational Reference Laboratories:*

- Massachusetts State Laboratory Institute, Massachusetts, USA
- Mycobacteriology/ Tuberculosis Laboratory CDC, Atlanta, USA
- Institute of Public Health of Chile
- National Institute of Infectious Diseases of Argentina
- National Epidemiological Reference Institute of Mexico

36. These laboratories constitute the Supranational Laboratory Network, in charge of the standardization of techniques in use, national laboratory qualification, supervision and monitoring of laboratory networks.

(b) *PAHO/WHO Collaborating Centers:*

- Pedro Kouri Institute, Cuba
- "Emilio Coni" National Institute of Respiratory Diseases, Argentina

37. The Collaborating Centers provide support for human resources education, clinical, epidemiological, and operational research activities, mass communication, and dissemination and exchange of information through regional publications. As of 2005, they will be incorporated into the Supranational Laboratory Network.

38. *Caribbean Epidemiological Center* (CAREC) in Port-of-Spain, Trinidad and Tobago, provides support for tuberculosis surveillance, as well as monitoring and supervision for the mycobateria laboratories in CAREC Member Countries.

39. L*atin American and Caribbean Center on Health Sciences Information* (BIREME), in São Paulo, Brazil, provides support for the promotion of technical cooperation in scientific and technical health information with and among the countries of Latin America and the Caribbean.

(c) *Financial Resources*

40. In the 2004-2005 biennium, the Regional Tuberculosis Program had nearly US$ 2,000,000 for tuberculosis control, 27% of which was from PAHO's regular budget. It is anticipated that regular budget resources will be cut by 45% in the 2006-2007 biennium. Regional resources from bilateral cooperation will also undergo a cut as a result of changes in donor priorities. The reduction of available resources for the next biennium creates significant gaps for implementation of the Regional Strategic Plan. The Regional Tuberculosis Program is working on resource mobilization strategies.

41. At the country level, during the last biennium PAHO mobilized a total of $1,897,000 from multilateral and bilateral cooperation for tuberculosis control in priority countries.

42. Through the *Global Fund to Fight AIDS, Tuberculosis and Malaria* (GFATM), up until now eleven countries of the Region have been successful with their tuberculosis proposals, obtaining nearly $83 million. These projects correspond to the 2003-2009 period. Table 2 lists the Global Fund projects approved in the Region.

Table 2. Tuberculosis Component of the Projects of the Global Fund to Fight AIDS, Tuberculosis, and Malaria, Region of the Americas, April 2005.

	Period First 2 years	**Quantity** First 2 years, US$	**Project Total**
Bolivia	Jul 2004-Jul 2006	2.381.646	5.688.896
Ecuador	Signature pending	-	16.353.319
El Salvador	Oct 2003-Oct 2005	1.918.344	3.373.959
Guyana	Signature pending	-	1.351.730
Haiti	Jun 2004-Jun 2006	8.131.836	14.665.170
Honduras	May 2004-May 2005	3.790.500	6.597.014
Nicaragua	Oct 2003-Oct 2005	1.271.820	2.853.065
Panama	Feb 2003-Feb 2005	440.000	570.000
Paraguay	Oct 2004-Oct 2006	1.194.902	2.799.545
Peru	Nov 2003-Nov 2005	20.153.818	24.228.179
Dominican Republic	Aug 2004-Aug 2006	2.636.816	4.611.816

Human Resources

Human Resources for Advisory Services of the Regional Tuberculosis Program

43. A Technical Advisory Committee will be set up this year for the purpose of having an independent technical perspective to review and advise on the policies, strategies, and action plans of the Regional Tuberculosis Program, and monitor and evaluate the degree of scope of the goals in order to improve Program performance. The technical advisory committee will consist of renowned international and regional experts who represent the main technical and financial partners, as well as the countries with the greatest tuberculosis burden in the Region (Brazil, Peru, and Mexico).

44. Specific human resources for tuberculosis end up being insufficient to respond to the objectives and activities of the Regional Strategic Plan; consequently, support is being sought from various entities so as to obtain greater backing for the Regional Tuberculosis Program, within the technical areas of laboratories and multidrug-resistant tuberculosis.

Regarding Partners and Resource Mobilization

45. The Stop TB Partnership, founded in 1998 at the First Meeting of the Ad hoc Committee on the Tuberculosis Epidemic convened by WHO (London, 1998), is a global

social movement against tuberculosis that proposes the need for a multisectoral approach and seeks out new opportunities to work with partners and allies.

46. The purpose of the Global Stop TB Partnership is to promote the development of regional and national partnerships, resource mobilization, and funding for the global plan; to integrate tuberculosis into poverty reduction strategies; to carry out community mobilization, communication, and global and local advocacy for boosting political commitment and financial resources; and to continue the activities of the Global TB Drug Facility.

47. The Region of the Americas is currently preparing to set up the Regional Stop TB Committee, whose base participants will be the technical and financial partners who carry out its activities in the Region. PAHO will actively attempt to add on new members and potential partners. The mission of this committee will be to ensure a regional commitment to the execution of the Regional Strategic Plan, which includes resource mobilization, advocacy for political and social commitment, preparation of strategies, and coordination of efforts between members. A tuberculosis ambassador will be appointed to serve as the public figure that will champion in society the struggle against tuberculosis in the Americas.

48. PAHO supports establishing up Stop TB Committees at a national level. Mexico and Brazil launched their National Stop TB Committees in 2004.

Action by the Executive Committee

49. The Executive Committee is requested to confirm tuberculosis control as a priority in health policies, considering the Regional Strategic Plan for Tuberculosis Control 2005-2015, and express its opinion about the possibilities of preparing national strategic plans consistent with the regional plan that will assist the Region in attaining the Millennium Development Goals.

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