

## **CHAPTER 2: THE UNFINISHED AGENDA: THE ETHICS OF HEALTH AND DEVELOPMENT**

105. The remarkable progress in improving health conditions and access to health care services in Latin America and the Caribbean has not been uniform. A large debt has been accumulated that is reflected especially in those health problems and living conditions that disproportionately affect the most disadvantaged social sectors. Diseases, death, and disability, while concentrated in high-poverty settings, decrease a society's capacity for productivity and development. Reducing this burden of social injustice is an urgent task for the Region in the 21st century.

106. Fulfilling this unfinished agenda is a complex undertaking. It requires not only redressing the poverty in which most of the population lives, but also eliminating the social, ethnic, cultural, and racial factors that perpetuate inequality and social exclusion and predispose certain groups to suffer illness more often than others, or that hamper their ability to enjoy the same opportunities as the rest of society. Because of their vulnerable situation, special attention should be given to the needs of disabled people, the elderly, children, women, and populations of Amerindian or African descent. It is necessary to fight against gender inequality and stigma and discrimination within communities and health services. Actions are needed to address the causes of diseases that have been neglected because they mainly affect the poor inhabitants of rural or marginal areas.

107. In the health sphere, primary health care (PHC) is the surest road toward achieving the goals related to this unfinished agenda and to the MDGs. Today there is full recognition that social solidarity and community participation, cornerstones of PHC, are indispensable for bringing about the profound, practical, and sustainable changes that can lead to better health by reducing the risk factors for disease and the inequities that limit access to health care and social development. For this reason, PAHO's Member States have made a collective appeal to renew the PHC strategy and to reorganize their health systems accordingly. An Interprogrammatic Working Group on Primary Health Care was established in 2007 to bring greater internal integration and coherence to this task.

### **Care of Vulnerable Groups**

#### ***The Health and Human Rights Project***

108. In its role as a WHO Regional Office and as the specialized health agency within the Inter-American System, PAHO works to protect the right of every inhabitant of its Member States to enjoy the best possible state of health.

109. For the purpose of disseminating the international norms and standards that protect the right to health and other basic rights of vulnerable population groups, PAHO has organized training workshops in collaboration with other agencies, among them the Inter-American Commission on Human Rights (IACHR). Furthermore, PAHO has held successful training workshops for its own technical and managerial staff members as well as for public health personnel in nine countries.

**Paraguay adopts precautionary measures to protect people confined to a neuropsychiatric hospital**

In 2004, in the Inter-American Commission on Human Rights of the OAS, a historic agreement was signed between the Government of Paraguay and two NGOs in response to an appeal by the latter for urgent precautionary measures to protect 450 people interned in the Neuropsychiatric Hospital of Paraguay. From the beginning of this process, PAHO provided technical assistance regarding health, disability, rehabilitation, and human rights to the national government and to the Commission. For the first time, a PAHO Member State made a formal commitment to reform its public health services in line with the provisions of regional human rights treaties and the recommendations of regional human rights agencies. The agreement was the direct result of PAHO's technical collaboration with its Member States in the dissemination of information on human rights; the technical training of public health personnel on applicable standards pertaining to human rights, disability, and health; and the review of health legislation and policies in light of international human rights norms.

***PAHO's collaboration with regional and international human rights organizations***

110. PAHO collaborates extensively with regional human rights agencies, such as the Committee on Economic, Social, and Cultural Rights, the Committee on the Elimination of Discrimination against Women, and the Special Rapporteur on the Right to Health. The collaboration between PAHO and IACHR involves visits to public health institutions; technical interpretation of the American Convention and the American Declaration on the Rights and Duties of Man in light of international standards of protection that are applied in fields such as mental health, HIV infection, and neglected diseases; and the implementation of precautionary measures. The technical collaboration between these two agencies, aimed at protecting the lives, personal integrity, and other rights of individuals who are confined to health facilities or who carry particular diseases, has resulted in major reforms.

***The health of the indigenous peoples of the Americas***

111. Throughout the 2003-2007 quinquennium, PAHO has promoted its Health of Indigenous Peoples Initiative with the ongoing participation of the Amerindian communities themselves, promoting recognition and respect for their ancestral wisdom. There have been two important milestones: (1) an evaluation of health achievements at

the end of the International Decade of the World's Indigenous People in 2004, and (2) Resolution CD47.R18, adopted by the 47th Directing Council in September 2006, which advocates for the period 2007 to 2011 the incorporation of indigenous peoples' perspectives into the attainment of the Millennium Development Goals and national health policies, a better understanding of the health of indigenous populations, the integration of an intercultural approach into the national health systems of the Region as part of the PHC strategy, and the development of strategic alliances with indigenous peoples and other stakeholders.

112. With the sponsorship of the Indigenous Fund, two graduate-level programs have been developed that combine traditional academic scholarship with indigenous knowledge: the International Degree in Intercultural Health of the Universidad de la Frontera (UFRO) in Chile, and the Masters Degree in Intercultural Health Management of the Universidad de las Regiones Autónomas de la Costa Caribe Nicaragüense (University of the Autonomous Regions of the Caribbean Coast of Nicaragua, URACCAN). This work has also benefited from the establishment of strategic partnerships with agencies such as UNICEF, ECLAC, and the Andean Regional Health Agency, and from participation in regional and global networks such as the Intercultural Health Network and the United Nations Permanent Forum on Indigenous Issues.

113. The regional project on Improvement of Environmental Conditions (Water and Sanitation) in Indigenous Communities has yielded some interesting results, including two projects of technical cooperation among countries. The first one, known as Water and Sanitation in Indigenous Communities, made it possible for Panama, El Salvador, and Guatemala to share their experiences among themselves. The second project, called Primary Environmental Care in Indigenous Communities of Costa Rica, Guatemala, and Panama, featured public education on solid and liquid waste management, personal hygiene, wastewater drainage systems, and indoor air pollution.

114. In Panama, a National Working Group (GNT) was formed with the participation of the indigenous communities and of various governmental and international entities, including UNICEF and PAHO. Also in Panama, a national project known as Monitoring Water Quality in Indigenous Communities was carried out, using an intercultural approach. That project, which was promoted by the Pan American Center for Sanitary Engineering and Environmental Sciences (CEPIS) with financial support from German Cooperation for Development (GTZ), focused on the community of Union Chocó in the region of Emberá. As a result of the project, the organizations represented in the GNT and especially the Ministry of Health became interested in establishing a national system for surveillance of drinking water quality. The indigenous communities of Ipetí-Emberá and Haytupo-Kuna also benefited from training aimed at improving their environmental conditions that was provided in the context of PHC.

### **Workshop on health and human rights of the indigenous Miskito population**

Between 1999 and 2004, 596 divers from the indigenous Miskito populations on the Atlantic Coast of Nicaragua and Honduras suffered decompression syndrome while fishing underwater for lobsters, their main source of livelihood. In that same period 13 divers died due as a result of damaged hyperbaric chambers, a lack of adequate rehabilitation services, and working conditions incompatible with international standards.

In 2004 PAHO carried out in Puerto Lempira, Honduras, a national workshop on human rights, disability, and the health of the indigenous populations. Participants included government officials, leaders of the Miskito community, the human rights ombudsman, the Inter-American Commission on Human Rights, and various organizations of civil society. As a result of PAHO's technical assistance in connection with the regional and international human rights standards that protect indigenous populations, the Honduran Ministry of Health repaired the hyperbaric chambers and improved medical and rehabilitation services. For its part, the Inter-American Commission on Human Rights is collaborating with PAHO to continue reviewing the situation of the Miskito in light of regional human rights treaties and regional and international standards pertaining to disability, rehabilitation, and health.

115. In Colombia and Ecuador PAHO works with communities in the Department of Cauca and the canton of Cotacachi, applying an intercultural approach that takes advantage not only of the resources offered by the health services but also of the traditional medical resources of the community and its indigenous health workers. The activities focus on promotion of healthy spaces, tuberculosis control, and protection of sexual and reproductive health.

116. Due to their living conditions, diet, and situation of displacement, the indigenous peoples of Colombia have an incidence of tuberculosis that exceeds the national average (25 cases per 100,000 population). In 2002, Colombia was incorporated in a project financed by PAHO and the Canadian International Development Agency (CIDA) that encouraged adoption of the DOTS strategy (Directly Observed Treatment, Short-Course) in indigenous communities.

### ***Displaced groups***

117. Political conflicts and natural disasters have led to the displacement of millions of people in Latin American and Caribbean countries. Colombia alone has some 2 million displaced persons, mostly women and children, as a result of the situation caused by illegal armed groups. These displaced people live in conditions of economic and social vulnerability. PAHO has concentrated on strengthening coordination among the different actors in government, civil society, and the international community to protect displaced people and refugees and has advocated better health care for these groups. As a result of this joint effort by PAHO and the Government of Colombia, with support from other agencies and financial allies, there has been an improvement since 2003 in the capacity

of the municipal and territorial authorities in affected areas to devote public resources to humanitarian assistance.

### ***People with disabilities***

118. People with disabilities have difficulty gaining physical and economic access to treatment, essential drugs, and goods and services for health and rehabilitation. They also face obstacles to the enjoyment of their fundamental human rights and freedoms. In the Region of the Americas, from 7% to 10% of the population—around 60 million to 80 million people—have some type of disability. The national figures for prevalence of disability in the Region vary widely as a result of the diversity of methods used to generate these figures and the absence of harmonization and standardization of technical criteria for defining disability.

119. Aware of the limitations of population censuses for depicting the situation of disability in the general population, some countries have conducted specific prevalence surveys. In Argentina and Uruguay, for example, surveys showed a prevalence of about 7.1% and 7.6%, respectively. Cuba carried out a psychosocial study of persons with disabilities and of the social, clinical, and genetic characteristics of persons with mental retardation. The study, which is known as *Por la Vida* (For Life) and ended in 2003, covered the country's 169 *municipios*. More recently, with the approval of the International Classification of Functioning, Disability and Health (ICF) in May 2001, countries have begun conducting prevalence studies that use this classification as a technical basis. Between 2003 and 2005, national studies based on the ICF were conducted in Chile, Ecuador, Nicaragua, and Panama; more recently, the ICF was used in developing the disability module for Colombia's population census.

120. PAHO provides technical cooperation in this area to the countries of the Region through its Regional Program on Disability Prevention and Rehabilitation and other interprogrammatic interventions. Furthermore, it collaborates with its Member States in generating policies, plans, interventions, and projects designed to prevent disability and enable disabled individuals to be rehabilitated and to enjoy the same opportunities as the rest of the population. Most of the countries have rehabilitation services available in their tertiary health care facilities. The strategy of community-based rehabilitation services (CBR) for the comprehensive care of disabled individuals has been promoted for more than two decades, although not all the countries have incorporated this as yet into their national health plans.

121. Chile is the first country in the Region to have developed an abbreviated version of the ICF. It conducted its first National Study on Disability through a survey of 14,000 families in order to determine the scope, distribution, and nature of disabilities in the population. Furthermore, Panama, with the active participation of PAHO, has

conducted its first survey on disability (PENDIS), has adopted measures to promote equal opportunity for persons with disabilities, and has created both a national council and a national secretariat to work for the social integration of such persons (CONADIS and SENADIS).

122. In Cuba, the care of disabled people is one of the health system's priority areas. PAHO's cooperation program includes support for the National Health System in its efforts to build capacity to address disability as a public health problem, as well as to enhance the program of comprehensive care for persons with disabilities.

### ***Gender equality and equity***

123. Global and inter-American conferences have issued important mandates calling on national governments to promote gender equality in the formulation of their public policies and programs. In the Region, gender equality was particularly emphasized in the Convention of Belém do Pará (1994), which dealt with the prevention, punishment, and eradication of violence against women, and in the 2002 Summit of the Americas, which set targets for gender equality in the Quebec Charter.

124. Gender inequalities in health exist in various ways, especially in the unequal access of men and women to care and in the lack of attention to the particular health needs of each sex. PAHO has integrated a gender perspective into all facets of its work: planning, execution, monitoring, and evaluation of policies, programs, projects, and research. The PAHO Policy on Gender Equality, introduced in 2005, calls for work with governments, civil society, and other entities in the Member States to eliminate all inequalities in health between women and men and to advance toward women's empowerment. The main objective is for both men and women to enjoy an optimal state of health and well-being throughout their life cycle.

125. These actions are consistent with WHO's gender policy, approved in 2002, and with the decision by all United Nations agencies to incorporate the gender perspective into all U.N. policies and programs. This approach is also in line with the PAHO Strategic Plan for 2003–2007, which stipulates that “reducing the impact of poverty, gender, and ethnicity as determinants of inequities in the health situation and in access to health care needs to be integrated into all programs.”

126. PAHO also promotes gender equality in its own work force in accordance with resolutions of the World Health Assembly and the United Nations General Assembly. It includes gender equality in its policies and programming, including the biennial program budget. The mainstreaming of gender, although initially overseen by the Gender, Ethnicity and Health Unit, is now the responsibility of all departments and levels of the Organization and of the ministries of health, other governmental sectors, academic and

research institutes, and NGOs. All technical and administrative areas of PAHO have gender focal points, as does every PAHO Country Office and every ministry of health. These, along with all the areas and units of the Organization, gather data by sex in order to permit data analysis from the standpoint of gender and the design of materials and interventions that use a gender-based approach.

### **Malnutrition and Food Insecurity**

127. In Latin America and the Caribbean, much of the population consumes insufficient quantities of nutrients and calories, which can lead to a broad range of clinical symptoms. Poor nutrition, when suffered early in life, undermines human capital, income, productivity, and development, as shown by the Longitudinal Study of Growth and Development carried out by the Nutrition Institute of Central America and Panama (INCAP) and other related studies.

128. Various analyses performed in the Region, based on national statistics and particular studies, have confirmed the relative importance of chronic malnutrition as opposed to acute malnutrition, which is less prevalent in all the countries. These studies have also made it possible to identify the determinants of the problem, which are basically associated with the agricultural, food, and nutrition system and which relate directly to the availability, accessibility, consumption, and biological utilization of food, and thus to food and nutritional insecurity.

129. At the national and subregional levels during the five-year period, certain joint initiatives of the health sector and other sectors, with the participation of PAHO and its specialized centers, have produced very good results, especially with respect to nutritional status in infancy. They include the Productive Municipios Movement in Cuba; Municipios for Development in Central America; transborder programs in health and nutritional and food security in several countries; national plans to reduce hunger in the population (for example, *Cero Hambre* (Zero Hunger) in Brazil); the programs and measures to reduce the population that suffers from hunger (such as *Cero Hambre* in Brazil and the naming of a commissioner against hunger in Guatemala), and different subregional initiatives in the context of the Nutrition and Food Security Initiative (SAN) launched in the 1990s.

130. In the area of nutrition, PAHO has provided technical cooperation through its subregional centers (INCAP and CFNI), mobilizing resources and transferring technologies and methodologies to the national institutions. In Costa Rica, INCAP has supported the SAN with a view to combating the gender inequity and inequality that afflict the country and contributing to the comprehensive development of poor families living in marginalized communities.

131. Activities to reduce chronic malnutrition have been particularly successful in Central America. Based on the approval of a specific proposal submitted by the World Food Program (WFP) to the XXI Special Meeting of the Health Sector of Central America and the Dominican Republic (RESSCAD), held in Belize in 2005, all the countries, with the support of PAHO/WHO, WFP, and INCAP, are strengthening their actions and implementing a new generation of food and nutrition programs based on scientific and technical evidence. In Guatemala, the Nutrition and Food Security Secretariat has coordinated intersectoral efforts involving the public sector, private enterprise, and civil society to target food and health programs to the higher-priority *municipios*, while other countries of the subregion have given priority to conditional cash transfer initiatives.

132. Since 2003, microenterprise has been promoted among rural women in Honduras, not only to combat food insecurity but also to empower women and enable them to participate in development processes. In Bolivia, the model of nutritional IMCI has been redesigned and is an essential part of the Zero Malnutrition Bolivia 2010 program, launched in July 2007 in order to radically reduce malnutrition rates in children under 5 and pregnant women. The Zero Malnutrition program is being disseminated rapidly throughout the Region, and nutritional evaluation has become the first rather than the last step in the IMCI algorithm.

133. Another important achievement is the assessment of linear growth in addition to weight-for-age; this is of special importance in the Region, where growth retardation is much more common than insufficient weight-for-age. Height is being added to the protocol for growth evaluation in Bolivia, Guyana, Honduras, Nicaragua, and other countries.

#### **The new WHO guidelines on child growth**

In April 2006, WHO launched new guidelines on childhood growth in breast-fed children. The new growth curves are already being applied in clinical settings in Bolivia, Brazil, and Chile. To promote adoption of the guidelines in 13 other countries of the Region, PAHO has held national workshops with key entities including the ministries of health, pediatric societies, United Nations agencies, bilateral agencies, and NGOs. Argentina, Guyana, and Mexico are already in the process of adopting the guidelines. PAHO has also offered three subregional courses—in South America, the Caribbean, and Central America—on the proper assessment of growth.

As a result of these actions, a group of facilitators is currently designing and presenting national courses to train health workers in the use and interpretation of the new curves. In countries such as Colombia, the new guidelines have led to the review of all nutritional programs and interventions with a view to redesigning or adapting them to achieve more favorable results. PAHO, with support from WHO, has introduced the new growth guidelines and has provided training materials.

PAHO has prepared a manual known as *Guidelines for Monitoring Child Development*, with versions in Spanish, English, and Portuguese. In the last two years almost 1,000 health professionals in 10 countries of the Region have been trained using this manual.



134. With the support of PAHO, courses and conferences on malnutrition have been offered in Mexico, educational materials and nutritional guides have been prepared, and support has been provided for the National Nutritional Sciences Congresses. Studies have been done on the nutritional impact of food supplementation on children under 5 through the Free Program of Conasupo Industrial Milk and the Secretariat of Social Development (LICONSA-SEDESOL).

135. Based on experiences in the Region to date, the 47th Directing Council (CD47.R8) in September 2006 approved the Regional Strategy and Plan of Action on Nutrition in Health and Development 2006–2015. The strategy addresses the complex relationships between nutrition and health. It covers both nutritional deficiencies (hunger, insufficiency of micronutrients, and chronic malnutrition, including growth retardation) and the excesses and imbalances that result in the epidemics of obesity and of chronic and metabolic diseases, such as diabetes, that have been observed in poorer populations.

#### **The Lima Act contributes to the fulfillment of several MDGs**

In November 2006, PAHO and other agencies of the United Nations system such as FAO, UNICEF, and the World Food Program, together with bilateral agencies such as USAID and various civil society organizations, signed the Lima Act as part of the initiative “Towards the Eradication of Child Malnutrition,” which includes health measures in the fight against poverty. Upon signing the Act, PAHO, the World Food Program, and UNICEF committed to helping Peru prepare and execute a plan to combat not only the most immediate causes of chronic malnutrition but also their social determinants, which are reflected in several MDGs.

### **Child and Maternal Mortality**

136. High rates of child and maternal mortality are a serious problem in Latin America and the Caribbean, especially among indigenous populations. There are enormous disparities between the countries and unacceptable figures in the poorest countries, such as Bolivia, Guatemala, Haiti, and Honduras, that are masked by regional averages. There is little reliable information on maternal and child mortality in the Region, and more data disaggregated by ethnic group is needed to better understand the cultural and social determinants of the problem. In Argentina, Colombia, Ecuador, Guatemala, Mexico, Panama, and the United States, meetings have been held to examine the needs of indigenous populations and the suitability of an intercultural approach.

137. PAHO and other agencies are working intensively in community programs with midwives and community leaders to improve health conditions during deliveries, expand care provided by skilled birth attendants, and identify and refer high-risk cases in a timely fashion.

### ***Integrated Management of Childhood Illness (IMCI)***

138. The potential for public health improvements in the new millennium lies in collaboration between families and communities and the health and social protection sectors. Estimates suggest that with good community interventions, almost half of childhood deaths could be prevented. The Integrated Management of Childhood Illness (IMCI) initiative was launched in the Region in 1996 to reduce morbidity and mortality caused by preventable childhood illnesses in children under 5. IMCI has three basic components—clinical, neonatal, and community—and local needs determine which of them should be promoted in particular places and circumstances.

139. In the Region, IMCI has transformed family health care and has led to a new type of community mobilization. In the countries where it has been adopted, it has been used to teach family practices that benefit children's health and that allow sick children to be cared for within the community itself. It has also improved equity by concentrating on vulnerable and indigenous populations.

140. January 2007 saw the conclusion, with good results, of the partnership forged in 2000 between PAHO, the U.S. Red Cross, and the United Nations Foundation (UNF) to help the ministries of health and the national societies of the Red Cross in 11 countries (Bolivia, Colombia, the Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Honduras, Nicaragua, Peru, and Venezuela) introduce the IMCI strategy within families and communities. The efforts of this alliance laid the foundations for an interinstitutional collaboration that has allowed the community component of IMCI to be firmly incorporated into the official plans and policies of these 11 countries. PAHO provided the necessary leadership and technical support to ensure that the IMCI strategy became an element of national programming based on the fundamental principles of PHC.

141. In order to promote the community component of IMCI, a model based on social actors was created. According to this model, the entire community identifies its health needs based on epidemiological data and conceives of interventions and programs that it later implements.

### **Community IMCI yields abundant benefits in Bolivia, Peru, and Honduras**

In Bolivia, IMCI was integrated into national health policy in order to support the governmental initiative of Zero Malnutrition Bolivia 2010, and the community model based on social actors has been applied widely. In Cotahuma, a poor peri-urban area of La Paz where most residents are indigenous Aymara speakers, the work with community IMCI has transformed family practices of key importance to child health. It has catalyzed joint action by a range of important actors, among them the Ministry of Health, the Ministry of Education, Red Cross volunteers, neighborhood councils, local health councils, community health promoters, and city hall.

The district of Chao in the Department of La Libertad, Peru, also applied the social actor model to promote IMCI, with a positive impact on parents' knowledge about the health of their children. Similar results were obtained in Honduras, where mothers learned to recognize the warning signs in children under 5 suffering from respiratory and intestinal infections and to seek medical care immediately when these signs are present.

142. In Guyana, IMCI was introduced in 2001 in an effort to reduce high infant mortality. It has been very fruitful, given the serious lack of resources and the difficulty in reaching the inhabitants of remote areas who lack access to essential diagnostic services. By the end of June 2007, Guyana had trained a critical number of health workers throughout the national territory. The Ministry of Health, with the technical support of PAHO, has expanded the initiative by introducing community IMCI.

143. In Ecuador, clinical, neonatal, and community IMCI has been promoted. In view of the high mortality rates in neonates, several workshops were held in 2006 to train nearly 200 professionals, including physicians and nurses, in neonatal IMCI. With support from PAHO, 14 universities in the country have incorporated IMCI as a clinical and community integrating strategy in the curricula of programs to train health personnel. The country's first breast milk bank was established at the Isidro Ayora maternity center in Quito.

144. Since 2003, the work of PAHO in the Dominican Republic has focused on the promotion of neonatal IMCI. From 2005 to 2006, mortality in children under 1 year of age was reduced 7.3%, according to data of the Ministry of Public Health and Social Welfare (SESPAS) and of the National Epidemiological Surveillance System (SINAVE). This means that during that period it was possible to prevent the deaths of over 500 children, especially neonates, partly through the impact of neonatal IMCI.

145. PAHO has undertaken a strategy of technical cooperation with the department of Antioquia in Colombia in order to integrate the experiences and practices characteristic of PHC, IMCI, and the Program to Improve Food and Nutrition (MANNA) of the government of Antioquia.

### ***Maternal mortality***

146. High maternal mortality is one of the most serious public health problems in Latin America and the Caribbean, where every year some 233,000 women die from complications of pregnancy and childbirth. Throughout 2003–2007 a great effort was made to strengthen the maternal mortality surveillance systems in the Region, especially in the neediest countries. Unfortunately, Latin American and Caribbean countries do not always have up-to-date data that would make it possible to determine how much progress has been achieved toward this goal of the fourth MDG.

147. In September 2002, the 26th Pan American Sanitary Conference approved a new regional strategy with concrete goals for the reduction of maternal mortality based on lessons learned and on the best available scientific tests. In 2003, the Latin American Center for Perinatology and Human Development (CLAP) located in Uruguay promoted the creation of a network of centers of excellence in order to accelerate implementation of the plan to reduce maternal mortality.

148. In Bolivia, maternal mortality is 230 per 100,000 live births, and in the Guatemalan indigenous population the rate is much higher than the national rate. Guyana, whose maternal mortality ratio in 2003 was 123.6 deaths per 100,000 live births, developed a National Strategic Plan for the Reduction of Maternal Mortality 2006–2010. To strengthen the maternal mortality database in Guyana, PAHO helped the Ministry of Health establish in the country's two largest hospitals a Maternal Mortality Audit Committee that will review, investigate, and classify all maternal deaths. The Ministry of Health and PAHO have also helped set guidelines for the Maternal Mortality Epidemiological Surveillance System and have prepared a training program on the management of maternal deaths in the maternity centers.

149. CLAP collaborated in implementation of a Perinatal Information System (SIP) in local hospitals that will make it possible to monitor all maternal, perinatal, and neonatal deaths in the country. The data obtained will be used to evaluate the quality of care provided to pregnant women from the initial prenatal consultation through the conclusion of the pregnancy.

150. In December 2004, the government of Panama and PAHO made a commitment to confront the problem of maternal mortality and prepared a strategic plan for the reduction of maternal and perinatal morbidity and mortality for the period 2006–2009. The plan includes the creation of local health plans to offer special obstetric and neonatal care (CONE) and reduce the gaps observed with regard to maternal and perinatal health in the country. It gives priority to the rural areas, which have predominantly indigenous populations and high rates of maternal and child mortality. Emergency obstetric and neonatal services are being studied in these areas with a view to creating new models of care.

151. In Haiti, where the maternal mortality rate is the highest in the Region, nearly 76% of women give birth at home because of economic barriers and 25% suffer complications. In collaboration with the Ministry of Health, PAHO has promoted the introduction of free obstetric services as a linchpin of health system reform in the country, with support from partners such as CIDA (Canada) and the European Communities.

152. In Mexico, the Secretariat of Health implemented the Equal Start in Life program in the period 2001–2006 as a national strategy to reduce maternal and child morbidity and mortality, particularly in the population with higher indices of poverty and marginalization. PAHO has supported the strategic component of the program, whose activities include surveillance, evaluation, and operations research. It has also supported, in nine Mexican states, an evaluation of the underreporting of maternal mortality due to faulty classification of deaths. This has made it possible to improve maternal mortality statistics with a modified version of the RAMOS method (Reproductive Age Mortality Survey).

153. In 2007 the Congress of the Republic of Peru held a forum where staff members of the Ministry of Health, PAHO, the UNFPA, UNICEF, CARE, and representatives of other entities signed an act of commitment to support the National Alliance for Healthy and Safe Motherhood.

#### **Promotion of safe motherhood in Colombia**

In 2000, Colombia had a maternal mortality ratio of 105 per 100,000 live births, an excessive rate in light of the country's level of development and high public spending on health. The Ministry of Social Protection of Colombia endorsed in 2003 the creation of a network of four centers of excellence to improve the surveillance and quality of maternal and neonatal care.

With support from PAHO, the Colombian centers have implemented an epidemiological surveillance system on maternal mortality that covers approximately 223,000 of the 800,000 deliveries recorded annually in the country. It is estimated that in the areas affected by the centers, maternal mortality has declined by 25% to 40% between 2003 and 2006.

Since 2003, the PAHO/WHO Country Office in Colombia has been in charge of developing the annual work plan and coordinating the monitoring of deliveries. This has made it possible to design a system for evaluating processes and outcomes and has facilitated the activities shared among different centers, as well as the articulation with national and departmental health authorities and with the regional program of PAHO. CLAP has trained focal points in the centers and in local hospitals within their area of influence; it has also provided methodological instruments for their work as well as initial financial support.

## ***Teenage Pregnancy***

154. Protecting the sexual and reproductive health of adolescents (SRHA) is very important in connection with the MDGs and the reduction of poverty, understood to mean not only insufficient income, but also low schooling, physical and mental vulnerability, and low participation in the political and social spheres.

155. As part of its initiative to promote healthy sexual practices and prevent pregnancy in adolescents, PAHO has been supporting developing countries in developing policies and information systems; building capacity; integrating SRHA and HIV services, and strengthening interagency and intersectoral work based on an ecologic, gender and human rights approach and which fosters community participation and the incorporation of current scientific evidence.

156. Materials for the promotion of adolescent health have been developed, such as the *Guía para abogar por la salud integral de los/las adolescentes, con énfasis en salud sexual y reproductiva* and the *Recomendaciones para los servicios de salud integrales para los/las adolescentes, con énfasis en salud sexual y reproductiva*, and workshops have been held in 11 countries of the Region. Didactic materials have also been prepared, and long-distance education programs have been implemented in order to improve the technical competencies of health professionals who provide sexual and reproductive health services to adolescents and young adults.

## **Communicable Diseases**

### ***HIV infection and AIDS***

157. HIV infection and AIDS are public health problems that require special and urgent attention around the world. In the Region, the epidemiological distribution of this disease, which previously was concentrated in men who have sex with men and in injecting drug users, is showing a clear trend toward feminization.

158. PAHO's support for activities aimed at fighting HIV infection and AIDS is coordinated with the work of other important partners who are active in the Region, among them the Global Fund to Fight AIDS, Tuberculosis and Malaria.

159. PAHO has been supporting its Member States as they prepare proposals and strengthen coordinating mechanisms in the countries. PAHO has collaborated with the United States President's Emergency Plan for AIDS Relief (PEPFAR) in the target countries (Guyana and Haiti) and has been working jointly with USAID, CDC, and other partners that are implementing PEPFAR in the Caribbean and Central America. The areas of collaboration include stigma reduction, laboratory support, case surveillance, behavioral change, and preventive interventions.

160. In keeping with PAHO's recent decentralization policy and in order to strengthen the Organization's response to the threat of sexually-transmitted infections and HIV, in August 2007 the Caribbean HIV/STI Office was set up in Port of Spain, Trinidad and Tobago, to coordinate technical support for PAHO's Caribbean HIV/STI Plan. The Office will be the main interface with agencies that specialize in supporting HIV-related projects, such as the Pan Caribbean Partnership on HIV/AIDS (PANCAP) and the Caribbean Regional Network of Seropositives (CRN+). CAREC will support laboratory and HIV surveillance activities, while CFNI will attend to the nutritional aspects.

### ***Regional Revolving Fund for Strategic Public Health Supplies***

In the full spirit of Pan-Americanism, in 2000 PAHO created the General Revolving Fund for Strategic Public Health Supplies to help Member States purchase medicines and essential public health supplies at reasonable prices. This is achieved through the negotiation capacity acquired by purchasing large volumes directly from the manufacturers.

The Strategic Fund, which some countries in the Region are members of, is a source of technical assistance and training on needs assessment and planning for procurement of medicines and essential supplies. In 2004, the PAHO Directing Council urged Member States to increase their use of the fund. This led to workshops being held in Central America, the Caribbean, and the Andean region for ministry of health personnel and major organizations that are beneficiaries of Global Fund projects. Activities in these areas have focused on examining and formulating national procurement plans financed by the Global Fund to help countries overcome the administrative and technical obstacles they face when converting available financing into product supply. All activities have been conducted with the assistance provided by PAHO Collaborating Centers and technical institutions of reference, with the support of the Global Fund.

Through the Strategic Fund, PAHO has helped countries that participate in global antiretroviral initiatives such as "Three Million by 2005" as well as Global Fund projects to fight AIDS, tuberculosis, and malaria. Favorable prices have been obtained from the Strategic Fund for orders of large amounts of vaccines. A ministerial meeting was planned in member countries of the Strategic Fund in order to generate consensus with regard to a reasonable price for introduction of the new rotavirus vaccine. It has also promoted introduction of new vaccines on the market, and annual agreements have been established for the drugs used most frequently.

### ***The Three Ones principle***

161. The Three Ones represents a new approach to the organization of the response to HIV in the countries. It entails the creation of one agreed HIV/AIDS action framework, one national AIDS coordinating authority, and one agreed country-level monitoring and evaluation system. With a view to applying these principles, PAHO and the other co-sponsors of UNAIDS meet annually to jointly plan strategies, examine progress to date, and harmonize activities.

162. The regional directors have reaffirmed their commitment and support for the Three Ones and their will to work in coordination with national leaders, multilateral and bilateral partners, and other key collaborators to implement the Three Ones principles in the countries. Resolution CD45.R10 of the 45th Directing Council of PAHO, adopted in 2004, supported the expansion of treatment for HIV infection and AIDS as well as other sexually transmitted infections (STIs) as part of an integrated response to the epidemic.

163. Since the adoption of this resolution, PAHO has increased its direct technical support to the countries in order to strengthen the health sector's response to the HIV epidemic. PAHO continues to decentralize its resources and technical assistance in view of the fact that improvements in prevention, care, and treatment will require not only drugs and other goods but also investments in building the capacity of the health systems to provide treatment effectively and equitably.

164. A good example of these efforts is in Panama, where the government, with support from PAHO, has achieved notable advances in the last five years on the road toward universal access to comprehensive care for people with HIV infection. A law has also been adopted to protect the rights of people infected with HIV. The prevention of this viral infection has been strengthened through specific public campaigns carried out by the Ministry of Health or by civil society entities. These initiatives have included campaigns for the elimination of stigma and discrimination against people with HIV.

165. Before 2005 in Suriname, the majority of screening tests were done in a single laboratory, based on clinical indications and doctor referrals. Starting in that year, however, the Ministry of Health has expanded screening services. Key aspects of the strategy have been the preparation of a national screening protocol, the delivery of same-day results, an expansion in the number of clinics and in their hours, and the integration of voluntary testing services into primary health care centers.

166. Another noteworthy experience is that of Guyana, which has mobilized \$1.2 million from PEPFAR to finance its strategic plans against HIV and AIDS. With these funds, PAHO provides technical cooperation to enable health workers in remote areas of the country to implement comprehensive plans to bridge the gaps in patient treatment within the framework of the Integrated Management of Adolescent and Adult Illness strategy. The initiative contributes to the fulfillment of the sixth MDG in Guyana and in the entire Caribbean area.

167. In the Dominican Republic, the prevention and control of HIV infection has received intensive support, and surveillance and epidemiological information systems have been strengthened. PAHO technical cooperation has been aimed at achieving goals and objectives for increased impact, improving information systems, reducing risk in the community, and improving care for affected people. As a result, from 2004 to 2006 the



number of people diagnosed with HIV infection increased from 5,041 to 14,050; the number being treated with antiretroviral drugs rose from 956 to 5,001; the number of health centers providing comprehensive care for people with HIV increased from 14 to 46; and the number of health facilities with trained staff and inputs for the interventions established in the Program to Reduce Vertical Transmission increased from 22 to 122.

168. With its INTEGRA program, Colombia has integrated technical assistance and voluntary testing for HIV infection in the sexual and reproductive health services of some *municipios*. The principal recipients are young people, and the model is spreading to health institutions in those parts of the country characterized by high vulnerability in relation to sexual and reproductive health. Together with UNICEF, the UNFPA, and UNAIDS, PAHO is represented on the managerial committee of the project and directed the preparation of the three modules it uses. PAHO also provides technical support for the development of the project and for assessment of results in the selected sites.

169. In Cuba, the Ministry of Health, supported by PAHO, has strengthened the monitoring and evaluation of activities to combat HIV and AIDS in 47 priority *municipios* connected to the national surveillance network. It has improved the laboratory network for local diagnosis; expanded the screening program in high-risk areas; trained health workers, especially in the polyclinics of those areas; and established a program of home visits by nurses to strengthen adherence to treatment.

170. PAHO has supported the sharing of experiences and the participation of Cuba in international events, and it has facilitated the creation of a multicountry project for the prevention and control of HIV/AIDS in the Region under the coordination of Cuba. This project, in which the Bahamas, Belize, Guatemala, Guyana, Jamaica, Honduras, and Nicaragua are participating, aims to identify best practices and lessons learned in the prevention and control of HIV/AIDS in the area of mother-to-child transmission. It also promotes technical cooperation among countries, documents and disseminates best practices and positive and negative experiences, and makes recommendations based on them.

**Chile formulates a quality-of-life index for people  
with HIV infection or AIDS (2003–2007)**

In the context of Chile's project to Accelerate and Deepen the National, Intersectoral, Participatory, and Decentralized Response to the HIV/AIDS Epidemic, which was approved by the Global Fund to Fight AIDS, Tuberculosis and Malaria, in 2006 a cross-sectional survey was carried out in Santiago and Valparaiso on the quality of life and adherence to antiretroviral treatment in 409 people affected by HIV who were served in the eight public hospitals with the highest concentration of HIV-positive people in the country.

This activity has made it possible to create an index to be used in calculating the impact of the disease on the lives and well-being of infected people. In addition to shedding light on the quality of life of people affected by HIV and AIDS, the index reveals the contrast between this group and the general population of the country and points up the impact of social determinants on the life situation of the HIV-affected population. A workshop on South-South cooperation was also held, with contributions from CONASIDA, the National AIDS Program of Brazil, and PAHO.

PAHO collaborated with the Global Fund on the project design, formed part of the coordination mechanism in the country that directed and managed the project, and provided financial support. South-South cooperation in the simultaneous prevention of HIV/AIDS and sexually transmitted infections has enabled the participating teams to better understand the importance of adopting complementary measures.

**The 2007 Latin American and Caribbean Forum on HIV/AIDS and STDs**

The fourth Latin American and Caribbean Forum on HIV/AIDS was held April 15–20, 2007, in Buenos Aires, Argentina. Its slogan was "Latin America and the Caribbean: United in Diversity Towards Universal Access." Its principal objectives were to promote universal access to public education on HIV prevention, to treatment, and to health care provided with respect and sensitivity.

In tandem with the official event, the Regional Community Networks of Latin America and the Caribbean on HIV/AIDS (LACCASO, ICW Latina, REDLA, RELARD, REDLACTRANS, ASICAL, MLCM+, REDTRASEX) convened the 2007 Community Forum. The theme addressed by this gathering was "25 years of the HIV/AIDS epidemic and the response of the community movement and civil society of Latin America and the Caribbean; past, present, and future challenges and opportunities."

The Community Forum is an opportunity for dialogue and collaborative work among the communities and civil entities of the Region whose task relates in some way to HIV/AIDS. In the Community Forum, held on April 18, 2007, the Latin American and Caribbean Women's Health Network participated in the regional launch of the "Women Won't Wait" campaign, whose call is to "End HIV & Violence Against Women Now!" This is an international women's coalition that promotes the health and human rights of women within the framework of the struggle against HIV and violence against women. The campaign, which aims to respond effectively to both problems, reflects the fact that violence against women and girls aggravates the ongoing feminization of the HIV epidemic.

171. With regard to the prevention of mother-to-child transmission of HIV (PMTCT), the report of 11 PAHO Member States indicates that the coverage of PMTCT programs ranges from 2.1% in Paraguay up to 87% in Argentina, with large disparities both within and between countries. There are new experiences in this field, for example in the Bahamas, where no case of death in children due to HIV/AIDS was recorded in 2002, and in Trinidad and Tobago, where between 85% and 95% of pregnant women were screened for HIV between 2002 and 2005.

### *Dengue*

172. Dengue, a disease of great epidemiological, social, and economic impact, constitutes a growing problem for public health worldwide and especially in the Americas. In 2007, facing the threat of a regional epidemic, PAHO issued an alert to the entire Region. The countries have made an effort to prepare and implement Comprehensive Care of Dengue, but the factors that facilitate transmission of the disease still persist in the Region. This has prevented the Region from meeting its goal to reduce incidence by 40% in 2007, although the marked reduction in mortality from the disease is very encouraging.

173. Central America is one of the most affected areas, with cases of dengue hemorrhagic fever concentrated primarily in El Salvador, Honduras, and Nicaragua, as well as in the Dominican Republic. In order to cope with the problem, PAHO has prepared the Strategy for Integrated Dengue Management in Central America and the Dominican Republic (EGI-DAC), based on a new model of work that encompasses health promotion and the development of new partnerships to prevent and control dengue. The Dengue Technical Group was created in 2003 as a group of experts who participate in the work of the country technical teams to jointly prepare a national strategy of integrated management.

174. El Salvador prepared guidelines for the Central American Comprehensive Plan for Dengue Prevention and Control that were presented at the meeting of the Coordinating Committee of the Central American Network for the Prevention and Control of Emerging and Reemerging Diseases (RECACER), held in Panama August 21–22, 2003.

175. Dengue is the communicable disease that poses the greatest threat to public health in Costa Rica, where 37,798 cases were reported in 2005, equivalent to an incidence rate of 890 per 100,000 population. The country has adopted the Strategy for Integrated Dengue Management (EGI-Dengue), which is being implemented in almost the entire national territory with the holding of regional workshops for discussion and analysis in each of the seven regions of the country. Since EGI-Dengue was implemented, the cases of dengue declined in 2006 and 2007, mainly in the regions of the country most affected by dengue and in the population with more vulnerable living conditions.

176. In Ecuador, dengue continues to be an important public health problem that transcends the sphere of activity of the health sector and as a result requires comprehensive, interprogrammatic, and multisectoral interventions, with local community organizations playing a key role. Thanks to vector control interventions and proper case management in hospitals, deaths from dengue in the country have declined from 14 in 2005 to 6 in 2006 to only 4 in 2007. Two important initiatives are under way in Ecuador, one in the community of Paraíso de la Flor and the other in the Galápagos Islands, both aimed at bringing about changes in behavior. Evaluations have shown favorable changes in the habits of the population and a reduction in the number of cases.

### ***Tuberculosis***

177. Although tuberculosis is preventable and curable, it continues to be an important public health problem in the Americas. The simultaneous presence of tuberculosis in many patients suffering from other diseases and the appearance of multidrug-resistant tuberculosis pose a challenge for control of the disease in all the countries. The problem is aggravated by the weaknesses of the health sector in the poorest countries and the adverse impact of health sector reforms.

178. During the last decade, adoption of the DOTS strategy (Directly Observed Treatment, Short-Course) has made it possible to improve the detection and cure of cases. The Region is on track to attain the indicators and goals set forth in the MDGs. Nevertheless, the best results have been obtained in the countries with high or medium income and long-standing national tuberculosis programs.

179. During the 5-year period, PAHO technical cooperation with the Ministry of Health of Brazil has resulted in the expansion of the DOTS in that country, where more than 40,000 health professionals have been trained in the application of control measures. The Brazilian Partnership against Tuberculosis (Fórum da Parceria Brasileira contra a Tuberculose) has been formed to undertake tuberculosis control with the participation of over 52 civil society organizations. Joint actions against tuberculosis and HIV infection have also been implemented in high-risk groups in the country.

180. Due to the varying levels of development of the countries, PAHO technical cooperation has been provided in different epidemiological and operational contexts and has given priority to those countries that are most vulnerable because of their poverty, high incidence of tuberculosis, HIV/AIDS situation, and presence of multidrug resistance. The Regional Strategy for Tuberculosis Control for 2005–2015 was established in order to provide a response tailored to the problems in each country through initiatives based on the DOTS strategy that improve the quality of care, community participation, and social mobilization.

181. Haiti is one of the poor countries that have made progress, but the advances have not been sufficient to enable the National Tuberculosis Program to reach its objectives. The principal obstacles are the HIV epidemic, the low coverage with DOTS (less than 60% of the country), insufficient control of the delivery of drugs, the emergence of multidrug-resistant tuberculosis, and scarcity of funds.

**The Dominican Republic strengthens its national tuberculosis program and reduces the impact of the association between HIV infection and AIDS**

Due to its high burden of the disease, the Dominican Republic is one of nine countries identified by PAHO as priorities for tuberculosis control. As such, it participates in all regional events related to the Stop TB Partnership. In December 2001, USAID signed a two-year cooperation agreement with PAHO for the purpose of strengthening the National TB Control Program (NTCP) of the Ministry of Public Health and Social Welfare in the Dominican Republic and adopting the DOTS strategy in seven priority provinces and the National District.

In 2007 the project with USAID was extended, with the following objectives: strengthen the actions of the NTCP through expansion of the DOTS strategy in five provinces and support for bordering provinces; consolidate and extend the strategy to all health facilities in the seven provinces and eight areas of the District National benefiting from the project; strengthen detection and comprehensive care of patients with multidrug-resistant tuberculosis; respond to tuberculosis and HIV co-infection; articulate binational actions for tuberculosis control on the island of Hispaniola; and collaborate with the project of the Global Fund to strengthen the NTCP. PAHO has provided technical and administrative support and has mobilized technical human resources from other countries with financing from USAID and other agencies.

***Malaria***

182. Although the general incidence of malaria has declined in the Region in recent years, the disease continues to be a public health problem of first magnitude and the results of control efforts carried out in the different countries have been very unequal. It is calculated that some 40 million people in the Region live in areas of moderate and high risk. In 1992 WHO, having been unable to eradicate the disease, launched the Global Malaria Control Strategy. In order to strengthen it, the Roll Back Malaria (RBM) initiative was implemented in 1998 with a view to reducing the disease burden 50% by 2010. In the 42nd Directing Council of PAHO, the Member States where malaria continued to be a public health problem adopted the RBM initiative.

183. In Guyana, malaria continues to be an important public health problem that is the cause of a significant proportion of outpatient consultations in ambulatory health centers and of hospital admissions. Guyana has received resources from the Global Fund and from the Amazon Network for the Surveillance of Antimalarial Drug Resistance

(RAVREDA), and the current Ministry of Health has given priority to malaria control. The disease affects more than 85% of the Amerindian population, whose poverty indices exceed those of all other population groups in the country.

184. In 2005, the Guyana Ministry of Health issued a mandate to integrate the vertical malaria program into the Regional Health Services. The National Malaria Diagnosis Network has been evaluated and restructured and national therapeutic guidelines have been written for uncomplicated malaria, which are currently being put into practice. After a study of the supply of antimalarial drugs in the country, the supply channels were improved and national policies were defined. Laboratory tests were also created for quality assurance of antimalarial drugs, and personnel were trained in their application. Chloroquine, primaquine, and mefloquine were subjected to repeated tests in two mini-laboratories in order to determine their quality.

185. In Suriname, the incidence of the disease has been reduced by 70% between 2003 and 2007. The country has a Malaria Board which, with support from RAVREDA and financing from the Global Fund, has directed measures to improve the control and prevention of malaria in the country. The disease is confined to the interior, a territory inhabited by Amerindians, Afro-descendants, and *garimpeiros* (miners originally from Brazil). Each inhabitant of the interior has received a mosquito net impregnated with long-acting insecticide and the initiative has been publicized over radio and television in the different languages spoken in Suriname. PAHO participates actively in the coordination by RAVREDA and in implementation of the project of the Global Fund.

#### **The Bahamas responds to a malaria case cluster in Exuma**

At the beginning of June 2006 the Ministry of Health of the Bahamas reported to the PAHO/WHO Country Office several cases of locally transmitted malaria on the island of Exuma. In collaboration with the Regional Malaria Program of CAREC, technical human resources were mobilized to assist the vector control unit of the Department of Environmental Health Services. This program arranged for Brazil and Nicaragua to donate drugs that could not be obtained locally.

PAHO mobilized the appropriate technical resources and provided technical assistance in the areas of epidemiological research and case search, detection, and care to complement national technical capabilities. It also acquired drugs and diagnostic products. The guidelines published by PAHO, WHO, and CAREC provided a technical foundation for the response to the outbreak. Thanks to the excellent collaboration between the Ministry of Health and various units of PAHO, as well as the assistance of Brazil, Guyana, and Nicaragua, the transmission of malaria was interrupted rapidly in Exuma.

186. Since 2003, action plans have been carried out in Nicaragua in the 36 *municipios* with the greatest transmission of malaria. These efforts are directed especially to vulnerable groups, many of them indigenous, living in remote and high-poverty areas. These *municipios* have only 26% of the country's population but account for 93% of the burden of disease from malaria. In the period 2003–2007, cases of malaria declined 54%; the annual parasite index has fallen from 1.20 to 0.55 per 1,000 population. The index of positive slides in 2006 was 0.65%, the lowest in the history of the malaria program. Beginning in 2006, and for the first time in the history of the epidemiological surveillance system for malaria, the data on positive cases were disaggregated by ethnic group. As part of the Roll Back Malaria initiative, PAHO has promoted adoption of the 7-day treatment for a radical cure. It has provided systematic support for the interventions and for continuous monitoring of the action plans.

**Regional program of malaria vector control without the use of DDT  
in Central America and Mexico**

In order to combat the adverse effects of DDT (dichloro-diphenyl-trichloroethane) and other persistent insecticides on human health and the environment, the Regional Program of Action and Demonstration of Sustainable Alternatives to DDT for Malaria Vector Control in Mexico and Central America was launched in August 2003 in Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, and Panama. The program, whose objective is to demonstrate the effectiveness of alternative methods of vector control that do not entail the application of DDT, has shown very good results.

The Regional Program, financed by the Global Environment Facility (GEF) over three years, represents the second phase of a project that in its first phase (2000–2002) consisted of collecting information about the use of DDT and about malaria control measures in the subregion. It is one of the first projects in the world to implement the recommendations of the Stockholm Convention on Persistent Organic Pollutants, adopted in 2001. In the countries where it has been applied, but especially in Mexico, the Regional Program has demonstrated that the malaria vector can be controlled without DDT, using comprehensive measures based on community participation and on collaboration between governmental entities, NGOs, and civil society.

***The response to avian and pandemic influenza***

187. In accordance with the International Health Regulations of 2005 (IHR 2005) and with the mandates of the Governing Bodies and of the Fifth Summit of the Americas of November 2005, PAHO has supported the Member States in developing plans of national preparedness for a flu pandemic. When the virus mutates into a new strain that can be transmitted from person to person, disease can spread rapidly, resulting in a pandemic capable of exhausting the resources of the Member States. The possibility that a strain with such characteristics could arise has forced the countries to put in place national preparedness plans. Fortunately, the H5N1 virus, which causes avian flu and which is

very pathogenic, continues to affect mainly domestic birds, with very sporadic cases in human beings. To date, no case of an animal infected in the Americas has been reported.

188. By May 2007, all Member States were carrying out activities in preparation for an influenza pandemic, and PAHO had received proposals for national plans from 28 Member States. All countries had received training on risk communication and outbreak notification as part of the process of alertness and preparation for a possible flu pandemic. Workshops were held that stressed the need to strengthen communication before, during, and after an outbreak.

189. PAHO technical cooperation has aimed at strengthening the core competencies of the Member States to detect and respond to unusual or unexpected situations, as established by the IHR 2005. In order to strengthen early warning systems in the countries, a new generic protocol for influenza surveillance was prepared with the CDC; according to this protocol, any isolated case caused by a new viral subtype has to be reported immediately to WHO. Introduction of the protocol has begun in the Caribbean and Central America and in the Southern Cone. In the Caribbean subregion, its implementation is under way in seven countries, coordinated by CAREC and by the focal points of the ECC. Laboratories have also been strengthened in the countries and the vaccine against seasonal flu has been introduced gradually into the Region.

190. PAHO has established at its Headquarters an Emergency Operations Center with networking capacity, computers, communications, software, and other equipment needed to coordinate the Organization's response to emergencies. PAHO has also helped train national staff members in communication during outbreaks and crises and has helped the countries establish detailed communication strategies as part of their preparedness plans. In July 2006 a workshop on training of instructors was held in Washington, D.C., with the participation of 80 staff members from almost all the countries of the Americas. Currently, all the countries of the Region have at least one trained instructor.

191. In July 2006 PAHO sponsored the Inter-Agency Communication Framework for Avian and Pandemic Influenza in the Americas, and it has coordinated information sessions for the U.S. Congress, the Board of Governors of the Inter-American Development Bank, the Permanent Council of the OAS, the U.S. State Department, and the World Bank. As a result of these encounters, an interinstitutional project on avian and pandemic influenza has been carried out by PAHO and the IDB.

192. The PAHO/WHO Country Offices have served as coordinators of the national teams of the United Nations agencies for avian and pandemic influenza in 25 of 28 countries that have U.N. offices. These activities have been carried out with economic support from USAID, the CDC, the IDB, WHO, and CIDA.



193. Uruguay is an example of a country that has prepared for an eventual flu pandemic with effective coordination and community participation and that has created a work plan for coping with outbreaks, epidemics, accidents, and disasters. Uruguay's strategy has been characterized by decentralization and local development of preparation activities. A subregional workshop, a national workshop, and three departmental workshops have been held in the country.

194. The Dominican Republic has prepared a pandemic plan with the cooperation of PAHO and with regional support and support from USAID and the Inter-American Institute for Cooperation on Agriculture (IICA), among other entities. The plan includes the development of mass communication and prevention of risks in the most vulnerable groups, especially health workers, farmers, and agricultural workers. The country now has technical personnel trained in laboratory techniques, rapid response equipment for emergencies, and a contingency and preparation plan for avian flu.

#### **Cuba is prepared for avian and pandemic flu**

Cuba has developed a national preparedness plan for avian flu in which several institutions and levels of management participate. The Ministry of Public Health and the Ministry of Agriculture are in charge of monitoring and executing the plan.

The country has participated in various international meetings for the training of staff members in the different sectors that are involved in these plans (public health, agriculture, veterinary medicine, communication). This complements the preparation of national human resources in other areas, such as regulations and standards, services, surveillance, response to outbreaks, vaccination, impact measurement, and evaluation of plans.

The management of information and knowledge has been systematized and instruments have been created for self-evaluation and impact measurement. Improvements have also been made in the process of planning and organization through action plans and implementation of a generic surveillance protocol. PAHO in Cuba was responsible for the technical aspects of the contingency plan used by United Nations personnel in the country to confront the threat of avian flu.

### **Tropical and Neglected Diseases**

195. In Latin America and the Caribbean there is an enormous burden of morbidity from tropical diseases and zoonoses. These diseases are mainly found in the rural areas and their transmission is facilitated by the poor housing conditions characteristic of underdevelopment. Hence the fight against these diseases is closely linked to several of the MDGs.

196. In the context of the MDGs, PAHO has undertaken an initiative against the so-called neglected diseases, whose victims tend to belong to the poorest and most vulnerable strata of societies located in tropical and subtropical regions. Over the years the health sectors and the pharmaceutical companies, focused on other priorities, have shown very little interest in these diseases, even though they constitute a serious obstacle to development and to human well-being because of their great economic and social impact.

197. They include, among others, Chagas' disease (neglected in certain parts of the Region despite notable progress in its control in the Southern Cone), Buruli ulcer, yellow fever, cholera, foodborne trematode infections (such as fascioliasis), some treponematoses (congenital syphilis among them), the Hantaan virus infection, plague, cysticercosis, leishmaniasis, hydatidosis, leptospirosis, lymphatic filariasis, onchocerciasis, schistosomiasis, the geohelminth infections, trachoma, and hemorrhagic fevers of viral origin (except for dengue hemorrhagic fever, which is not considered neglected). The victims of these afflictions often suffer disabilities that prevent them from living normal lives and make them prone to social marginalization.

198. There are several programs in the world to eliminate or control the geohelminth infections, schistosomiasis, onchocerciasis, and lymphatic filariasis, and their lines of action have been applied in the Region. WHO and PAHO have issued resolutions to eliminate onchocerciasis and lymphatic filariasis as public health problems, and over the quinquennium PAHO has implemented its Regional Program on Parasitic and Neglected Diseases, an initiative that seeks to prevent, treat, or eliminate many of these diseases simultaneously using an integrated, interprogrammatic, and intersectoral approach. This type of approach has special usefulness in the fight against parasitic and neglected diseases since some interventions are effective against several of them.

199. PAHO has noted the need to abandon vertical programs characterized by the centralized definition of policies. Some neglected diseases are currently being targeted by small-scale interventions in Belize, Bolivia, Brazil, the Dominican Republic, Ecuador, Haiti, Honduras, Nicaragua, and Suriname. Efforts are under way to strengthen partnerships with the international development banks, the World Food Program, NGOs, and pharmaceutical companies, which donate the drugs needed to sustain the elimination programs. Everywhere, there is a need to enhance community participation and strengthen infrastructure and the cadre of trained staff.

### *Chagas' disease*

200. An estimated 40 million people in the Region are at risk of contracting Chagas' disease. Control of this disease in several countries was neglected for many years due to its image as a disease of rural areas and of very poor populations living far from the urban centers.

201. The regional Chagas' disease program, located in Uruguay, has played an active role in the international fight against the disease through four subregional initiatives covering the Southern Cone, Central America, the Amazon area, and the Andean subregion. Before 2003 a reduction of 94% had already been achieved in the incidence of Chagas' disease in seven countries of the Southern Cone, and on June 9, 2006, the Southern Cone Intergovernmental Commission to Eliminate *Triatoma infestans* and Interrupt the Transmission of Transfusional Trypanosomiasis certified the interruption of vector-borne transmission in Brazil, a stage that is technically indispensable for later elimination of the vector.

202. In the Andean subregion an active struggle continues through the Initiative of the Andean Countries to Control Vectoral and Transfusional Transmission of Chagas' Disease, which held three subregional meetings during the quinquennium 2003-2007.

203. During the quinquennium 2003–2007, PAHO's regional Chagas' disease program has continued technical cooperation activities and has taken advantage of the partnerships already forged with agencies such as the Japan International Cooperation Agency, CIDA (Canada), Doctors without Borders, the Inter-American Development Bank (IDB), the Red Cross, and the European Communities. Its mission is to provide technical cooperation to those countries where the disease is endemic with a view to interrupting the household vector-borne transmission of *Trypanosoma cruzi*, contributing to the interruption of the transfusional transmission of the parasite, and improving the diagnosis, treatment, and surveillance of the disease.

204. Based on the good results obtained in the Southern Cone, PAHO has been promoting the Initiative of the Countries of Central America for Control of Vector-Borne and Transfusional Transmission and Medical Care for Chagas' Disease (IPCA), which was launched in Tegucigalpa, Honduras, in 1997. Within the framework of this initiative, PAHO and the Japan International Cooperation Agency (JICA) have been collaborating to promote control of Chagas' disease in Guatemala since 2000 and in Honduras and El Salvador since 2003.

205. The projects of JICA and PAHO in Central America are coordinated with those of other international agencies, such as CIDA (Canada) and World Vision. PAHO provides technical cooperation and evaluates the project activities. The coordination among several donors is particularly evident in Honduras, where the Ministry of Health has produced a national strategic 5-year plan with which all the donors are harmonizing their activities. JICA has placed a regional adviser in the PAHO/WHO Country Office in Honduras in order to further strengthen its collaboration with the IPCA. The coordination achieved in Honduras stands as an example for the international community.

### **The fight against Chagas' disease yields good results in Guatemala**

The principal vector of Chagas' disease in Guatemala is *Rhodnius prolixus*, which has been found in 10 departments of the country (nearly 50% of the national territory). In 2002 an estimated 4,022,000 inhabitants (36% of the Guatemalan population) were considered at risk of contracting the disease. That year saw the start of vector control interventions in the country, mainly against *R. prolixus*; treatment of all patients under 15; and expanded coverage of blood donor screening.

JICA and Doctors without Borders have played a key role in the struggle against Chagas' disease in Guatemala. For its part, the Guatemalan government has participated in the contracting of human resources, the execution of operational actions, and the expansion of blood donor screening, and it has contributed funds equivalent to double the amount that has been contributed by international cooperation.

Guatemala has eliminated *R. prolixus* and managed to control *Triatoma dimidita*; as a result, seroprevalence in children declined from 12% to 1% in the last five years. It is expected that transmission will have been eliminated in the country by 2010.

Previously, Guatemala accounted for about 33% of the population at risk of contracting Chagas' disease, 41% of the seroprevalence, and 45% of the annual acute cases in Central America. Therefore, the interruption of vector-borne and transfusional transmission of Chagas' disease in Guatemala as a result of the actions against it served to significantly reduce the burden of the disease in the subregion. The good results obtained in Guatemala and the excellent interagency coordination made possible the financial intervention of JICA in El Salvador and Honduras, with plans for Nicaragua and for a second phase in Guatemala, of CIDA in Honduras, and of Doctors without Borders in Nicaragua.

### ***Leprosy***

206. Leprosy is a curable disease, and thanks to good case-finding and the global application of an effective multidrug therapeutic regimen, it has stopped being a public health problem in various countries. In the majority of the Caribbean countries, where the disease was most prevalent in earlier times, the incidence has been reduced to a few isolated cases per year, although Guyana, Jamaica, St. Lucia, Suriname, and Trinidad and Tobago continue to have slightly higher incidence than the rest. CAREC has provided assistance in three of those countries, with a subsidy of \$166,000; Suriname receives direct assistance from Netherlands Leprosy Relief (NLR). The Caribbean countries where leprosy continues to exist have related dermatological services. Nevertheless, some health systems have incorporated vertical components for leprosy control. In accordance with the global strategy developed by WHO, PAHO makes an effort to integrate control activities into the PHC system.

207. Paraguay, where the prevalence of leprosy has traditionally been high, the disease was eliminated as a national public health problem in 2001, and in 2003 PAHO helped carry out the second monitoring exercise in connection with elimination activities. The

results obtained led to the development and review of plans of action for eliminating the disease subnationally. In 2005, patient care and follow-up were integrated into PHC activities in different parts of the country, and in 2006 and 2007 efforts have focused on strengthening the leprosy program's institutional capacity centrally and in the five areas of the country given the highest priority.

208. Another case worth noting is that of Brazil, which has the second-highest annual incidence of leprosy in the Region and is one of five countries that have not yet eliminated the disease. In 2006, 47,612 new cases were found within the national territory, 15% of them in persons younger than 15 years. Fortunately, leprosy is one of the diseases that the government prioritizes, and control activities have been integrated into basic health services. More than 64,000 people in the country receive multidrug therapy. Thanks to the coordinated actions of the health sector, PAHO, two PAHO/WHO collaborating centers and other entities, Brazil has achieved its national goal for the reduction of leprosy and hopes to reach its goals for the subnational level by 2010 through combined strategies.

209. With PAHO's technical cooperation and the support of the Sasakawa Foundation and of the German Leprosy Relief Association, the countries have taken steps to eliminate the disease as a public health problem.

### *Yellow fever*

210. Yellow fever is a sylvatic disease in South America and in some countries of the Caribbean where ecological conditions permit the presence of competent vectors and of susceptible vertebrates. In the Region, the countries with enzootic areas are Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Panama, Peru, Suriname, Trinidad and Tobago, and Venezuela. From 2003 to 2007, five of these countries reported a total of 596 cases, mainly of sylvatic transmission affecting farmers, travelers, ecotourists, and immigrants without immunity who penetrated danger zones.

211. The most severely affected countries have made great advances toward control of yellow fever thanks to the adoption, with PAHO's support, of national plans that include vaccination of the inhabitants of enzootic areas and of the areas where immigrants tend to originate. In particular, Bolivia, Colombia, Peru, and Venezuela have included yellow fever vaccine in their national routine immunization series for children 1 year of age.

212. Since implementation of the yellow fever control plans, a reduction of cases has been observed in the Region. However, it is important to continue immunizing inhabitants of the high-risk areas and areas of emigration, as well as to maintain high vaccination coverage in the new 1-year-old cohorts in countries with enzootic areas.

### *Hydatidosis*

213. There has been major progress with respect to hydatidosis (or hydatid cyst) in Latin America and the Caribbean, where PAHO has strengthened measures to eradicate the disease in Argentina, Bolivia, Brazil, Colombia, Paraguay, Peru, and other countries. According to the World Organization for Animal Health, some areas of the Region are already free of hydatidosis.

**Project to eliminate hydatidosis from the Island of Tierra del Fuego, Chile,  
and to control it in neighboring territories**

At the end of the 1970s, the prevalence of hydatidosis in canines, cattle, and sheep exceeded 45%, 80%, and 55%, respectively, in both the Argentine part and the Chilean part of the Island of Tierra del Fuego. Interventions have been carried out since then to reduce this prevalence and mitigate the danger of infestation in the human population. As a result, in the 1990s the prevalence of hydatidosis in sheep fell to less than 7%. However, control activities have been weak for the last several years, and not only has the disease not been eliminated, but there is the risk of losing the gains made to date.

In response to expressions of interest on the part of Argentina and Chile, PAHO recently approved a project of technical cooperation among countries whose purpose is to analyze the political, technical, institutional, and financial viability of formulating a control program to eliminate hydatidosis from the Island of Tierra del Fuego. If such a control program succeeds, it would be the first time in the Americas that the disease is eliminated from a territory where it has been endemic. This in turn would create the conditions for more effective control of hydatidosis in the continental part of both countries, especially in the provinces of Punta Arenas and Última Esperanza in Chile and Santa Cruz in Argentina.

### *Lymphatic filariasis*

214. This disease affects more than half a million people in the Region, with another 6 to 8 million, at a minimum, at risk of contracting it. There are seven countries in Latin America and the Caribbean where lymphatic filariasis is endemic (Brazil, Costa Rica, the Dominican Republic, Guyana, Haiti, Suriname, and Trinidad and Tobago), but in three of them (Costa Rica, Suriname, and Trinidad and Tobago) the absence of transmission has been confirmed. In fact, everything indicates that the Region could become the first in the world to eliminate the disease, thanks to important regional advances in morbidity control and operations research as well as the many alliances and associations that have been forged among the different countries, the international community, various NGOs, and the private sector. In the context of WHO's Global Programme to Eliminate Lymphatic Filariasis, PAHO and GlaxoSmithKline (GSK) have joined the struggle to eliminate the disease from the continent.

215. Operations research activities have been extensive throughout the Region. Health professionals in Brazil, Haiti, the Dominican Republic, and Trinidad have kept up a

continuous exchange of experiences that soon will extend to the use of geographic information systems to map the transmission foci. PAHO's partners in the Region, both business and institutional, especially the Bill & Melinda Gates Foundation, have contributed substantial support during the 5-year period. The Lymphatic Filariasis Support Center at Emory University in the United States, the School of Tropical Medicine in Liverpool, England, and the PAHO/WHO collaborating center on lymphatic filariasis that is located in the U.S. Centers for Disease Control and Prevention (CDC) have continued to support control activities in the Americas.

### ***Leishmaniasis***

216. The cutaneous and visceral types of leishmaniasis constitute a growing problem in the rural and peri-urban areas of many countries of the Region, from the north of Argentina all the way to the south of Texas in the United States, with almost 35,000 reported cases in Brazil in 2003 alone. Muco-visceral leishmaniasis, a disfiguring variant that can follow the cutaneous disease, is endemic in Mexico and in some countries of Central America and South America. Peru has a high prevalence of leishmaniasis, especially the cutaneous type. Chile and Uruguay are the only countries in the Region that have not reported cases. However, underreporting or lack of information is common in the areas where these diseases are commonly found.

217. The Region has a Regional Program on Leishmaniasis that collaborates with the Regional Program on Parasitic and Neglected Diseases. Its activities include establishing sentinel sites for surveillance, finding new and less expensive drugs, increasing access to the health services, promoting research, formulating guidelines for diagnosis and case definition, setting up working groups in the countries, and evaluating the results of interventions.

218. Leishmaniasis is a priority disease for the Special Program for Research and Training in Tropical Diseases of UNICEF/UNDP/World Bank/WHO (TDR), which works with the PAHO Communicable Disease Research Program.

### ***Onchocerciasis***

219. Nearly half a million people in the Region are at risk of contracting onchocerciasis, also known as river blindness. Within the Region, this disease poses an especially serious problem in an extensive area of remote communities on the Amazon border between Brazil and Venezuela. Elimination of the disease is the goal of a multinational and multi-institutional initiative based in Guatemala and known as the Onchocerciasis Elimination Program for the Americas. The activities of this program focus on the six countries where the disease is endemic—Brazil, Colombia, Ecuador, Guatemala, Mexico, and Venezuela—and consist mainly of promoting the large-scale

administration of ivermectin every six months, with the goal of treating a minimum of 85% of the population at risk of getting sick over a 12- to 14-year period. PAHO participates actively in this program, together with the Merck pharmaceutical company, the CDC, the Carter Center, the Lions Clubs International Foundation, and various academic institutions in the Region. The activities undertaken in the Region are linked with the Global Initiative for the Elimination of Avoidable Blindness, also known as Vision 20/20: The Right to Sight, which was launched in 1999 as a partnership between WHO and the International Agency for the Prevention of Blindness.

220. In 2003, all the countries with endemic onchocerciasis reached the target coverage with drug therapy. That level of coverage has been sustained since then, making it feasible to aim at cutting transmission in half by the end of decade. As a result of this progress, there have been no new cases of blindness caused by the disease and interruption of transmission has been achieved in six of the 13 endemic areas. In the fall of 2003 it was estimated that \$15 million would be needed in order to eliminate onchocerciasis from the Region by 2010. Toward that end, the Bill & Melinda Gates Foundation made an initial contribution of \$5 million and urged other donors to contribute the same amount, promising to match each donation. With the support of over 70 donors, the necessary funds were mobilized four years before the deadline. The goal of eliminating onchocerciasis from the Americas is close to being fulfilled.

### ***Trachoma***

221. This disease, which can cause blindness by damaging the ocular conjunctivas, continues to be hyperendemic in Brazil, Guatemala, and Mexico. PAHO has been applying the “SAFE” strategy (surgery, antibiotics, facial cleanliness, and environmental improvement) developed by WHO. This strategy aims to eliminate the disease worldwide, using a community approach in the context of PHC and as part of the Alliance for the Global Elimination of Blinding Trachoma by the Year 2020 (GET 2020). Component E of the strategy depends to a great extent on education, environmental sanitation, and poverty reduction, so that any progress in this regard will be measured in light of the fulfillment of the MDGs. As in the case of onchocerciasis, many of the activities to combat the disease in the Region are linked with the Global Initiative for the Elimination of Avoidable Blindness.

### ***Congenital syphilis***

222. Congenital syphilis can be prevented with a single dose of penicillin. Nevertheless, it is estimated that in Latin America and the Caribbean more than 100,000 children are born every year with the disease. In order to help the countries to combat the problem, PAHO has spearheaded the creation of an interprogrammatic group that will work to strengthen preventive measures at the regional level. PAHO is also collecting



epidemiological data in order to have figures of reference and is conducting a study in three countries to determine the magnitude of case underreporting, which is believed to be extensive. It has also modified the perinatal clinical file in an effort to facilitate detection and early treatment of the disease and improve the incidence statistics.

### ***Schistosomiasis and geohelminth infections***

223. Schistosomiasis and soil-transmitted helminth infections continue to be the parasitic diseases of highest prevalence in the world. PAHO estimates that 20% to 30% of all Latin Americans are infected by intestinal parasites and that this figure rises to 50% in the poor strata and to 95% in some indigenous tribes.

224. Several countries have recognized the magnitude of the health problem caused by schistosomiasis and soil-transmitted helminth infections and have carried out control activities for years, with excellent results. In Brazil, morbidity and mortality due to schistosomiasis have been dramatically reduced. Other countries, such as the small Caribbean island nations, Puerto Rico, and Venezuela, are coming closer to the goal of elimination or have already reached it.

### **Drinking Water and Sanitation**

225. The poverty that exists in many sectors of Latin America and the Caribbean is associated with precarious sanitation conditions that leave the population vulnerable to many communicable diseases. It is estimated that in 2000 around 45% of the rural populations of Latin America and the Caribbean lacked access to drinking water and basic sanitation systems, a clear manifestation of the marked inequities between the poorer and the more privileged sectors of society. Fortunately, during the quinquennium the majority of the countries in the Region, supported by PAHO and many other entities, have obtained encouraging results in this area. On this basis it is possible to predict that by the end of 2007, the goal of reducing by 25% the deficit in drinking water supply and sanitation services in Latin America and the Caribbean will have been reached, although not in the rural areas of the poorest countries.

226. By May 2007, some 10 countries (28% of the Member States) had national policies, and nearly 20 (55%) had national plans for solid waste management. In countries such as Colombia and Peru, local authorities have prepared very complete general plans, as required by law, while in others, such as Argentina, Brazil, Cuba, Mexico, and Uruguay, master plans for the disposal and treatment of solid waste have been prepared for the larger cities.

227. PAHO, together with WHO, has prepared new standards for air quality and is putting them into effect in the Region. The standards are being disseminated

electronically and in print. A regional publication has been prepared on the effects of air pollution, pointing out some of the measures being taken in that field by Latin America and Caribbean countries. Information in the publication mainly concerns certain metropolitan areas of Argentina, Bolivia, Brazil, Chile, Colombia, Cuba, Ecuador, Mexico, Peru, and Puerto Rico, where the majority of program activities entail the ongoing control of air pollution and the determination of its origin. Some countries, such as Bolivia, Peru, and Puerto Rico, have created cooperative programs with the support of other international programs such as Swisscontact and the U.S. Environmental Protection Agency (EPA).

228. In June 2005, the Meeting of Health and Environmental Ministers of the Americas was held. It was attended by then WHO Director General Dr. Lee Jong-wook, who gave the opening speech. During the meeting, the Declaration of Mar del Plata was issued, calling for regional cooperation in three major areas: the integrated management of water resources and solid residues; the safe handling of chemical substances, and children's environmental health, for which PAHO is responsible.

229. In the Dominican Republic, diseases associated with the poor quality and low coverage of water and sanitation services contribute enormously to infant mortality, which was estimated in 1997 and 2002 at 31 per 100,000 live births, according to the latest demographic survey, DHS 2002. In order to fulfill one of the goals of the seventh MDG, the Dominican Republic has implemented a strategy targeted at the populations of rural areas and urban fringe neighborhoods that lack adequate drinking water and sanitation services. The strategy has consisted of the monitoring and the national evaluation of the goal, institutional arrangements, the development of new technologies, and the strengthening of programs for health surveillance and interinstitutional coordination.

### **Comprehensive Program on Sustainable Development and Environmental Health of PAHO and the Caribbean Environmental Health Institute (CEHI)**

There is a long history of collaboration between the Caribbean Environmental Health Institute (CEHI) and PAHO, which provided technical assistance and technical cooperation to establish the Institute as part of the Caribbean Community and Common Market (CARICOM). These ties have been further strengthened with the Caribbean Cooperation in Health initiative, for which the CEHI acts as the agency in charge of environmental and health issues.

PAHO intends to strengthen the ties between the two agencies in order to respond more effectively and with greater synergy to the needs of the countries, and to facilitate a more solid common program for the countries of the Eastern Caribbean.

PAHO and CEHI have agreed to collaborate to create and launch a comprehensive environmental health program for the Caribbean area. The objective of the agreement is to strengthen the technical cooperation that PAHO and CEHI provide to the Caribbean countries and to promote joint action aimed at improving the use of resources and helping to improve health and environmental conditions in the countries.

The relationship is strengthened by the experience of the PAHO technical advisers within the CEHI, especially the Environmental Health Adviser (EHA), and it aims to create a program structured in close collaboration with the environmental health officials in the Caribbean ministries of health and with other stakeholders committed to sustainable development.

### **Household Environmental Pollution**

230. Household environmental pollution is related to smoking and to the use of fossil fuels and biomass as sources of energy for cooking and home heating, which continues to be common in the rural and peri-urban areas of some countries. In 2005, PAHO organized a series of five-day training workshops to begin to create regional capability with regard to control of household contamination and use of fossil fuels in dwellings.

### **Occupational Health**

231. To the eight countries that had systematically adopted surveillance systems in this field—Argentina, Brazil, Chile, Colombia, Jamaica, Mexico, Panama, Uruguay—have been added Ecuador and Venezuela, with new information systems for occupational accidents that are of special usefulness for the health sector. Brazil and Chile have also initiated the control and reporting of silicosis cases as part of their national surveillance systems. The participation of the WHO Collaborating Centers—the National Institute for Occupational Safety and Health (NIOSH) of the United States, the National Public Health Institute (INSP) of Chile, the Chilean Safety Association (ACHS), and FUNDACENTRO of Brazil—facilitates the attainment of these objectives.

232. The adoption of a “toolbox” to improve workplace environments in Central America continues to be extended to additional industrial sectors. To date, 160 companies have established health and safety committees thanks to a partnership between PAHO and FUNDACERSSO as well as financial support from the OAS and the Ministry of Labour of Canada.

#### **Peru attends to its unfinished agenda in environmental health**

Peru is taking steps to complete its unfinished agenda with regard to environmental health as part of an effort to protect human rights in the area of health and reduce health inequities in the country. To document the status of environmental health, Peru, with the assistance of PAHO, has used several indicators that reveal unequal access to drinking water and sanitation: the Lorenz curve, the Gini coefficient, the rate of exclusion, the inequality index, and the index of investment in health. A state-of-the-art geographic information system based on Google Earth has also been created in order to better visualize the territorial distribution of these inequities.

The use of these methods of analysis and communication has made it possible to analyze health status in greater depth and has played a decisive role in the inclusion of various programs and actions in the central government’s work plan. These include the Water for All program, which seeks to extend coverage of drinking water services to 97%, and the National Water and Sanitation Plan, which has already exceeded the goal of sanitation coverage of 77% by 2015. Since the MDGs set goals for sanitation and drinking water of 76% and 87% by 2015, respectively, Peru has already reached the goal for sanitation and will reach the goal for drinking water without difficulty. The country has also carried out construction of safe dwellings through several projects, and in some departments a large project has upgraded kitchens to reduce household environmental pollution and the incidence of acute respiratory infections in the Andean highlands.