Chapter 2
WHO's contributions to world health

The Global Strategy for Health for All by the Year 2000, founded on primary health care, provides the policy framework for worldwide health action.

This chapter gives an overview of WHO's contribution during the year 1995 to supporting the progress of Member States in the improvement of people's health. Each of the Organization's programmes consists of an aggregate of activities directed towards the attainment of specific objectives. Through close interaction amongst these programmes, the totality of their work is intended to contribute to global health improvement.

The activities of WHO's programmes are brought together in this chapter according to their effect on people's health at different stages of life - childhood, adolescence, adulthood and old age. In many cases, however, these effects cut across the age groups and concern the population as a whole. Because of the report's focus on infectious diseases, this chapter begins with highlights of WHO's activities in this particular field. It then moves to age-specific and other disease-specific programme activities and to those intended to induce positive changes in the determinants of health. It concludes with examples of WHO's work on health infrastructure, health policy and coordination.

The WHO Constitution (1946) sets the attainment by all peoples of the highest possible level of health as the ultimate objective of the Organization and its Member countries. With the decision of the Health Assembly (in 1977) to express this fundamental right of every human being to enjoy the highest standard of health as "Health for all", governments and WHO were committed to attaining, as a minimum, by all people in all countries, at least such a level of health that they are capable of working productively and of participating actively in the social life of the community in which they live; this is popularly known as "health for all by the year 2000". In 1978 the declaration of the International Conference on Primary Health Care in Alma-Ata identified primary health care based on the principles of social justice and equity, self-reliance and community development in the promotion of health as the way to achieve this target of health for all by the year 2000. Subsequently, at a conference held in Riga in 1988, this primary health care strategy was reaffirmed as being valid beyond the year 2000.

The Global Strategy for Health for All by the Year 2000, founded on primary health care and adopted by the Health Assembly in 1981, provides both the policy framework for the worldwide health action needed to achieve the social target of at least a minimum level of health for all people and the framework for WHO's programme to support it. Three general programmes of work were envisaged, to outline in greater detail, for the years 1984-1989, 1990-1995 and 1996-2001, both the global policy framework and the work of the WHO secretariat up to the year 2000. This chapter reviews WHO's contributions to global health during 1995, the final year of the eighth General Programme of Work covering the period 1990-1995.

Various programmes and their activities developed by the Organization within this eighth General Programme of Work correspond to the major functions of the Organization as defined by Article 2 of the WHO Constitution, namely to act as the directing and coordinating authority on international health work and to provide technical cooperation for health within Member States. All WHO's programmes and activities are guided by the principles of
WHO can now mobilize staff and place teams on site within 24 hours of notification of an outbreak.

Emerging issues in infectious disease control

While focusing on the eradication, elimination and/or control of major diseases of global concern, WHO's recently strengthened capacity to combat new and re-emerging infectious diseases will bolster national and international collaboration for their surveillance and control. WHO can now mobilize staff and place teams on site within 24 hours of notification of an outbreak, together with the supplies and equipment required to implement epidemic control measures. It will also mobilize and coordinate the activities of an international network of collaborating centres, bilateral donors, expert advisers and nongovernmental organizations as required.

In the 1995 outbreak of Ebola haemorrhagic fever in Zaire, for example, WHO staff arrived at the site of the epidemic within 24 hours of notification being received in Geneva, and at the same time that the diagnosis of Ebola fever was confirmed at the WHO collaborating centre on viral haemorrhagic fevers at the United States Centers for Disease Control and Prevention in Atlanta (see Box 4, page 16).

To prepare for such emergencies WHO uses innovative field epidemiology and public health laboratory training programmes to strengthen country surveillance and disease control, so that countries can develop the early warning systems necessary to detect emerging or re-emerging diseases. The Organization is developing a network of public health laboratories to strengthen regional and international collaboration in the detection and control of outbreaks. The Kenyan Medical Research Institute in Nairobi and the National Institute of Communicable Diseases in New Delhi, for example, are fully ready to serve as regional centres of expertise.

As part of its work in detecting and monitoring antimicrobial resistance worldwide, WHO has developed an information system to support the global surveillance of bacterial resistance to antimicrobial agents (WHONET). As
of the end of 1995, a total of 177 laboratories in 31 countries or areas were participating. Also, in order to tackle the emergence of strains of M. tuberculosis resistant to antimycobacterial agents, WHO together with the International Union against Tuberculosis and Lung Disease has set up the global project of Antituberculosis Drug Resistance Surveillance (Box 5, page 21).

Infectious diseases, all ages, according to mode of transmission

This section illustrates how WHO is working to improve the situation with respect to selected infectious diseases as described in Chapter 1. It mainly reflects activities of global significance, but many of WHO's activities take place within each region. A summary of these can be found on pages 92-103.

Areas that are particularly relevant to children (acute lower respiratory infections, measles, pertussis, meningococcal meningitis, poliomyelitis, tetanus) are discussed in the section on child health, below.

Infectious diseases transmitted from person to person

The epidemic of diphtheria originating in Europe in 1992 has now spread to the Western Pacific. When an outbreak of diphtheria occurred in Mongolia in late 1994, WHO launched a rapid and effective response with the support of Japan. Once all those under 15 had been immunized, national immunization days for diphtheria control took place in late 1995, targeting the vulnerable population aged between 16 and 40 years.

Tuberculosis control programmes are already overwhelmed by the growing prevalence of HIV infection. In response to this situation and to prevent the collapse of tuberculosis programmes in countries with a newly emergent HIV problem, WHO is mobilizing experts from both industrialized and low-income countries to develop a new research strategy.

WHO promotes the "directly observed treatment, short-course" (DOTS) strategy, already mentioned in Chapter 1, as the key to halting the current epidemic. Comprehensive technical advice on implementing the strategy is given in guidelines issued by WHO for national programmes. Training materials produced during 1995 included a package on managing tuberculosis at district level, four new modules for training national programme managers, guidelines on drug supply, and a handbook on case detection and treatment. During 1994-1995 WHO-supported workshops in 15 countries trained over 400 professionals in all regions.

WHO coordinates activities of the different parties involved in the development of improved immunization technology and easier vaccine delivery. Seed money spent under WHO auspices on tuberculosis vaccine development (totalling 56 million) stimulated other agencies and industry to donate about ten times this amount, and a whole range of different candidate vaccines are now becoming available.

Steady progress is being made towards the goal of eliminating leprosy as a public health problem (that is, achieving a prevalence of less than 1 case per 10,000 population) before the end of the century. In 1981 WHO recommended a "cocktail" of three drugs which effectively prevent the leprosy bacillus from becoming resistant to any one of the three. This multidrug therapy now seems certain to stop the disease in its tracks. It is effective, relatively cheap and acceptable to all patients and at the end of the treatment period the cure is complete.

The strategy at this stage of near-elimination is to concentrate on reaching patients in areas difficult of access and to promote community awareness and use case-finding strategies to detect everyone who remains untreated.

The genetic map of Mycobacterium leprae – the organism causing leprosy – is the most advanced one in WHO's parasite genome project. This project aims to achieve a better understanding of the biology of organisms causing
tropical diseases, with a view to developing new prevention and control strategies.

In February 1995 WHO announced the composition of the influenza vaccine for the 1995–1996 season, replacing two of the three components that had been included in the vaccine for the previous season.

The importance of the HIV/AIDS pandemic cannot be measured solely by the number of infected or sick individuals. In keeping with the United Nations International Year of Tolerance, the slogan for World AIDS Day 1995 was "Shared rights, shared responsibilities". WHO urged individuals, families, governments and the international community to ensure that AIDS-related rights are respected and AIDS-related responsibilities are fulfilled. WHO was involved in the setting up of a Joint United Nations Programme on HIV/AIDS (UNAIDS), which became operational on 1 January 1996.

Involvement of the private sector in HIV/AIDS activities was promoted through a joint WHO/ILo International seminar, bringing together representatives of government, industry and trade unions from over 20 countries. Training in condom promotion continued in most regions. A WHO study demonstrated the efficacy of the female condom as a protection against sexually transmitted diseases.

Studies were supported in the areas of household and community responses to HIV/AIDS, risk-taking among young people in developing countries, sexual negotiation, empowerment of women and the female condom; and the determinants of HIV/AIDS-related discrimination, stigmatization and denial.

A four-centre study was initiated on the efficacy of the antiretrovirals stavudine (AZT) and lamivudine (3TC) in preventing mother-to-child transmission of HIV. Studies on the treatment and prophylaxis of a number of opportunistic infections were also supported. Diagnostic algorithms for detection of HIV-1 group O viruses were evaluated through surveillance studies in central and West Africa. An efficacy study of a long-acting vaginal microbicide, COL-1492, was begun in Côte d'Ivoire and Thailand.

Vaccine development focused on the preparation of field-testing sites in developing countries and support to the WHO network for HIV isolation and characterization. A phase II immunogenicity trial was begun with support from Thailand.

Foodborne, waterborne and soilborne diseases

WHO has concluded an agreement with Swiss Disaster Relief to provide technical assistance in epidemic diarrhoea control and preparedness. Links have also been established with UNHCR, the Istituto Italiano Latinoamericano in Rome, EPICENTRE Groupe européen d'Expertise en Épidémiologie pratique in Paris, the United States Centers for Disease Control and Prevention in Atlanta, USAID and the National School of Public Health in Spain. The work also receives financial support from the Governments of Australia, Italy and Switzerland. Special collaboration has begun with the International Federation of Red Cross and Red Crescent Societies in the newly independent States of eastern Europe and central Asia (see also the section on child health, below).

Under the southern African initiative for control of epidemic diarrhoea, a team in Harare continued to coordinate activities aimed at improved preparedness and response to cholera and epidemic dysentery. Support was also given to five African countries in policy formulation, in developing a rapid surveillance system and in strengthening bacteriological laboratory services. Diarrhoea training units were established in Malawi and Mozambique. An intercountry workshop on cholera was held in Maputo for participants from Portuguese-speaking African countries. An intercountry briefing meeting on dysentery was held in English and French in Harare.

Surveillance and control strategies for cholera and dysentery were set up in refugee camps in the United Republic.
of Tanzania and in Zaire. Contingency plans were updated, clinical training courses organized and emergency supplies provided. Several West African countries reported outbreaks of cholera or dysentery caused by Shigella dysenteriae serotype 1. Technical assistance and emergency supplies were provided to six African countries. Intercountry workshops on cholera preparedness and control were organized in Ghana for English-speaking and in Guinea for French-speaking African countries. A coordination meeting on cholera emergency preparedness and control was organized in Egypt for Djibouti, Eritrea, Ethiopia, Kenya, Somalia and Sudan.

Particular efforts were made in the development of vaccines against cholera and dysentery but WHO does not recommend any vaccine so far available for use in the prevention and control of cholera during acute emergencies.

WHO reassessed the distribution and prevalence of schistosomiasis in the world and its social and economic impact. The Organization supports training, for example in Botswana and Senegal, with IDRC support. A project was initiated in the Lao People’s Democratic Republic to train provincial staff in schistosomiasis control methods. Trials of the combination of two drugs, albendazole against common intestinal helminths and praziquantel against schistosomiasis, demonstrated it to be safe and effective.

Dracunculiasis (guinea-worm disease) is on the verge of eradication. In 1986, the World Health Assembly set the goal of elimination; in 1989 it called for a strengthening of efforts; in 1991, it declared its commitment to the goal of eliminating dracunculiasis by the end of 1995, this being technically feasible given appropriate political, social and economic support.

WHO’s priorities are to achieve the interruption of transmission as quickly as technically feasible and to facilitate the work of the independent International Commission for the Certification of Dracunculiasis Eradication (created in 1995) by conducting the global certification process. The main objectives are to facilitate the search for remaining, unknown foci of dracunculiasis in countries considered to be at high risk but not known to be endemic; to verify whether low-risk countries are free of dracunculiasis and prepare for their certification as “dracunculiasis-free”; to prepare for a smooth transition to the certification phase, as currently endemic countries become free of dracunculiasis; and to secure funding for complete dracunculiasis eradication and the certification process, approximately $10 million in all (which should be completed three years after the last case of guinea-worm disease is reported anywhere in the world).

Guinea-worm endemic villages are often the most remote in Africa, and until recently many did not appear on available maps. They were therefore underserved by the public health system. To facilitate effective targeting of interventions for the eradication of the disease, UNICEF field-based staff undertook to map the location of all endemic villages. WHO staff were able to provide information regarding health facilities and epidemiological data and through this initiative, the WHO/UNICEF Joint Programme on Data Management and Mapping for Public Health was established in 1993. Using a geographical information system, data on guinea-worm disease are presented in the form of maps showing distribution in relation to water sources, health centres and schools. This information enables district-level coordinators and national decision-makers to effectively target activities, to monitor the situation and plan future operations. The system is now being established at national, regional and global levels for monitoring results of epidemiological surveillance for dracunculiasis and other diseases in the villages concerned.

In recent years food safety assurance has become increasingly important. To help public health officials deal with problems associated with several newly emerging foodborne pathogens, such as trematodes—which are acquired through the consumption of raw or inadequately processed freshwater fish,
**Box 12. The new trade environment - can health and commerce be complementary?**

The new trade agreements issuing from the Uruguay Round of multilateral negotiations are intended to further liberalize international trade and provide greater access of all parties to markets. Although these objectives may seem removed from WHO’s concerns, the organization strives to ensure that health is protected in several of the areas covered by the agreements. In turn, some of its products contribute to facilitating international trade.

For instance, WHO's quality standards for pharmaceutical, biological and food products are the basis of internationally agreed standards that the Agreement on Technical Barriers to Trade encourages governments to adopt as a basis for national regulations. Intended to protect health, they are also of use for trade purposes. The South American countries belonging to the Mercosur free market, for example, adopted WHO's requirements for good manufacturing practices for pharmaceutical products in order to harmonize regulations within their trade group, and a number of OECD countries decided to eliminate customs duties on pharmaceutical active ingredients bearing a WHO International Nonproprietary (generic) name. The recommendations and guidelines established by the Joint FAO/WHO Codex Alimentarius Commission are specifically cited in the Agreement on the Application of Sanitary and Phytosanitary Measures as a reference for national food safety regulations. With world food trade amounting to some $250 billion a year, there are strong economic reasons for countries to ensure that their food exports meet these norms.

WHO also guides health authorities on ways to tackle new situations produced by the agreements. For countries that decide to open their health sectors to foreign service suppliers under the General Agreement on Trade in Services, WHO offers information and advice on such aspects as the appropriate mix of public and private involvement. By maintaining and promoting the Model List of essential drugs — comprising off-patent pharmaceuticals and vaccines — it furnishes an increasingly valuable tool for developing countries in view of the Agreement on Trade-Related Aspects of Intellectual Property, which extends, for the first time, patent protection to pharmaceuticals.

Along with its efforts to improve health conditions of workers, including those in major exporting sectors in developing countries such as agriculture, mining or manufacturing, and its special attention to protection of environmental health, WHO provides support to meet the challenges — and to take advantage of the opportunities — of an environment of expanding trade.

With the creation of the World Trade Organization (see Box 12) and the entry into force of the Agreement on the Application of Sanitary and Phytosanitary Measures concerning the application of food safety, and animal and plant health regulations, the Codex now serves as the international reference for national requirements. To strengthen the scientific basis of Codex decision-making, WHO and FAO convened expert consultations on the use of risk analysis in establishing food standards and on guidelines for predicting dietary intake of pesticide residues.

**Insect-borne diseases**

Of the total number of malaria cases and deaths worldwide, 90% occur in Africa, principally among children, so that 1 million or so of them die each year from the disease alone.

Standard methods for assessing the therapeutic efficacy of antimalarial drugs are being simplified. An interregional system is being established for monitoring drug resistance in South-East Asia and the Western Pacific. WHO supports operational research, for instance on strategies to improve compliance with multidose antimalarial drug regimens and the use of artemisinin derivatives in South-East Asia and the countries of Indochina.

Other research is aimed at improving disease management, including simple and rapid diagnostic techniques. A dipstick (antigen capture) assay for detection of *Plasmodium falciparum* was evaluated in field trials and compared favourably with microscopy.

Some 150 senior programme managers and specialists, many from sub-Saharan Africa, attended international courses on malaria control, and 1 100 staff from 21 endemic countries were trained in disease management. More than 200 district medical officers were trained in the management of severe malaria in eight African countries and Bangladesh.

Material on basic statistics and epidemiology was produced for use in a three-month training course in Ethiopia, due to start in 1996 with financial
Support from the Netherlands. Courses were held for 48 health centre and vector control staff from epidemic-prone areas of Turkey, with support from the European Commission. Similar training took place in India and Nepal with funding from the Overseas Development Administration of the United Kingdom (ODA). By March 1996 some 1,160 persons will have been trained.

Training of community health workers in the diagnosis and treatment of malaria commenced with support from Italy in Eritrea and Ethiopia and support from the Netherlands and ODA in Ghana, Uganda and Zambia. Training of pharmacists and other vendors in the correct use of antimalarial drugs started in three African countries with support from ODA.

WHO assisted in control measures in refugee camps in Burundi, Rwanda, United Republic of Tanzania and Zaire and mobilized funds to combat epidemics in the north of the Islamic Republic of Iran. Training was provided on disease management and selective vector control in Turkey.

The "altruistic" transmission-blocking Pf25 vaccine (so called because it is designed to prevent malaria spread to others, not to prevent malaria in the recipient of the vaccine) entered Phase I clinical trials, and worked on some 15-20 other promising vaccine candidates was further advanced. Trials on the most promising candidates are due to be completed by 2002.

The rapid spread of dengue fever and dengue haemorrhagic fever is causing great concern to public health specialists and WHO. Until 1970, only nine countries had faced epidemics of dengue haemorrhagic fever; now at least 38 countries have experienced them.

There is no specific treatment and effective vaccines will not be available for some years. Currently, the only effective way to prevent the disease is to eliminate the mosquito vectors or drastically reduce their numbers.

The WHO global control programme recommends the following broad guidelines for dengue-endemic countries: selective, integrated vector control, with community and intersectoral participation; active surveillance based on a strong health information system; emergency preparedness; capacity building and training; and research on vector control.

Dengue fever and dengue haemorrhagic fever are notifiable in Indonesia, Myanmar and Thailand, where national control programmes have been developed with WHO support. India also has a national prevention and control strategy.

WHO participated in the implementation of the vaccination campaign that controlled the epidemic of hand, foot and mouth disease 1995, the largest outbreak recorded since 1950.

The vaccine for Japanese encephalitis was used in endemic areas in India, Sri Lanka and Thailand, with WHO providing technical support and diagnostic reagents and assisting countries in the procurement of vaccines. During 1993-1995 a declining trend in morbidity and mortality in Sri Lanka and Thailand was seen as a result of vaccination and vector control activities.

With the recognition of lymphatic filariasis (elephantiasis) as the second leading cause of permanent, long-term disability and as one of only six potentially eradicable infectious diseases, efforts are being made to apply new control tools and elimination strategies. Multicentre trials of single-dose diethylcarbamazine, single-dose ivermectin and combinations of both drugs show that all these regimens are effective and safe, with the two-drug combination producing the best results. Diethylcarbamazine proved effective for filariasis control in China.

A vast array of potential new techniques for malaria diagnosis and drug and vaccine development is opening up.
In view of the sharp increase in co-infections of AIDS with visceral leishmaniasis (kala-azar) in certain parts of the world such as southern Europe, and of the special difficulties of diagnosis and treatment encountered, WHO has recently set up a surveillance network of 14 institutions worldwide, endorsed guidelines for diagnosis and established a central registry to collect, analyse and periodically redisseminate updated epidemiological information.

Prompt action was taken to curb the spread and limit mortality from the severe epidemics of visceral leishmaniasis that have raged in southern Sudan during the last five years. The high mortality rate fell dramatically following the introduction of a decentralized serodiagnosis and treatment system. Drugs and supplies were procured and technical assistance provided with support from UNICEF and Médecins sans Frontières (Netherlands). Periodic technical input was provided to Bangladesh for step-by-step implementation of an emergency plan of action to control the disease in the five endemic districts most affected by it.

The use of insecticide-impregnated bednets is being investigated as an alternative to vector control in foci of cutaneous leishmaniasis (Islamic Republic of Iran, Syrian Arab Republic) and visceral leishmaniasis (Bangladesh, Nepal, Sudan). Preliminary results are highly promising. WHO is also testing the use of long-lasting insecticidal paints to control sandflies in the home in India and north-eastern Brazil.

Research in Tunisia has demonstrated that deep ploughing of burrows of the rodent vector Psammomys obesus and destruction of the plants which are its obligatory food can sharply reduce the incidence of the disease. Phase III large-scale protection trials began in the Islamic Republic of Iran of a vaccine based on killed Leishmania major. A workshop cosponsored by WHO, ODA and the London School of Hygiene and Tropical Medicine led to the preparation of a technical manual on control of visceral leishmaniasis, to be distributed in 1996.

Guidelines for control of African trypanosomiasis (sleeping sickness) were prepared for Angola and Zaire, and plans of action developed for several countries. A revolving fund was established to ensure the supply of drugs to national programmes. Studies on the pharmacokinetics of two classical drugs against trypanosomiasis, pentamidine and melarsoprol, suggest that shorter treatment schedules and lower dosages may be just as effective as those currently used. Clinical trials are planned to investigate these results.

Onchocerciasis is the world's second leading infectious cause of blindness. The WHO, World Bank, UNDP and FAO joint Onchocerciasis Control Programme was launched in 1974. Today some 1.5 million people who were once infected no longer have any trace of the disease. About 10 million children born in the operational area since the programme began are now free of any risk of contracting the disease. To complement vector control activities, the drug ivermectin is distributed free of charge to more than 2.2 million people in the operational area.

The control activities are opening up an estimated 25 million hectares of fertile riverine land for resettlement and cultivation with an additional 17 million people annually.

The Programme is now nearing the end of its fourth 6-year funding cycle and is scheduled to come to an end by the year 2002. It will have cost an estimated total of $550 million, or less than $1 per year for each protected person.

The new African Programme for Onchocerciasis Control will continue to draw on the support of several United Nations agencies together with the World Bank; in addition, it will collaborate closely with the international nongovernmental development organizations' coordination group for ivermectin distribution, which has produced a procedural manual jointly with WHO. The recently established partnership committee of NGOs and WHO also fosters active collaboration in the prevention of blindness and in rehabilitation.

Some 1.5 million people who were once infected no longer have any trace of onchocerciasis.
The campaign to eliminate Chagas disease from the Southern Cone of the Americas (Argentina, Brazil, Bolivia, Chile, Paraguay, Uruguay) is making good progress. Reports indicate decreases in house infestation rates of 75% in 13 out of 15 endemic provinces in Argentina, 89% of municipalities affected in Brazil, 90% throughout Chile, and 98% in all endemic areas of Uruguay. A total of $138 million has been allocated for control measures by the six countries since 1992.

Activities directed to specific age groups

Child health

Since 1980, child and infant mortality have been greatly reduced, from more than 180 per 1,000 live births respectively in 1960 to about 80 and 60 respectively in 1995. Immunization against six vaccine-preventable diseases—diphtheria, pertussis, tetanus, measles, tuberculosis and poliomyelitis—has saved millions of children annually from death and disability. WHO and UNICEF, working jointly, have harnessed the commitment of individual countries and the international community to fight diseases and foster development.

WHO/UNICEF strategies for attaining the health-related goals of the 1990 World Summit for Children, including high-impact interventions, are aimed at eradication of poliomyelitis, diphtheria, and meningitis; and iron deficiency disorders; elimination of measles, neonatal tetanus and vitamin A deficiency and its consequences, including blindness; control of diarrhoeal diseases and acute respiratory infections; and reduction in the prevalence of underweight children.

By 1995, the goal of 80% immunization coverage had been achieved for all childhood vaccines (except tetanus toxoid) globally. 73 developing countries are now reporting above 85% coverage but there are still 23 countries—19 of them in Africa—reporting coverage below 50% for all six vaccines in 1994. Comprehensive plans of action have been developed in six African

Box 13. Progress towards polio eradication

Since WHO resolved in 1988 to eradicate poliomyelitis from the world, cases have fallen by about 85%. Eradication means completely freeing all countries of naturally occurring poliomyelitis—a step further than elimination, which means getting rid of the clinical disease.

The first polio vaccine, administered by injection, was developed in 1955 by Dr Jonas Salk. The second, administered orally, was developed by Dr Albert Sabin, and introduced in 1961. Worldwide, about 5,800 cases were reported for 1995. There are now 143 countries completely free of the disease, and an estimated 82% of all eligible children in the world have received the recommended three doses of oral polio vaccine. Almost half the world’s children under 5 years of age—about 300 million of them—received the vaccine in national immunization days in 1995.

All countries of the western hemisphere have been polio-free since 1994. The disease is disappearing from Europe, North Africa, Southern and East Africa, the Middle East and the Arabian Peninsula, and the Western Pacific. Progress reports from all WHO regions are given below.

Africa. Thirteen countries immunize under 50% of infants against polio, but 27 countries will have conducted full national immunization days by early 1997. WHO has launched a "Kick polio out of Africa" campaign with the support of prominent political figures.

The Americas. Polio has been eradicated for over four years. The last case was in Peru in 1991.

Eastern Mediterranean. Just over 700 cases were reported for 1995. On World Health Day in April, nearly 63 million children in 18 contiguous countries in the Middle East, the Caucasus and the central Asian Republics were immunized in an operation called MEVACAR. The operation was jointly planned with the European region.

Europe. An outbreak of 140 cases occurred in the Russian Federation in 1995. Otherwise polio cases have remained static in Europe since 1988, with barely 200 cases reported for 1995. The Russian Federation is scheduled to take part in second MEVACAR operation in the spring of 1996.

South-East Asia. Reported cases have fallen more than eight-fold since 1988 to under 3,300 in 1995. India immunized 82 million children on 9 December 1995; five other countries conducted their first national immunization days.

Western Pacific. Just over 200 cases were reported in 1995. Cambodia conducted its first national immunization day in 1995, reaching 99% of children. Globally, 67 countries remain endemic for poliomyelitis, including those with the greatest difficulties in achieving satisfactory immunization coverage because of remote populations, wars, civil unrest or economic chaos. About 90,000 cases a year are estimated still to occur worldwide, three-quarters of them in the Indian subcontinent.

Poli-endoemic countries meet 80% of the costs of eradication themselves, but the remaining 20%—equal to $100 million a year before the year 2000—depends on external donors. As many as 10 billion doses will be needed to ensure eradication.

Maintaining the political will and global partnerships that are essential to eradication is to be achieved in priority for the coalition of WHO, UNICEF, Rotary International and other agencies and organizations committed to the campaign.

Apart from lives saved and disabilities prevented by eradication, the global financial savings are expected to total at least $1.5 billion a year.
countries, but major efforts are urgently needed to cover all the other low-performance countries.

Since the global polio eradication goal was established in 1988, reported cases of the disease have declined by about 85% (Box 13).

For the fourth consecutive year, global measles immunization coverage remained at about 80% in 1994, ranging from 54% in Africa to 88% in the Western Pacific. Since immunization began, the numbers of measles cases and deaths have dropped by about 70% and 83% respectively. However, about 1 million deaths and 43 million cases still occur annually.

Measles is targeted for elimination in the Americas by the year 2000 and "catch-up" immunization campaigns for all children aged 9 months to 14 years have been organized in all Latin American and English-speaking Caribbean countries. In other regions, many countries are pursuing innovative immunization strategies. Some, particularly in the Western Pacific, have included the administration of measles vaccine in the activities of their national immunization days.

Substantial progress has been made globally in the elimination of neonatal tetanus, particularly in the Americas and in South-East Asia. More than 720,000 neonatal deaths are now being prevented annually through routine immunization of women with tetanus toxoid, particularly in high-risk areas, and through improved hygienic birth practices. The number of countries with less than one neonatal tetanus death per 1,000 live births increased from 76 in 1980 to 122 in 1995. Effective surveillance has been promoted.

The World Health Assembly decided in 1990 on the elimination of iodine deficiency disorders by the year 2000. In 1993 the World Health Assembly reaffirmed this goal and provided strategic guidance, including emphasis on salt iodization. WHO, in close collaboration with UNICEF and the International Council for the Control of Iodine Deficiency Disorders, has been providing technical guidance and programme support to Member States and the international community.

There is encouraging evidence that the prevalence of goitre and the incidence of cretinism, both major iodine deficiency disorders, are falling, particularly in areas where iodized salt programmes are established. Of 118 countries where iodine deficiency disorders are a significant public health problem, 83 had national salt-iodization programmes in 1995. In over 30 African countries the population consuming iodized salt has increased from less than 5% in 1992 to more than 50% in 1995; the proportion of salt that is iodized is over 70% in Latin America and about 50% in South-East Asia.

Every year more than 8 million children are killed by diarrhoea, pneumonia, measles, malaria or malnutrition—and often by some combination of them. Three of every four children brought for health care suffer from at least one of these conditions. Child health programmes therefore need to address the sick child as a whole rather than single diseases. To this end, WHO and UNICEF have jointly developed an approach for the integrated management of the sick child, which gives due attention to both prevention and treatment of childhood disease (Box 14).

The WHO/UNICEF course Management of childhood illness enables health workers in outpatient clinics and health centres to manage infant and early childhood illnesses effectively in an integrated fashion. The course is based on treatment guidelines developed by WHO and covering the most common potentially fatal conditions. WHO teaching materials on diarrhoeal disease are now being used in 147 medical schools in 35 countries. As regards acute respiratory infections, the focus is on 88 countries where the 1990 infant mortality rate was 40 or more per 1,000 live births, and where a case management strategy can have the greatest impact in reducing mortality.

It is essential to teach families to respond rapidly to signs of illness. A major emphasis in national programmes is on communication between health
workers and families. In 1995, radio broadcasts for disseminating messages among families were developed for Bangladesh and the United Republic of Tanzania.

A course on breast-feeding counseling, jointly developed by WHO and UNICEF, was given to referral-level health workers in seven countries. The Subcommittee on Nutrition of the United Nations Administrative Committee on Coordination estimated that the prevalence of underweight children aged less than 5 years had fallen from 34% in 1985 to 31% in 1995 for the developing countries as a whole. About 4 out of 10 children aged under 5 in the least developed countries were underweight in 1995, compared with about 3 out of 10 in other developing countries; in South Asia however one in two children were classified as underweight. In sub-Saharan Africa there were estimated to be about 6.7 million more underweight children in 1995 than in 1990. Food availability in the area is not expected to increase significantly in the next 25 years.

WHO provides normative information on monitoring, prevention and management of major crippling forms of malnutrition, with emphasis on protein-energy malnutrition, micronutrient malnutrition, such as iodine deficiency disorders, vitamin A deficiency, and nutritional anaemia. The Organization also gives support to countries in dealing with infant and young child nutrition in emergency situations.

Research is essential to reducing mortality and morbidity in children. WHO-supported research found that zinc supplementation in young children with diarrhoea produces clinically important reductions in both the duration and the severity of diarrhoea. A multicentre study on the efficacy and safety of linking vitamin A supplementation to immunization began in three countries. WHO is supporting field trials to evaluate the efficacy against acute diarrhoea of a rotavirus vaccine in Venezuela, and the efficacy of a Haemophilus influenzae type b conjugate vaccine for preventing pneumonia and meningitis in the Gambia.

**Box 14. Integrated management of childhood illnesses**

Over 70% of deaths among children under age 5 are due to diarrhoea, pneumonia, measles, malaria or malnutrition, alone or in combination. Three in every four children brought for care to health facilities suffer from one or more of these conditions.

A single diagnosis for a sick child is often inappropriate because signs and symptoms of these diseases overlap. The correct clinical approach is to treat not single diseases but the sick child as a whole. Until recently, however, training programmes were organized to address only one or perhaps two of these conditions at a time, leading to duplication and incomplete assessment and treatment.

WHO and UNICEF have developed an approach to the integrated management of childhood illness. WHO has led a coordinated effort to develop and issue guidelines for integrated management. Four wall charts, also available in booklet form, guide health workers through the process of assessing the sick child, classifying and treating the child’s problems and counselling the mother about home treatment and when to return to the health facility. These guidelines were validated in studies in Ethiopia, the Gambia and Kenya.

An 11-day training course has now been developed to teach health workers at first-level health facilities how to use the guidelines. Practical sessions in clinics and hospitals every morning allow course participants to practice what they are learning under the supervision of an expert clinician. The course provides substantial clinical experience in managing children who present with general danger signs, cough or difficult breathing, acute watery diarrhoea, dysentery and persistent diarrhoea, fever, rashes, malnutrition, anaemia and ear problems. Special training is provided in the management of sick young infants (age 1 week up to 2 months). The training covers preventive interventions related to feeding and breast-feeding, the provision of immunizations and vitamin A supplementation.

The Integrated management of childhood illness course was piloted in Ethiopia in 1994. After revision, the course was again tested in the United Republic of Tanzania in 1995, with the participation of several categories of health workers. All course participants were able to learn and apply the process for the integrated management of the sick child.

An Adaptation guide provides step-by-step procedures for the adaptation process needed in all countries to ensure that treatment and counselling recommendations are appropriate and consistent with local conditions and policies. The first training for 25 WHO staff, consultants and representatives of countries involved in early implementation was organized in Ethiopia in November 1995. The course was followed by a seminar on planning for the introduction of the finalized course in countries and a workshop on the use of the Adaptation guide. WHO has started to assist a few "early use" countries in adapting the guidelines and training course, and in planning the introduction and close monitoring of the use of these materials.

Other components of the approach include: a training package on the management of drug supplies at first-level health facilities; developed by WHO in collaboration with the USAID-funded BASICS project; to ensure that the essential medicines needed for integrated management are available in first-level facilities; guidelines on referral-level care of childhood illness; methods and tools to ensure that health workers are followed up after training and their skills reinforced; and a planning guide on interventions for improving family management of childhood illness.

Integrated management of childhood illness is a cost-effective intervention likely to have great impact in reducing the global burden of disease in developing countries.
Communication with programme managers and health workers caring for children is maintained through Child health dialogue, a newsletter dealing with prevention and treatment of the main childhood illnesses.

**Health of school-age children and adolescents**

The world’s population of school-age children and adolescents has grown enormously in recent decades. It now numbers over 1 billion, of whom almost 700 million are children of primary school age (6-11 years).

Such social changes as the gradual disappearance of the extended family, rapid urbanization and the extension of telecommunications across cultural and geographical boundaries, put the health and development of many of these young people at risk. The hazards include infectious diseases in the unimmunized, unprotected sexual relations, the consequences of induced abortion in dangerous conditions, sexually transmitted diseases including HIV/AIDS, and tobacco and illicit drug use.

A joint WHO/UNFPA/UNICEF study group was set up to facilitate the development of a common programme for action with countries. A review of the health of young people in developing countries entitled A picture of health was produced jointly with UNICEF. WHO issued a guide to the provision of reproductive health services for young people and a prototype for a regional training course in adolescent health was prepared in the Western Pacific. A series of studies on advertising and operational linkage of reproductive health services was launched in South-East Asia with the participation of young people. Joint WHO/UNFPA meetings on multisectoral planning for adolescent health and teaching of counselling skills on adolescent sexuality and reproductive health, for both French- and Portuguese-speaking African countries, were followed by field projects. Health and youth sector plans were prepared in the Americas, and activities to promote the health of adolescent girls were begun in the Eastern Mediterranean.

Since the use of volatile solvent inhalants is increasingly common in developed and developing countries among younger and marginalized people, phase II of the WHO project on street children—of whom there are perhaps 100 million worldwide—has been launched in cities around the world, and piloted by street children organizations in over 30 countries.

By acquiring health-related knowledge, values, skills and practices, children and youth are better able to pursue a healthy life and to work in adulthood as agents of change for the health of their communities and nations. Recent research has also confirmed strong links between health, school attendance and educational attainment. In this light, efforts to improve school performance which ignore health are ill-conceived, just as are efforts to improve health which ignore education. WHO therefore established an Expert Committee on Comprehensive School Health Education and Promotion to lay the operational foundation for WHO’s Global School Health Initiative and provide a roadmap for action into the 21st century. The Committee is supported by international agencies reflecting WHO's highly interdisciplinary approach.

**HIV/AIDS and other sexually transmitted diseases**. Of the 6,000 new HIV infections every day, more than half are estimated to occur among adolescents. Together with UNICEF and the Commonwealth Youth Programme, WHO produced a guide on strategies to prevent AIDS and other sexually transmitted diseases among out-of-school youth.

**Worms**. About 40% of the world’s school-age children (400 million) are infested with intestinal worms. Schistosomiasis alone affects 88 million children under 15 years of age. Such infestations impair growth and development, cause chronic disability and limit school attendance. A standardized protocol for the control of conditions caused by intestinal parasites in school-age children was consolidated and reviewed in five countries. Protocols adapted to local conditions are now available.
Tobacco and drugs. While per capita consumption of tobacco is slowly falling in industrialized countries, it is rising in developing countries. In some Latin American and Caribbean cities more than half of all young people smoke.

Each year tobacco is responsible for the death of 3 million people around the world. Even allowing for the short-term income that it generates, tobacco is estimated to cost the world over $200 billion per year. If this money became available, it would be enough to double the current health budget of all the developing countries.

WHO focused World No-Tobacco Day 1995 on the economic aspects of tobacco, with the slogan "Tobacco costs more than you think", intended to make all those committed to reducing the threat to future world health from rising tobacco use aware of the power of economics and also aware of the need to get economic policies and health policies moving in the same direction.

Diffusion of the quarterly Tobacco alert has increased and, like other promotional materials, it is now available on Internet. Work in this field with the United Nations and affiliated agencies is also bearing fruit. For example, the World Bank no longer grants loans for tobacco-linked projects; and ICAO adopted a resolution calling for a ban on smoking on all international flights by July 1995.

WHO has continued to develop a system for global epidemiological monitoring and surveillance of substance abuse and related health risk assessment, and is supporting countries in implementing this approach. A study of mortality in injecting drug users was completed. Major primary prevention initiatives were launched in southern Africa, the Caribbean, central and eastern Europe and South-East Asia.

Research is underway on the health consequences of cannabis use, the efficacy of drug treatment, and the role of drug substitution approaches. A report is available on cocaine use and its health consequences in 19 countries. Training materials are being prepared on the management of drug-related programmes for health professionals. Innovative approaches to community-based drug treatment in Asia have been evaluated with a view to their application in other regions. The WHO Expert Committee on Drug Dependence evaluated eight psychoactive substances and recommended appropriate levels of international control for seven of them.

Children need the opportunity to learn the behaviour, skills and knowledge necessary for good health. These include communication and other interpersonal skills, problem-solving and decision-making, and coping with stress, anxiety and other emotions. To this end, WHO, in collaboration with UNICEF, is supporting the introduction of life skills education programmes in a number of schools worldwide.

Health of adults and the elderly

Almost 15 million adults and elderly died in 1995 from heart disease, stroke, or other forms of circulatory disease. About 5 million others died from infectious diseases. Another 6 million were killed by cancer, and over 3 million by external causes such as accidents and violence. In broad terms, these are the main groupings of causes of death among adults and the elderly.

Whether diseases are infectious or noncommunicable, most of them can be prevented, at least to some extent. In relation to noncommunicable diseases, WHO promotes community-based prevention as the strategy to reduce risk factors and morbidity, and increase life expectancy. However, some diseases formerly regarded as noncommunicable have an infectious element.

WHO's INTERHEALTH research project has shown that the situation regarding noncommunicable diseases in developing countries is similar to that in the industrialized world 30 years ago. Community-based prevention is therefore the strategy that WHO promotes to reduce risk factors, increase life expectancy and reduce morbidity.

Cardiovascular diseases are the leading cause of morbidity and premature death in the industrialized countries and it is now conclusively proven that
The key to cervical cancer control is health education, early detection and screening, linked to adequate therapy.

The occurrence of those diseases is related to diet. WHO continues to coordinate four major cardiovascular disease research projects: the MONICA Project; the WHO/International Society and Federation of Cardiology study on the pathobiology of atherosclerosis in youth; evaluation of new methods for patient education in hypertension, with the World Hypertension League; and the CARDIAC study.

WHO supports epidemiological surveys in several Member States and a project is under way in collaboration with the United States Centers for Disease Control and Prevention to forecast worldwide frequency of diabetes up to the year 2050, taking into account anticipated demographic changes.

In support of the development of national programmes for the control of major hereditary diseases and congenital malformations, WHO issued recommendations on the management of neurofibromatosis, cystic fibrosis and thrombophilia; an Asian/Pacific working group on the control of haemoglobinopathies was established; and computerized databases on thalassaemia and congenital malformations were initiated.

Genetic approaches to noncommunicable disease prevention were furthered through an international pilot study on familial hypercholesterolaemia. WHO monitors international human genome research, and guidelines were issued on ethical issues in medical genetics and the provision of genetic counselling services.

INTERHEALTH has revealed unfavourable nutrition trends globally, with most countries experiencing either high or increasing availability of dietary fat and declining availability of vegetable protein and total carbohydrates, particularly starch.

Following the International Conference on Nutrition convened in 1992 by WHO and FAO, WHO has defined indicators for monitoring progress in countries towards the goals of the conference. WHO's strategy is two-fold: to encourage countries to reduce malnutrition and promote good nutrition; and to provide normative guiding information on scientific issues relating to the prevention, management and monitoring of malnutrition.

WHO, UNICEF and FAO give technical and financial support to countries to develop and implement their strategies, and WHO mobilizes supplementary resources from bilateral aid agencies.

WHO focuses on diet-related noncommunicable diseases such as cancer and heart disease in addition to the areas that it emphasizes in relation to infant and child nutrition. In collaboration with other international agencies, it implements a strategy for dealing effectively with nutritional emergencies in large populations.

Forty-seven of WHO's Member countries in five regions have adopted education programmes aimed at preventing communicable diseases related to lifestyle and diet.

Cancer is a growing health problem in developing countries, where some 3.5 million of the global total of over 6 million cancer deaths occur. It is becoming increasingly clear that an infectious agent contributes to many cases.

The key to cervical cancer control is health education, early detection and screening, linked to adequate therapy. Recognizing that cervical cancer control is feasible, even in developing countries, WHO has pioneered pragmatic, realistic approaches for early detection by visual inspection, for affordable radiotherapy and for provision of pain and symptom relief in incurable cases.

The International Agency for Research on Cancer (IARC) coordinates and conducts epidemiological and laboratory research aimed at developing scientific strategies for cancer prevention. It adds to skills and information at country level through its programme of education, training and publications.

The results of evaluation of the carcinogenic risk to humans posed by a variety of exposures are published in the IARC Monographs series. One volume appearing in 1995 provides conclusive evidence of the role of human papilloma virus, mentioned above, as a cause of
cervical cancer. Other IARC programmes assess the efficacy of various methods of screening for precancerous and cancerous lesions of the cervix, and assess potential vaccines against human papilloma virus.

Evidence is mounting that infection with the bacterium *Helicobacter pylori* may also lead to stomach cancer. IARC is evaluating strategies to eradicate the bacterium as a means of prevention (see Chapter 1, pages 59–62).

During the International Conference on Population and Development, held in Cairo in September 1994, it was recognized, thanks to WHO, that reproductive health is central to health in general, and thus to socioeconomic development. The burden of reproductive ill-health falls overwhelmingly on women, in terms of unwanted pregnancy, unsafe abortion, reproductive tract infections and cancers, and complications of pregnancy and childbirth.

WHO's activities focus on advocacy for a more integrated approach that addresses people's reproductive health needs throughout life and reaches a wider audience — women, young people, service providers, policy-makers and community groups. WHO has set up a new reproductive health programme that brings into a more coherent framework programmes dealing with different aspects of the subject, to ensure better coordination of research and technical support activities. The new programme will draw up a comprehensive strategy, define norms and standards, and develop technical tools for addressing reproductive health concerns in countries.

Psychological problems such as depression and generalized anxiety that seriously affect the lives of millions of people worldwide are often not treated or even recognized. These and other mental health problems represent at least 10% of the total burden of disease. Those affected are more disabled in everyday life than persons with common chronic physical conditions such as arthritis, back pain and diabetes, and the numbers of people affected and the impact on quality of life make such disorders a major public health problem and a great burden on individuals, their families and their communities. WHO therefore supports the incorporation of research and appropriate action into public health programmes and strategies in countries, as well as training directed to that end.

The Organization completed a review of mental health legislation analysing 55 jurisdictions in all six of its regions, on the basis of which it produced a guideline document on approaches to updating legislation or introducing new laws and regulations.

Approximately 45% of the world's population make up the global workforce. This group sustains the economic and material basis of society which is thus crucially dependent on its working capacity. Hence, occupational health and the well-being of working people are not only prerequisites for productivity but are of the utmost importance for overall socioeconomic and sustainable development.

The workplace is often a hazardous environment. Occupational health and safety hazards are common in many economic sectors and affect large numbers of workers. Some 120 million accidental injuries with 200,000 fatalities resulting from work-related hazards, and up to 157 million new cases of occupational diseases and other illnesses caused by various exposures at work occur each year in the world.

The structure of economies is rapidly changing with the advent of new technology, new divisions of work and new trends in the social environment. In response to these changes and in order to meet emerging challenges, the global network of WHO collaborating centres for occupational health, comprising 52 national institutions in 37 countries (both developing and industrialized), was established.

On the basis of a situation analysis using available indicators, WHO has drawn up a global strategy which highlights the need for broad-based action in view of the occupational health situation in the world, the major impact of work on health, and the continuous transformations taking place in working
life. Against this background, it presents principles of modern occupational health and identifies the international and national action needed for global development of occupational health.

The number of years that people now live and the quality of life that they enjoy most often depend on health conditions dating from very early in their life. Substance abuse (such as smoking, alcohol or drug use), poor living environments, inadequate nutrition and reproductive ill-health, are all major factors contributing to the poor health status of people as they age, wherever they live in the world, and their latter years are often characterized by disability, chronic ill-health, poverty, loneliness and alienation.

In collaboration with 15 centres in 14 countries, WHO has also developed a measure of quality of life (WHQOL) which will complement established methods of assessing health status in terms of disease with means that use positive measurements of health.

Trachoma, although it begins in childhood, has its main impact on adults. It is a major preventable cause of blindness in developing countries. WHO produced a guide to fostering community support for trachoma control – a key requirement for ensuring effective antibiotic treatment and improving personal and environmental hygiene – in collaboration with the Edna McConnell Clark Foundation. WHO is closely monitoring the possible application of a new antibiotic effective against trachoma, which could be administered in a few doses per year at low cost.

A standardized proforma for assessing hearing impairment and its causes has been produced by WHO. Inappropriate use of ototoxic drugs has been identified as a possible preventable cause of hearing impairment. The development of simple ear care as part of primary health care was promoted in various ways including the organization of a joint international symposium with collaborating institutions in the United Kingdom and an African regional workshop in Nairobi.

As part of its efforts to promote oral health, WHO supports standard database planning, standard prevention of common conditions, development of affordable treatment systems and production of appropriate personnel, and promotes oral disease prevention. In that connection, the international milk fluoridation programme has expanded considerably.

The WHO community-based rehabilitation strategy is the best means of providing services and equalizing opportunities for persons with disability as part of primary health care, backed by an adequate referral system. Because specialized staff are lacking in many countries, the Organization works with countries to improve the rehabilitation skills of general practitioners, nurses and other primary health care workers. In cooperation with Swedish educators and health professionals, WHO has drawn up recommendations on training programme managers in community-based rehabilitation.

As rehabilitation is concerned not only with improving functional skills but also with restoring dignity, it is essential to involve the community, making the social environment of the disabled more responsive to their human rights. Account must be taken of people with special needs, such as refugees, slum dwellers, nomads and indigenous populations. A seminar for French-speaking African countries on a multisectoral approach to rehabilitation was held in Abidjan with support from ILO and UNESCO.

Guides were produced on strengthening disability prevention and rehabilitation in basic nursing education and within primary health care services, for the use of district health and rehabilitation managers.

The Organization provides worldwide leadership in the field of aging and health, a dominant social issue for the year 2000 and beyond. WHO's approach is based on a life course perspective, the promotion of healthy aging, the importance of cultural settings for health status, recognition of gender differences in
health and factors affecting health, and ethical considerations. Research includes such topics as physical activity, osteoporosis, incontinence, and uses of modern technology for improving quality of life in older age. A major focus for WHO is on healthy aging in women, given estimates that the number of women over the age of 65 will increase from 188 million in 1990 to 326 million in 2015, the majority of whom will live in developing countries.

The third meeting of the WHO Global Commission on Women's Health focused on the health conditions that women face in later life, which to date have not been adequately addressed, the conditions responsible for determining and accelerating the health consequences of aging throughout women's life span and the strategies that will help older women enjoy good health and an improved quality of life.

A peer review process examining work done over the last eight years and involving experts from around the world helped to establish research priorities on healthy aging, with special emphasis on the situation in developing countries. Collaboration with academic institutions is now being established.

Environment and lifestyles

Safe water and basic sanitation are major determinants of health. The growth of the human population and its increasing exploitation of limited natural resources, and the pollution of air, water and land are major threats. Deforestation, desertification, depletion of the ozone layer and climatic change all have health implications of a global nature, as does rapid urbanization.

As water supply and sanitation are more likely to be sustainable when managed at community level, WHO is cooperating with the UNDP, World Bank water and sanitation programme and with UNICEF to develop participatory approaches in this area—which can also be effective in stimulating changes in hygiene behaviour and improvements in sanitation.

At the end of 1990 the WHO/UNICEF Joint Water Supply and Sanitation Monitoring Programme estimated that out of a total population of the world's developing countries of 4.1 billion people, 1.6 billion were without access to an adequate and safe water supply and a little over 2.8 billion were without access to appropriate means of excreta disposal. The Child Summit has set goals of closing the gap by 25% for water supply and 10% for sanitation for 1995; i.e. reducing the number of people without water services from 1.6 billion to 1.2 billion, and reducing the number of people without sanitation from around 2.8 billion to a little more than 2.5 billion.

In global average terms, the target for water supply has been met, with the most significant progress being made in Asia and the Pacific. Unfortunately, the sanitation target has not been met, and in some cases the population without access to appropriate sanitation has risen—for example in Africa—with population increase a major contributing factor.

As coordinator of the Water Supply and Sanitation Collaborative Council's working group on promotion of sanitation, WHO supports several initiatives to raise awareness of the need for improved sanitation, and promotes the partnership roles of international agencies, donors, ministries, NGOs and academic institutions in this respect.

The Healthy Cities movement has gained ground rapidly and regional networks are now operational or soon will be in all WHO regions. Direct links have been established between cities in Latin America and Europe, and among French-speaking cities in three continents.

The launching of the network of Healthy Cities has resulted in specific environmental improvements, for instance in reducing urban air pollution. The thrust of the air pollution monitoring network forming part of the Global Environmental Monitoring System has shifted from simple assessment of the problem to identification and control of emission sources. Capacity for manage-
ment of air quality has been assessed in 20 cities to identify immediate needs for technical cooperation, particularly in introducing comprehensive management strategies and measures.

WHO is concerned by the increasingly serious problem of health care wastes. Case studies have demonstrated a high risk of infection when such wastes are disposed of together with municipal garbage without specific controls. A comprehensive strategy on medical waste disposal from urban areas, covering hospitals as well as the private sector, has been established in collaboration with UNDP, the World Bank and the United Nations Centre for Human Settlements.

WHO is developing an action plan in the areas of health promotion and health education, leading into the 21st century. Infrastructure is being built up around existing economic or other arrangements and the regional structure of WHO. Programme development in southern Africa is progressing satisfactorily, with South Africa taking the lead, and in eastern and central Europe with Hungary as the hub. A health promotion and education alliance is developing between the more populated countries, including China, India, Indonesia, the Russian Federation and the United States. Two new collaborating centres were established in Australia (Sydney) and Canada (Toronto), bringing the total to 16.

WHO pays particular attention to school health. In September 1995, its Expert Committee on Comprehensive School Health Education and Promotion provided leadership in directing the global school health initiative, and for health into the next millennium.

A network of health-promoting schools is being built up in several WHO regions. Also, guidelines on helminth eradication have been prepared, as well as a school health bibliography.

### Health care, organization and management

#### Health infrastructure

WHO works with countries and the world health community to focus action on achieving a number of goals and targets. Success in this area lies not simply in specifically focused actions, but also in knowing which issues are important, and why they are, and then planning and managing the strategies, policies and resources to tackle them. Infrastructure can be described as the capacity to implement and sustain specific and focused action while also using that action to achieve broader ends.

High on the agenda of many countries facing rapid economic, political and social change in the 1990s is the question of health system reform. In any reform process, a wide range of options exists, relating mainly to financial arrangements, institutional and organizational structures and service delivery.

A framework for research to support improved urban health services is being set up. Recognizing the growing disparities in health service performance and health status in both industrialized and developing countries and the implications for policy-makers and managers, WHO and the Swedish International Development Authority launched an initiative to improve monitoring and global awareness of such trends.

Based on studies on the relevance of user charges, WHO is preparing a position paper that outlines requirements and implications of financing mechanisms for improving health care delivery at the community level.

In the context of civil service reform in response to economic stringency, WHO held a consultation with the Danish International Development Agency to review health care functions and structures prior to strengthening ministries of health. A manual is being produced on health ministry reorganization for a group of countries in the Americas with similar problems.

To promote quality assurance in hospitals and health centres, guidelines were issued on the use of standards and
measurement of performance. Because of the waste of resources and decreased quality of care resulting from poor management of health care equipment, WHO produces guidelines on managing physical resources. The Organisation helped create an African federation for technology in health care with its secretariat in Cape Town (South Africa). A subregional project on equipment maintenance is under way in Central America.

A network of centres and activities collaborating with WHO in all regions serves as a source of health research expertise; and a health system research network linking North, Central and South American countries was set up. Regional task forces for health systems research were established in the Eastern Mediterranean and in South-East Asia. In Europe, the focus is on countries of eastern Europe, where health systems research is especially weak.

WHO launched an initiative for reorienting medical education and public health training towards the 21st century, and jointly organized a meeting in Cape Town (South Africa) with the World Federation for Medical Education.

WHO supports training in health care financing and health insurance and in quality assurance. Up to now some 1000 health workers from the public health sector as well as NGO facilitators have attended courses for trainers.

Bolivia, Mexico, and Zimbabwe took practical measures to establish an optimally balanced and productive workforce, setting up management information systems on nursing/midwifery personnel in primary health care, with support from WHO and the Kellogg Foundation.

As part of an effort to improve the cost-effectiveness of nursing and midwifery services, WHO and its network of nursing/midwifery collaborating centres have been determining the extent to which countries make assessments of their needs for nursing personnel, and have so far received more about 140 replies to the survey.

Networking to disseminate experiences, information and expertise is facilitated through issue of the Bridge newsletter; the Directory of health services and systems research centres, of which a third edition appeared in 1995; the Directory of training programmes in health services research; the Current Concerns series dealing with economics and financing issues; and manuals and reports on specific topics. A newsletter, Changing medical education and medical practice, is distributed twice a year. It aims to describe initiatives worldwide to make medical education and practice more responsive to people’s health needs.

Table 5. Distribution of WHO fellowships, 1994–1995

<table>
<thead>
<tr>
<th>Subject of study (with examples)</th>
<th>Africa</th>
<th>Americas</th>
<th>Eastern Mediterranean</th>
<th>Europe</th>
<th>South-East Asia</th>
<th>Western Pacific</th>
<th>Total</th>
<th>% by subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate studies (medicine, pharmacy)</td>
<td>79</td>
<td>0</td>
<td>10</td>
<td>22</td>
<td>62</td>
<td>44</td>
<td>217</td>
<td>4.3</td>
</tr>
<tr>
<td>Postgraduate specialties (paediatrics, surgery)</td>
<td>43</td>
<td>49</td>
<td>217</td>
<td>5</td>
<td>402</td>
<td>151</td>
<td>857</td>
<td>17.2</td>
</tr>
<tr>
<td>Postbasic/graduate nursing/midwifery education (community nursing, clinical specialties)</td>
<td>26</td>
<td>42</td>
<td>35</td>
<td>3</td>
<td>52</td>
<td>104</td>
<td>262</td>
<td>5.2</td>
</tr>
<tr>
<td>Public health sciences (epidemiology, health economics)</td>
<td>151</td>
<td>215</td>
<td>475</td>
<td>39</td>
<td>735</td>
<td>379</td>
<td>1994</td>
<td>39.8</td>
</tr>
<tr>
<td>Diagnostic and laboratory sciences (radiology, laboratory techniques and services)</td>
<td>33</td>
<td>29</td>
<td>206</td>
<td>4</td>
<td>231</td>
<td>102</td>
<td>595</td>
<td>11.8</td>
</tr>
<tr>
<td>Education, communication and research (health education, medical librarianship)</td>
<td>70</td>
<td>19</td>
<td>173</td>
<td>4</td>
<td>231</td>
<td>152</td>
<td>644</td>
<td>12.8</td>
</tr>
<tr>
<td>Environment sciences (water, sanitation, housing)</td>
<td>22</td>
<td>8</td>
<td>147</td>
<td>3</td>
<td>189</td>
<td>76</td>
<td>445</td>
<td>8.8</td>
</tr>
<tr>
<td>Total</td>
<td>424</td>
<td>362</td>
<td>1263</td>
<td>80</td>
<td>1982</td>
<td>1803</td>
<td>5029</td>
<td>100</td>
</tr>
</tbody>
</table>

% by region: 8.4 | 7.2 | 25.1 | 1.6 | 37.6 | 20 | 100
Box 15. Renewing the health-for-all strategy

Health is a basic human right and a worldwide social goal. It is essential to the satisfaction of basic human needs and the quality of life, and is to be attained by all people. Concerned over the unsatisfactory health and related socioeconomic situation and the widening gap in the levels of health both among and within countries, the Member States of WHO decided in 1977 on an intermediate goal of achieving, by the year 2000, a level of health for all peoples in all countries which would permit them to work productively and participate actively in the social life of their community. This was referred to as Health for All by the Year 2000. The International Conference on Primary Health Care, held in Alma-Ata in 1978, endorsed the goal of Health for All by the Year 2000 and declared primary health care to be the key to achieving a minimum level of health below which no country or individuals within countries would fall, the minimum level of health being interpreted by each country in the light of its socioeconomic and health situation. In 1981, a global strategy was adopted to achieve this goal.

The Member States of WHO also decided that progress towards this goal was to be measured against a set of targets to be achieved by all countries. For example, the target for life expectancy at birth in the year 2000 was set at over 60 years; the infant mortality target was set at below 50 per 1,000 live births. A review of progress in 1995 showed that the number of countries with a life expectancy at birth of over 60 years had increased from at least 98 (with a total population of 2.7 billion) in 1980 to at least 120 (with a total population of 4.9 billion) in 1995. The number of countries meeting the infant mortality target had risen from at least 77 (with a total population of 1.3 billion) in 1980 to at least 103 (with a total population of 3.2 billion) in 1995.

Overall, in the last 15 years, there have been substantial improvements in global health status. Disparities between the developed and the developing world have been reduced, but those between the developing world and the least developed countries as a group have widened. Gaps also widened between population groups within countries. In recent years, health gains have slowed down and even been reversed in some countries.

In 1994, recognizing the change that had occurred in the global context since the adoption of the strategy, WHO's Member States restated the validity of health for all as a global vision and identified the need to formulate alternative plans for attaining further targets for the year 2000 and beyond.

WHO's vision of global health is based on equity and solidarity calls for the building of new partnerships and the adoption of an innovative and pragmatic agenda for international health extending beyond countries or regions.

The Organization has already begun a consultation process on renewing the strategy. Renewed does not mean extending the time-frame, but visualizing health in the early 21st century, and setting up intermediate targets for achieving health for all and renewing efforts to meet the challenges, by exploiting opportunities and overcoming threats and obstacles. It is envisaged that the World Health Assembly in May 1998 will renew the commitment of Member States to the universal goal of health for all and to any adjustments or new directions that may be warranted in the strategy for achieving the intermediate objectives and targets for the year 2005, 2010 or as appropriate.

Rapid changes in the personal, social, economic, environmental and other determinants that influence health make it necessary for health care providers constantly to reassess their knowledge and reorient their methods. A highly effective means for this purpose is exchange of experience among countries with different health systems. WHO, through its fellowships programme, provides opportunities for carefully selected health professionals to obtain the necessary skills to direct, guide and support health development in their countries, within the framework of careful human resources planning and clearly defined priorities (Table 5).

Health policy

This section is concerned with the ways in which WHO shapes global health policy through its directing and coordinating functions. Since 1948, WHO has provided leadership for global health programmes and initiatives. However, the Organization has recently faced critical challenges as a result of worldwide political, economic, social and health changes. To ensure that WHO maintains its leadership in the health sector, its governing bodies have reviewed in depth the extent to which the Organization could make its contribution even more effective.

A new aspirational health policy is being worked out in consultation with Member States and other partners in health to give broad guidance for health development in the 21st century (Box 15). The pursuit of development in the economic, educational, or health spheres in isolation may obscure the purpose of development as a whole — to improve the quality of life of all people. WHO's perspective is that social and economic gains can be pursued simultaneously and that they are mutually beneficial and in turn contribute to alleviating poverty. WHO therefore focuses on protecting and promoting the health and well-being of the most disadvantaged groups. At the World Summit for Social Devel-
opment, held in Copenhagen in March 1995, WHO advocated strengthening partnerships for health development and mobilizing the political commitment to view it in the context of economic and social development.

The net result of continuing poverty is growing inequality between countries and between groups and areas within countries. For example, by 1994 there were 47 least developed countries in contrast to 27 in 1971. To this end WHO directs action and resources in a country-focused rather than a programme-oriented approach, emphasizing the links between poverty and ill-health through its specific focus on intensified cooperation with countries and people most in need. This initiative has 28 participating countries. Through it, for example, WHO has cooperated in developing health policy, strengthening health systems in countries such as Guinea and Zambia and in putting sustainable health financing schemes in place. The Organization gives technical support for upgrading country capability in health economics, enabling countries to make pragmatic changes easing the transition from centrally planned to market economies.

In the context of its advocacy and technical advisory role, WHO gave technical support to ensure the inclusion of health considerations in economic development projects in Burkina Faso, Guatemala, Mali, Mongolia, Rwanda, Togo and Uganda. A joint UNESCO/WHO conference held in Geneva in February 1995 was attended by representatives of ministries of finance, education and health from 15 French-speaking African countries. One of its conclusions was that proper management of drug procurement and distribution would substantially mitigate the effects of the CFA franc devaluation on health and education.

WHO works towards a more focused and increased flow of external funds and their more effective use by countries. The Organization brings together countries engaged in health reform and principal extrabudgetary donors, and issues advocacy articles on poverty and health. WHO also works to develop coherent thinking and consensus among donors on aid policy for the most needy countries, for example, using a country typology based on capacity to lead the development process.

The Organization is working with multilateral bodies such as UNDP, the World Bank and regional development banks, the European Union and bilateral donors – leading to joint projects, donor commitment and the mobilization of over $700 million for health in 1994-1995.

A substantive study of WHO's external funding, sponsored by the governments' aid agencies of Australia, Norway and the United Kingdom, was carried out with a view to making further improvements in the means by which WHO influences the mobilization of funds and coordinates and organizes the ways in which they are spent.

The ability to treat many diseases is affected by factors influencing the availability of essential drugs, such as logistics, resource availability and sheer demand. Health sector reforms often place emphasis on the private sector but this does not necessarily enhance access. Government responsibility is critical and many countries urgently require new and enforceable legislation and regulations on drugs. The international environment resulting from GATT/WTO agreements may however improve drug availability in some countries. Nevertheless, inappropriate drug use in developed and developing countries remains a cause for concern. WHO therefore supports countries, including those in the newly independent States, to ensure that essential drugs are available (Map 8).

WHO's quality standards for pharmaceutical products are the kind of internationally agreed standard that the Agreement on Technical Barriers to Trade encourages governments to adopt as a basis for national regulations. Four South American countries, for example, adopted WHO's requirements for good manufacturing practices for pharmaceutical...
tical products in order to harmonize regulations within their trade group (Mercosur), and a number of OECD countries decided to eliminate customs duties on pharmaceutical ingredients bearing a WHO international non-proprietary (generic) name (Box 12, page 68).

The health and well-being of women influences also their children and families, their communities and society as a whole. Shaping the development of policies aimed at investing in and improving women’s health is a priority for WHO. Ill-health and malnutrition in one generation of women can be followed by a cycle of ill-health in the next generation. Women’s status and health also affect household incomes and national productivity.

The Fourth World Conference on Women in Beijing in September 1995 was the culmination of a series of major international conferences dealing with women’s health and development. The Platform for Action set up at Beijing addresses all the many determinants of women’s health such as the environment, violence and education.

In the sphere of health and the environment WHO provides a forum for addressing global concerns, as for example when it brought together some 600 scientists, researchers, public health specialists and policy-makers from 59 countries in the fist of three international conferences concerned with the effects of the Chernobyl disaster.

The International Programme on Chemical Safety is another example—a joint activity at international level between WHO, UNEP and ILO to provide internationally evaluated scientific information on the basis of which countries can develop their own policies and measures to protect human health and the environment.

The issues confronting the world health community guide WHO’s research policy, which is geared to catalysing the search for knowledge and technology to meet known and emerg-
 WHO's Contributions to World Health

Box 16. The Advisory Committee on Health Research – a catalyst for scientific cooperation

Research promotion and development in the health field is one of the constitutional functions of WHO, which promotes and initiates research activity at national and international levels. The global Advisory Committee on Health Research (ACHR) and the regional ACHR's were established to guide the work of WHO in the area of medical and health research.

With the adoption in 1981 of the Global Strategy of Health for all by the Year 2000, the scope of WHO's research functions and activity was broadened to address research issues in policy, organization and management aspects of health care delivery at primary level. Studies are required on the multisectoral determinants of health such as poverty, illiteracy, unemployment and environmental degradation with a view to developing mechanisms for improving health and coverage, effectiveness and efficiency in health services delivery. The ACHR recognized the increasingly complex challenges posed and decided to mobilize and exploit all available knowledge and skills in the medical, behavioural, technological and environmental sciences so as to find the appropriate scientific answers to health development problems. WHO began expanding its relationship with scientific institutions beyond the existing national and international programme-related networks, and now relies on tens of thousands of scientists worldwide to provide research and training facilities.

To complement the leadership role of WHO, ACHR is becoming a catalyst, seeking constructive cooperation at the global level with governmental and nongovernmental organizations, identifying the problems and suggesting solutions based on scientific evidence. In this way resources and creativity are being pooled to improve health, health services and health development.

The ACHR reaches out on the one side to governments and on the other to the scientific community, research institutes, universities and all those concerned with scientific endeavour, in order to make an impact on the dynamics of global health development. To this end, WHO and all members of the global and regional ACHR's are also being connected by means of modified telecommunications technologies so as to harmonize and rapidly disseminate scientific advice as it becomes available.

One of WHO's principal responsibilities under its Constitution is to monitor health status and trends nationally, regionally and globally and to make this health information available to all. In 1995, WHO launched the first World Health Report, intended to reach the lay public as well as policy makers and health professionals. The aim of this new publication is to annually update information on the global health situation, and draw attention to priority health problems.

The third monitoring of progress in the implementation of strategies for health for all by the year 2000 was carried out by Member States, and reports were submitted to WHO's governing bodies in 1995.
Box 17. Dear WHO, can you help us?

Every month WHO receives over 7 000 requests for copies of its manuals, guidelines, recommendations, statistical data or official advice on any number of public health problems.

Several factors help explain this demand. WHO publications are always issued in response to a need, whether expressed by a Member State or detected during a technical programme's work. In most cases only WHO can fill this need. The Organization's status as the global health authority makes it uniquely well suited to issue international guidelines and norms in areas ranging from permissible levels of contaminants in food to quality standards for pharmaceutical products.

Even more important is WHO's commitment to the health needs of poor people in poor places—“orphan” needs that are rarely a priority for commercial publishers. Though the Organization's international guidelines and standards serve the world, most of its practical handbooks and “do-it-yourself” manuals respond to health problems in developing countries, where the need is always greatest and where WHO publications are welcomed as a link to the best expertise. In the many countries that cannot afford to subscribe to the host of specialty research journals, WHO publications do the research for them. State-of-the-art consensus reports, such as those published in the Technical Report Series, allow countries to skip a costly and time-consuming step in the process of acquiring reliable advice.

WHO publications also enable developing countries to communicate their experiences to the world at large. Experts from the developing world are always well represented among the pages of WHO publications. During 1995, for example, the World health forum published 116 contributions from 47 countries, of which 31 were in the developing world.

When gathering and issuing information, WHO puts the developing world first. One of the Organization's strengths is its ability to work out low-tech solutions to high-tech problems. Lists of essential drugs, manuals explaining the use of oral rehydration salts or murdering therapy for leprosy, and how-to guides on topics ranging from the construction of sanitary facilities to the interpretation of radiographs and ultrasound scans are just some examples.

When issuing advice on health problems in developing countries, WHO draws on the very best expertise, edits to achieve the precision and clarity needed by people who are reading in a foreign language, and designs text and illustrations to make comprehension easier. As a result, information produced by WHO for developing countries is often relevant to industrialized countries as well.

http://www.who.ch

WHO also serves the information needs of the many professionals who seek instant electronic access to the latest health data and statistics. The WHO home page on the World Wide Web makes it easy for Internet users to retrieve up-to-date health-related data on a range of topics. Users can find descriptions of the major programmes co-ordinated by WHO, global and country-specific health statistics, country profiles, WHO events attracting media attention, data on individual diseases, and alerts to outbreaks. Also instantly accessible are information about important WHO publications, the contents of newsletters and press communications, and reference to the more than 60 000 items in the WHO library database. The full texts of frequently-referenced publications are likewise available. Users can access the contents of the Weekly epidemiological record, which serves as a “bulletin board” for disease news, or browse The World Health Organisation's summary.

The WHO home page enables the user to retrieve information about the regional offices, country activities, WHO collaborating centres, and depository libraries where complete collections of WHO publications are maintained. For more specialized information within the United Nations family, links are provided to the home pages of the WHO Regional Office for Europe, the Pan American Health Organization, the International Agency for Research on Cancer, and other UN agencies.

WHO supports Member States in the application of the International Health Regulations and disseminates epidemiological information through its automatic telecommunications reply services and by issuing the Weekly epidemiological record and International travel and health. As an example, WHO provided data charting the course of the outbreaks of Ebola haemorrhagic fever in Zaire in 1995.

Publication of volumes of the tenth revision of the International Statistical Classification of Diseases and Related Health Problems continued, and it has already appeared in more than 30 languages. The English-language version of the Classification is now available on diskette. The International Classification of Impairments, Disabilities, and Handicaps is under revision.
A new strategy for strengthening national health information systems has been initiated and a series of methodologies and products for use by countries in assessing and enhancing various components of their health information systems have been produced, for example, a catalogue of health indicators recommended for programme management, and an updated version of training modules in health statistics.

Activities have focused on Africa and newly independent States. Eleven countries and four regional meetings were supported in 1995.

The scientific community can now also access a special bulletin board through Internet. In addition to gathering and providing epidemiological information to countries and to the world health community, WHO supports countries in enhancing their own health information systems. It ensures that the information to which it has access and which it generates on health status, health services, technologies, research, legislation, methodologies, resource flows and social issues and on WHO programmes themselves, is made accessible to policy-makers, scientists, doctors, managers and lay people, and to the many national and international organizations working in the health field.

Such information is available in WHO publications as well as on the Internet World Wide Web with the WHO "home page" indicating the many areas of information that can be accessed (see Box 17). In 1995, with more than 350,000 "hits" per month, WHO ranked among the top 5% of all World Wide Web servers for the Internet.

Computing, networking and communications, often grouped under the headings of "informatics" and "teleinformatics", have tremendous potential and are already being used to support health care in both industrialized and developing countries. Libraries on CD-ROM, for instance, have reduced the problem of meeting the hard currency costs of medical literature acquisition for developing countries. Even procurement of the necessary hardware and software and training of staff need not be expensive, as

---

**Box 18. TeleMedicine**

TeleMedicine is the practice of medical care using interactive audio, visual and data communications; this includes medical care delivery, consultation, diagnosis and treatment, as well as education and the transfer of medical data. TeleMedicine may be a partial solution to the problem of competing demands for equitable access to good-quality health care services and for reduced expenditure in health care. Such technology is most needed by the poorest countries.

The term "TeleMedicine" is used to refer generically to growing disciplines such as TeleRadiology, TelePathology, TeleCardiology, TelePsychiatry and TeleEducation. The practice of TeleMedicine can be exemplified by three scenarios. It could enable a general practitioner in a rural setting to seek a second or an expert opinion from colleagues in a national specialty hospital. It could enable a remotely located nurse to obtain the technical guidance of a physician. It could enable a physician to look after (examine, monitor or interview) a remotely located patient — for example at home, in another city or country.

TeleMedicine supports any of these scenarios with the transmission of the relevant diagnostic data (an X-ray, a heart beat, a pathological section, an ultrasound or a video film) and the receipt of the corresponding diagnosis and recommended follow-up, with real-time dialogue between the two communicating parties as if they were face to face.

What is required to get it to work? Given agreement between a provider and a recipient of TeleMedicine services, these are then supported on a TeleMedicine infrastructure backed up by a telecommunications infrastructure. The TeleMedicine infrastructure includes hardware and software ranging from a simple facsimile to scan, compress and transmit an X-ray image, to sophisticated facilities for remote control of surgical equipment accompanied by interactive video. The telecommunications infrastructure requires a communications line (ranging from a simple telephone line to a broadband bandwidth to carry video images and sound) and the means to send and receive digital data.

In practice, TeleMedicine should be viewed as a part of the broader topic of TeledHealth, which includes the use of telecommunications technology and services for surveillance, emergency preparedness and education.

WHO plays a dual role in TeleMedicine. It cooperates with countries in studies on the feasibility and cost-effectiveness of TeledMedicine services and actively participates in scientific forums to identify the needs and problems associated with the wider use of TeleMedicine within individual countries and between countries. Recently in South Africa, WHO helped establish a test link for TeleMedicine between Johannesburg General Hospital and the rural hospital in Tshwane, some 500 km away; X-ray images of patients taken in Tshwane were digitized and transmitted to Johannesburg where they were read and interpreted by expert radiologists who also, as necessary, engaged in video-conferencing to discuss certain cases. WHO also supports Kuwait in the comparative evaluation of the logistics, capital outlay and costs of TeleMedicine services offered by nine European and United States university hospitals.

Before long, international cooperation in TeleMedicine will become second only to international cooperation in the surveillance and control of infectious diseases.
demonstrated by a cost-effective low earth-orbit satellite project in Zambia for electronic mail (e-mail) and access to international data bases (Internet). Access to expert knowledge to assist medical decision-making is another key area of computer support. Telemedicine allows field workers to obtain advice directly from an expert and to use remotely and centrally placed diagnostic equipment (see Box 18). Epidemiological surveillance is probably the field where the greatest use is made of computers.

WHO has collaborated with many countries including, over the past year, Kuwait, Nigeria, South Africa and the Syrian Arab Republic, in introducing or strengthening informatics and telematics to support health care. The network of WHO collaborating centres on health informatics, even though relatively small, contributes significantly to technology evaluation, training and transfer of experience. WHO also contributes to several technical groups and consultations aimed at setting international standards for the use of informatics and telematics in health care within a country and between countries.

**Coordination**

WHO seeks active collaboration with other intergovernmental and nongovernmental organizations active in the health field. Every opportunity is taken to reinforce their contributions to health and to emphasize the importance of health as a component of national development.

Within the framework of the *United Nations system*, a special initiative for African economic recovery and development has been launched. One of its components deals with health sector reform and disease control, particularly of malaria, cholera, diarrhoea, schistosomiasis, dengue fever and filariasis through improved water supply and sanitation.

The Economic and Social Council continued to debate and endorse action on many issues having a bearing on health, including progress in implementing the global AIDS strategy; control of malaria, cholera and other diarrhoeal diseases; health hazards of smoking; migration; and humanitarian action. The Director-General of WHO drew the Council's attention to the Onchocerciasis Control Programme as an example of a health initiative that is bringing substantial social, political and economic returns.

The United Nations regional commissions have been strengthening collaboration with other United Nations bodies, including WHO, for the benefit of Member countries. For its part, WHO has given the Economic and Social Commission for Asia and the Pacific technical guidance on disease eradication in Asia and the Pacific.

In October 1995, the Administrative Committee on Coordination (of which WHO is a member) agreed on a United Nations system-wide Special Initiative on Africa, to start early in 1996. In order to be effective, health programmes must focus on action at country level, and above all support the policies and programmes decided on by African countries themselves. The *World Bank* will play a leading role in resource mobilization for the initiative. Reform of basic health care systems, with particular attention to malaria control, is among the priorities for resource mobilization, as well as water, sanitation and food security.

Action plans have been prepared for implementing the recommendations of the *Organization of African Unity* on control of HIV/AIDS. The fifth conference of African Ministers of Health, held in Cairo with WHO support, gave priority to solving health problems of women, including HIV/AIDS, malaria and tuberculosis, within the context of family health. Agreement was reached with the Common Market for Eastern and Southern Africa to extend essential drugs coverage to malaria, HIV/AIDS and tuberculosis.

has provided assistance in the drafting of a health protocol which will become an integral part of the treaty establishing the African Economic Community.

The health sector policy of the African Development Bank includes provision for prevention and control of major diseases, immunization of children, vector control, and safe water supply and sanitation. WHO is cooperating with the Asian Development Bank on tuberculosis control in Indonesia and the Philippines. The Islamic Development Bank made available $90,000 for providing meningococcal meningitis vaccine to Burkina Faso, Mali and Niger under WHO auspices.

WHO continued to work closely with nongovernmental organizations that are in official relations with it. Through a combination of hands-on support, fund-raising and advocacy, they contributed to WHO’s efforts in such fields as control of leprosy and tuberculosis, immunization, prevention of blindness and deafness, and water supply and sanitation. In January 1995 the WHO Executive Board admitted four new organizations into official relations, bringing the total number to 181. This decision was based, among other criteria, on the performance of joint activities. For example, the Inter-Africa Committee on Traditional Practices affecting the Health of Women and Children contributed to the production of a WHO information kit on female genital mutilation; the International Association of Biologists Technicians to training courses in developing countries on detection of sexually transmitted diseases, tuberculosis and opportunistic diseases associated with AIDS and to courses on the maintenance of laboratory equipment; the International Medical Parliamentarians Organization to exchange of information on health policies; and the International Women’s Health Coalition to promotion of women’s perspectives in reproductive health research.

An emergency task force was established on 1 January 1995 to give a sharper focus to WHO’s emergency relief programme, ensure optimal use of resources, and strengthen cooperation with other concerned organizations. The Organization, as a member of the Interagency Standing Committee, has been increasingly active in United Nations emergency and humanitarian activities, helping to prepare 13 consolidated interagency humanitarian assistance appeals. The Organization assisted in emergency relief efforts in 55 Member States, conducted emergency preparedness activities in 10 and was involved in safety promotion and injury control in 11.

WHO’s support for emergency preparedness focused on the establishment of country and regional programmes; the development of technical and normative guidelines; and activities contributing to the International Decade for Natural Disaster Reduction.

WHO contributed to United Nations activities concerned with landmines and the impact of war on children, and set up demonstration projects as part of its safe community initiative.

WHO provided support to Angola in formulating health policy and organizing health services for demobilized soldiers and their families; to Burundi in coordinating emergency health assistance and organizing measures for control of tuberculosis, sexually transmitted diseases including HIV infection, fever of unknown origin, malaria, cholera and dysentery; to Liberia in forming water and sanitation teams to combat cholera and providing urgently needed supplies for safe blood transfusion; and to Cape Verde and Mali in controlling malaria.

Activities in Rwanda focused on the re-establishment of the national epidemiological surveillance system, HIV/AIDS prevention and control through safe blood transfusion, control of water quality and restoring hospital and mental health services. In addition, a mapping software was developed to allow the detection of trouble spots and monitoring of trends in communicable diseases.

In Sierra Leone WHO helped to set up an early warning system on epidemics; supported a workshop on diarrhoeal diseases and acute respiratory infections;
and provided supplies including laboratory reagents to control an outbreak of cholera.

Emergency activities in the United Republic of Tanzania initially centered on health assistance to the 700,000 refugees from Rwanda and Burundi. WHO is currently helping to meet the needs of local residents whose health status is now inferior to that of the refugees.

In the Kivu camps in Zaire which shelter 1.2 million refugees from Rwanda and Burundi, activities are being redirected to target assistance to the local population. WHO also supported laboratory services in Goma and control of the acute phase of the epidemic of Ebola hemorrhagic fever in Kikwit, Zaire. More than $3 million in cash and in kind were mobilized for the emergency.

WHO assisted Iraq in procuring lifesaving drugs and medical supplies that could not be imported owing to shortages of foreign exchange. Some $5.6 million was used to support the nascent Palestinian health authority in late 1994 and 1995. WHO took part with the health authorities, UNICEF and NGOs in a mass immunization campaign in Afghanistan, which has so far protected 2 million children and over 800,000 women.

WHO collaborated with the United Nations Disaster Assessment and Coordination (UNDAC) in assessing needs following an earthquake in Indonesia and severe flooding in the Democratic People's Republic of Korea and the Lao People's Democratic Republic -- where assistance was also given in mobilizing international support to control a cholera outbreak. The Organization continued to monitor the health situation following floods in Bangladesh, China and India.

WHO-coordinated international health assistance to the countries of former Yugoslavia focused on supply of medical equipment; operation of public health programmes; health and nutrition monitoring; rehabilitation; and reconstruction of health facilities.

In the Russian Federation, emergency support to Chechnya included coordination of international relief; tuberculosis control; diagnosis and control of waterborne diseases including cholera; immunization; and procurement of supplies for general hospitals.

Following outbreaks of cholera in Albania and Ukraine, WHO provided medical equipment, laboratory materials and chlorinators, and gave courses in diagnosis and clinical management of the disease, and control of water quality.

Public information and promotional work was carried out in connection with major events during 1995, including: in March, the World Summit for Social Development in Copenhagen; on 7 April, World Health Day on the theme of polio eradication; on 31 May, World No-Tobacco Day on the theme of the economics of tobacco; in September, the World Conference on Women in Beijing; and in October, the 50th anniversary of the United Nations.

In 1995, WHO produced 94 press releases, 8 feature stories, 15 fact sheets, press kits and other material for the media. Eleven press conferences were organized on various issues such as the impact of the CFA franc devaluation on health, poliomyelitis eradication, tuberculosis and testing of nuclear weapons. Hundreds of telephone requests for interviews or information were handled during the year, with a peak during the Ebola fever outbreak. Arrangements were made to receive almost 10,000 visitors from 60 countries.

WHO issues a wide range of publications, from guidelines to reports on the latest biomedical research around the world (see Box 17). A highlight of the year was the launching of The World Health Report 1995, which became a bestseller and won extensive coverage in the media.

WHO translates a considerable volume of material to meet priority health advocacy needs in various language and cultural settings. Texts are produced in WHO's six official languages -- Arabic, Chinese, English, French, Russian and Spanish. The potential of new technologies in referencing, terminology and translation is kept under constant
review. During 1995 new agreements were prepared for the translation and publication in non-official languages of 150 WHO titles and, as a result of earlier agreements, 95 published translations were received from around the world.

Sales of publications through the worldwide network of WHO agents exceeded $8 million in the biennium 1994-1995. These sales help to support unpaid distribution mainly to institutions such as libraries, educational establishments, hospitals, research institutes, documentation centres and professional associations where WHO books are available to all users. Arrangements with NGOs, training institutions and aid agencies also help to target distribution to poorer countries. The reach of the 152 WHO depositary libraries was extended by a growing network of WHO public reference points – some 900 libraries where comprehensive collections of WHO publications are available for public consultation.

The WHO library acts as a central purchasing agent for libraries worldwide. An arrangement for the international exchange of health literature provides for the free transfer of books and journals among 214 libraries in 68 countries, while a WHO revolving fund allows developing countries to order material through WHO and to pay for it in their own currency.

Bibliographic data in the WHO LIS database are available to all Member States in different forms: print (WHO/DOC), online, diskette, CD-ROM and Internet. WHO technical documents are also stored on optical disks from which CD-ROMs can be produced on request.

The financial position of the Organization was significantly weakened by the shortfall in payment contributions for 1994-1995 together with unfavourable exchange rate fluctuations, necessitating close monitoring of available funds. A major redesign was undertaken of the computerised administrative and financial information system for regional offices, and a much improved system is to be introduced during 1996-1997.

In response to this difficult financial situation, available resources are being prudently used for general administration, to ensure that services such as mailing and telecommunications are efficient, while still enabling the Organization to fulfil its mandate. A number of cost-saving and cost-avoidance measures have been identified, including elimination of some services and replacement of others by new technologies such as optical scanning for records management.

Although the workload of WHO's supply services was heavier than ever during 1995, the relocation of some activities outside the Organization and restructuring of others made it possible to maintain high-quality performance despite staff reductions. Responding to emergencies such as the outbreaks of Ebola fever in Zaire and plague in India put further pressure on the Organization's resources. An initial supply of antileprosy products worth $10 million was procured for 24 countries worldwide, together with substantial vaccines and other supplies for poliomyelitis eradication.

The main thrust of WHO's personnel work during the year was in responding to the funding shortfall which necessitated the abolition of over 300 posts in headquarters and regional offices and a substantial reorientation and restructuring of WHO's programmes to address priority health concerns. In spite of the reduction of recruitment due to the budget cuts, emphasis continued to be given to increasing the proportion of women in professional and higher-graded posts and to recruitment from unrepresented and underrepresented countries through active prospection.

**Regional highlights**

A characteristic feature of WHO is its decentralization. It has "regional organizations", of which there are six, each consisting of a regional committee and a regional office. The regions vary widely in size, socioeconomic development, epidemiological characteristics, culture and history. Highlights are presented in the following pages.

An initial supply of antileprosy products worth $10 million was procured for 24 countries worldwide, together with substantial vaccine and other supplies for poliomyelitis eradication.
Africa

In Africa, the main causes of illness and death of children who survive the neonatal period include acute respiratory infections, diarrhoea, malaria and measles, alone and in combinations, against a background of protein-energy and micronutrient malnutrition. For women they include complications connected with childbirth. For both men and women they include communicable diseases such as malaria, tuberculosis and HIV/AIDS, as well as injuries.

These causes, which often are aggravated by the impact of emergencies and disasters such as armed conflict, drought and famine, in turn are linked to inadequate access to primary and secondary education, safe water and sanitation, safe and nutritious food, essential drugs, and family planning. In some countries, this poverty is further complicated by societal and economic factors, including the low status of women and other vulnerable groups, inequality in the distribution of the benefits of economic growth, underfunding of the health sector, and the impact of a deteriorating economy and various structural adjustment programmes on the social sector.

Implementation of activities is guided by the quest for efficiency in order to make savings for cooperation activities with countries. To that end, stringent budgetary management measures have been introduced in the Regional Office. Similarly, measures are being introduced at all levels of execution of the regional programme in order to contain costs. The savings thus realized have been allocated to the countries hardest hit by the socioeconomic upheavals and natural or man-made emergency situations which are affecting a growing number of countries in the Region. WHO has set up an emergency management mechanism to provide a coherent and effective response.

Communication within the Region has been greatly improved. A satellite system has been installed to facilitate telephone contacts and e-mail is in use and will be extended to as many countries in the Region as possible.

Twelve countries have probably eliminated or are about to eliminate neonatal tetanus. This has resulted from the significant increase in the vaccination of women of childbearing age with tetanus toxoid and from improved epidemiological surveillance. Countries have adopted the approach of identifying the districts at risk through active surveillance.

Eleven countries have reported no cases of poliomyelitis, at least during the period 1993-1994; four neighbouring countries in southern Africa have become the first potential poliomyelitis-free zone (Botswana, Lesotho, South Africa and Swaziland). In seven other countries, the incidence has been significantly reduced. In all the countries, emphasis has been placed on increasing vaccination coverage, strengthening surveillance and ensuring a fast and decisive response to epidemic outbreaks of poliomyelitis.
In 1994, only four countries met the 90% target for measles vaccination coverage (Cape Verde, Malawi, Mauritius and Seychelles); five other countries reached a coverage of at least 80%. However, many epidemic outbreaks have been reported, surveillance is too often inadequate and the containment of these epidemics insufficient.

In the face of the increasing incidence of tuberculosis, the countries of the Region have given priority to strengthening national control programmes, specifically by promoting short-course chemotherapy. Of the 34 national programmes for which information is available, 27 have a central tuberculosis control unit. 11 are providing short-course treatment for all patients, and 19 are providing it for 50% of patients. However, there has not been full compliance with treatment protocols. A number of countries are concerned by difficulties in ensuring a regular supply of anti-tuberculosis drugs.

There has been significant progress in the treatment of leprosy with multidrug therapy, the coverage of which increased from 7% in 1987 to 27% in 1990 and 63% in 1993. The use of multidrug therapy has led to a reduction in the prevalence of the disease from about 483,000 cases in 1980 to about 159,000 in 1993. These results are encouraging and promising for the achievement of the target of reducing the prevalence of leprosy to less than one case per 10,000 people by the year 2000.

The malaria control programme was given high priority in most countries at risk. Twenty-five countries have organized training for national officials, and especially district health workers, in new strategies based on the correct management of malaria. The countries put special effort into programme management: operational targets have been defined in many countries, and indicators for continuous surveillance and evaluation have been taken into account in their information systems. But some difficulties are being encountered in the implementation of certain components of the regional malaria control strategy, particularly ensuring the availability and accessibility of insecticide-impregnated materials, and maintaining surveillance of Plasmodium falciparum resistance to antimalarial drugs.

Two major initiatives took place in cooperation with countries: promotion of the quality of care in health care delivery facilities and services in the Region and promotion of action aimed at wider accessibility of essential drugs. A partnership for sharing expertise and cooperation in the area of health sector reform was established among 10 countries in southern Africa. A meeting was held in the United Republic of Tanzania to identify ways in which health research on such topics as user charge exemption mechanisms can support the reform process in sub-Saharan Africa.

Steps are being taken to put into place a system of support to countries in order to facilitate the purchase of generic drugs and ensure the widest possible accessibility to them. This will encourage the setting-up of sustainable community cost-recovery mechanisms for the delivery of good-quality care.

A meeting in 1995 of the African network of public health training and research institutions focused on defining the concept of "the new public health" adapted to the cultural, epidemiological and socioeconomic context of the Region. The results obtained will undoubtedly have an impact on practice, training and research in public health in Africa. An inventory of centres of excellence is being drawn up with a view to increasing the number of collaborating centres.

Under the new Africa 2000 initiative for expanding water supply and sanitation services through partnership between countries, agencies and NGOs, national consultations to prepare strategies and action plans were held in 14 countries, and demonstration projects to promote new concepts of hygiene education, low-cost sanitation, and operation and maintenance were launched in 12 countries.

The Regional Office is supporting governments in coordinating in a sustained manner health inputs from multilateral, bilateral and non-governmental organizations. Projects have been funded by other agencies such as the World Bank and the African Development Bank. Quality assurance is a major area of support, as is technology transfer to strengthen local production facilities.

Integrated disease control – especially the attainment of eradication, elimination and control targets – thus continues to be a major concern of the Region. Promotion of the quality of care and its accessibility for the most disadvantaged are among the operational priorities for the coming years. In health promotion and protection, guidelines are aimed at identifying problems and needs that can be resolved or met from available resources and at giving priority to interventions likely to produce observable results.
The Americas

The countries of the Region are experiencing changes in the profiles of their population and the health problems they confront. Almost all have shown declines in infant and childhood mortality and increases in life expectancy at birth, primarily as a result of the control of infectious diseases in the early years of life. As populations have aged and become concentrated in large urban areas, chronic and degenerative diseases, particularly cardiovascular disease and cancer, have become more important as causes of morbidity and mortality. The countries that have reduced early mortality the most and have achieved the lowest birth rates have the highest incidence of chronic diseases. At the other end of the spectrum are those countries that still have high infant and child mortality, primarily from diarrhoea and acute respiratory illness.

1995 marked the fourth year without poliomyelitis in the Region. The success of polio eradication in the Americas can be attributed to several factors, including high-level political commitment, dedicated community participation, social mobilization, remarkable degree of solidarity among all the peoples of the Region, and the strong and steadfast collaboration of agencies and organizations working towards the same goal. The goal was reached by means of strategies that included mass immunization campaigns aimed at achieving coverage levels above 80%; reinforced surveillance of all cases of acute flaccid paralysis; a network of laboratories working together to analyze samples; case-finding, follow-up, and sample gathering by epidemiologists; and constant monitoring of key surveillance indicators. The "polio model" has come to be viewed as the archetype for successfully combating other disease problems.

Infectious diseases are still the major cause of morbidity and mortality in the Region, and they account for most of the demand on the health services. Moreover, the risk of new or re-emerging infectious diseases looms large. Some — such as cholera — had not been active for decades, but humbled the health services by returning to the Region. The resurgence of these diseases is due to several factors, such as human incursions into wilderness areas and, more significantly, to the deterioration of basic water and sanitation services and overcrowding in urban areas. In Ecuador, Mexico, Peru and some countries of Central America, a seasonal pattern of cholera seems to have emerged, suggesting that the infection has become endemic. In 1995, the Organization mobilized approximately $1.7 million from the international community and the Inter-American Development Bank technical cooperation agreement for investment in improved water and sanitation systems, epidemiological surveillance, proper case management, laboratory diagnosis, social communication strategies and safe food handling. All these factors, combined with exten-
sive health education efforts, have contributed to maintaining case fatality rates under 1%.

Dengue also has become widespread in many tropical countries, and its more lethal form, dengue haemorrhagic fever, appears to have become endemic in some. Training was provided in the clinical diagnosis and treatment of dengue haemorrhagic fever (9 countries), vector control (3 countries), social participation and laboratory diagnosis. A proficiency programme for laboratory diagnosis of dengue has been carried out since 1993, involving over 25 laboratories. Efforts are being made to develop self-sufficiency in the production of dengue reagents in Central America. A technical task force was established to study the feasibility and timelines of drawing up a hemispheric plan for the eradication of Aedes aegypti as an effective means of controlling dengue and urban yellow fever in the Americas.

Tuberculosis remains a serious problem in the Region—it is present in every country, despite the fact that effective drugs and a cost-effective tuberculosis control strategy exist. Controlling this disease presents a tremendous challenge especially in view of the synergistic relationship between tuberculosis and HIV infection.

The pattern of HIV transmission in the Americas is changing and the epidemic is rapidly spreading to heterosexual populations, with new infections occurring primarily among those 15 to 25 years old. In addition, HIV infection is increasingly associated with poverty and lack of access to basic health and education services. Through partnerships with the governments of Canada, France, Germany, the Nordic countries, and Spain, WHO mobilized almost $2 million for activities crucial to the prevention and control of the AIDS epidemic in the Region, and its consequences.

Morbidity and case fatality in the epidemic of plague in Peru have been significantly reduced, mainly as a result of the efficiency of coordinated action at the community level, and of technical cooperation. During 1995, a contribution of $680 000 was obtained from the European Community Humanitarian Office to strengthen prevention and control activities.

Although the greatest triumphs in the control of childhood infections have been achieved through immunization programmes, better living conditions and nutrition can be credited in part for continued improvements in traditional maternal and child health indicators. Despite these successes, nearly 350 000 children in Latin America and the Caribbean die every year before their first birthday for preventable reasons tied to poverty, a loss that roughly translates to the deaths of two children every three minutes.

Diarrhoeal diseases rank among the five leading causes of death in infants under 1 year old, and are the most frequent single cause of death among children between 1 and 4 years old in many countries of the Region. Moreover, these diseases are major determinants of growth retardation and malnutrition, helping to sustain the cycle of disease. Diarrhoeal diseases are thus one of the health problems that most affect children in the Americas.

Largely as a result of the pressures exerted to restructure their debt in the late 1980s, the vast majority of the countries of the Region engaged in reform processes that included the health sector. Well over half of them report some reform efforts, including the development of national health plans, decentralization, enhancing the delivery of services at the local level, and generally efforts aimed at improving the accessibility, coverage and efficiency of the health services. In order for decentralization to be successful, the health services at the provincial and municipal levels must have adequately trained staff who can carry out the critical technical and managerial tasks to ensure efficient service delivery.

Poverty, as an expression of social inequity, is the underlying cause of most of the morbidity and mortality in the Region. The restrictions placed on public spending during the 1980s have curtailed social investments, with dire consequences for the already disadvantaged. Although the vast inequality in income distribution registered during the past decade was mitigated or reversed in some countries in the early 1990s, poverty levels in most countries are still higher than they were in the 1970s.

Throughout the 1990s, there has been a growing understanding of the interdependence of the factors that contribute to human well-being and of the power of integrated approaches to improve the health status of the population. Member States of the Region increasingly acknowledge that the health sector’s boundaries must stretch if countries are to effectively address conditions such as poverty, inequality, marginalization, and gender-based discrimination, which lead to gross inequities in health and health care.
Despite some favourable changes in the political situation in the Region (such as the settling of the problem in Lebanon and the evolution of a unified Yemen), there were also significant setbacks. Repercussions of the 1990-1991 Gulf War still affect a number of countries, due to massive population movements, huge expenditures and a drop in revenues. In war-affected areas, lack of funds, food, drugs and other supplies, of security and the concomitant difficulties in implementing health programmes, all add to the suffering of people.

Emerging diseases have been a focus of many activities in the Region. In view of the spread of viral hepatitis, brucellosis, leishmaniasis and haemorhagic fevers, and other examples of reurrences (such as tuberculosis), a regional conference was held in November 1995 to build up regional and national control efforts. The conference endorsed a regional plan emphasizing various elements of surveillance and response to the emergence and resurgence of communicable diseases. Particular attention was paid to viral hepatitis, especially type C which has very high prevalence rates in some countries. The first in a series of regional workshops for training of trainers in communicable disease surveillance and epidemic preparedness and response was held.

**Eastern Mediterranean**

Efforts to eradicate poliomyelitis are progressing well in most Member States with 11 countries reporting zero cases, although there are problem areas in countries suffering from civil strife. The number of cases decreased significantly during 1994 and the first part of 1995. National immunization days were implemented in 19 countries during 1995. Laboratory-based surveillance has improved, and during 1994, 74% of reported cases of acute flaccid paralysis were investigated in laboratories. National committees for certification of poliomyelitis eradication have been established in many countries, and the regional commission on poliomyelitis eradication held its first meeting in September 1995.

Concern continues in the Region about the deteriorating malaria situation in Afghanistan, Djibouti, Somalia and Sudan. Efforts are being made to support these countries and to maintain control of the malaria epidemic in northern Iraq. WHO collaborated with national authorities to reorient national programmes and bring them into line with the global strategy for malaria control, particularly in relation to making judicious use of insecticides, developing a system for monitoring drug sensitivity, enhancing epidemic preparedness, and achieving self-sufficiency in the supply of drugs and insecticides and impregnated materials through promotion of local production. Progress was made in maintaining the malaria-free status in eight countries, and ensuring the non-proliferation or reduction of residual foci in two more. WHO also collaborates in ensuring that there is no shortage of
WHO'S CONTRIBUTIONS TO WORLD HEALTH

Selected health for all (HFA) indicators

<table>
<thead>
<tr>
<th></th>
<th>1980</th>
<th>1995</th>
<th>2000</th>
<th>HFA targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy at birth (years)</td>
<td>55</td>
<td>74</td>
<td>63</td>
<td>65</td>
</tr>
<tr>
<td>Infant mortality rate (per 1,000 live births)</td>
<td>113</td>
<td>198</td>
<td>71</td>
<td>62</td>
</tr>
<tr>
<td>Under-5 mortality rate (per 1,000 live births)</td>
<td>160</td>
<td>250</td>
<td>98</td>
<td>86</td>
</tr>
</tbody>
</table>

Drugs. Local production of chloroquine was started in Sudan with WHO support. Two training centres for malaria started functioning in 1995 in Sudan and the Islamic Republic of Iran. WHO supported local production of impregnated bednets which have proved to be effective in eliminating disease vectors, and local manufacture of antimalarial drugs through securing for countries the raw materials needed.

Eradication of dracunculiasis was successful in Pakistan. No cases have been reported since October 1993. In Sudan and Yemen the disease still exists, but eradication efforts were much improved. Surveillance activities and control measures are being boosted in close collaboration with all agencies concerned.

National leprosy control programmes were updated and supported by the provision of drugs and teaching/learning materials. Member States of the Region reaffirmed their commitment to achieving the target of the elimination of leprosy as a public health problem by the year 2000.

Plans and strategies for health and the environment were prepared or are under way in 17 countries of the Region, and the concept of healthy cities and healthy villages was accepted and promoted in various countries with WHO support. Several international funding agencies such as UNICEF have made health promotion an integral part of their support to a new health strategy. A major activity in the Eastern Mediterranean was a meeting on health promotion for supportive environments with special focus on healthy cities, held in Bahrain in September 1995.

During its 10 years of existence, the Centre for Environmental Health Activities (CEHA) has proved to be a viable addition to the Region's environmental health programme, serving as its technical arm and information exchange unit. In addition to supporting health, CEHA's Regional Environmental Health Information Network (CEHANET) continues to expand its information services to Member States, and to strengthen their national networking capabilities, drawing up plans according to the priority needs of Member States and implementing them in close collaboration with concerned national and international organizations.

Human resources development is at the core of implementation of national programmes. A WHO manual on human resources policy analysis was prepared and tested in three countries. The use of national languages, particularly Arabic, in medical and paramedical education is accorded priority, and WHO has supported the preparation of textbooks in these languages for use by training institutions. The Regional Office extended technical support to national authorities in their efforts to increase the number of nursing training institutions, and in reviewing and updating curricula and developing clinical nursing modules and practice.

Several Eastern Mediterranean countries are attempting to restructure their health care financing systems. A regional programme on health care economics and financing has been established together with a computerized regional health database to support health management. Egypt, Pakistan and Yemen have addressed the problem of health sector reform in a pragmatic manner, setting up special accounts for the development and support of national regulatory authorities.

The basic minimum needs/quality of life concept has expanded among and within countries of the Region. At present, 12 countries have embarked on basic minimum needs (BMN) programmes, albeit at different rates.

Projects to extend health laboratory services in support of primary health care were completed in many countries of the Region. To upgrade quality assurance, follow-up continued at regional and country levels in line with national and regional plans formulated in previous years, with emphasis on laboratory management. The Regional Office has issued several manuals on blood transfusion, which are being used by countries to ensure the provision of safe blood and blood products.

National lists of essential drugs were adopted by many countries. Local drug production was encouraged and the Region initiated a programme for providing raw materials for local manufacture of drugs, instead of importing finished products (e.g. production of chloroquine tablets in Sudan, already mentioned).

Countries of the Region believe that it is time to recall that ethical values in medical practice need to be reinforced in today's world where mostly technical and economic considerations prevail. There is already an impetus in the Region to develop a code of health ethics, and interested parties from other areas of the world will be encouraged to participate in its formulation.
Europe

A wave of change has broken over the European Region during the past few years, transforming the social, political and economic landscape. The most important feature of this landscape for health is the deep and widening gap between the eastern and western parts of the Region. Nevertheless, WHO’s recent work shows that the regional policy for health for all, with its 38 targets, offers the best way to meet the health challenges of both the old Europe and the new.

The policy’s enduring value lies in its comprehensive approach to health, its firm fundamental principles, and the flexibility of their application. This means that the Regional Office pursues a wide variety of goals in all areas relevant to health—including disease prevention, lifestyles, the environment and health services—with any combination of methods and partners that suits the circumstances.

In order to meet the challenge of the growing gap in health status between east and west, the Regional Office, through the EUROHEALTH programme, now directs two-thirds of its resources to the countries of central and eastern Europe and the newly independent States. The EUROHEALTH programme with its six priority areas (health policies; health care reform; women’s and children’s health; infectious diseases; noncommunicable diseases; the promotion of better health; and environmental health) is seen as the major tool for focusing support to those countries in the Region in greatest need.

The Region is experiencing an alarming resurgence of infectious diseases. Epidemics of diphtheria and poliomyelitis constitute a major health threat, mainly in the newly independent States. A diphtheria epidemic (which originated in the Russian Federation and Ukraine in the early 1990s) rose sharply to 50,000 cases and was present in all those States by 1995, affecting both adults and children. A review of the status of the epidemic in 1994 made it clear that a hitherto unexpected level of help was needed if it was to be brought under control.

Minimum: Albania
Maximum: Luxembourg

• Regional average (1993)
  Minimum: Albania
  Maximum: Luxembourg

• Annual average growth rate (1990–1993)
  Minimum: Georgia
  Maximum: Ireland

GDP per capita

Albania
Armenia
Austria
Azerbaijan
Belarus
Belgium
Bosnia and Herzegovina
Bulgaria
Croatia
Czech Republic
Denmark
Estonia
Finland
France
Georgia
Germany
Greece
Hungary
Iceland
Ireland
Israel
Italy
Kazakhstan
Kyrgyzstan
Latvia
Lithuania
Luxembourg
Malta
Monaco
Netherlands
Norway
Poland
Portugal
Republic of Moldova
Romania
Russian Federation
San Marino
Serbia
Slovakia
Slovenia
Spain
Sweden
Switzerland
Turkey
Turkmenistan
Ukraine
United Kingdom of Great Britain and Northern Ireland
United Kingdom
Yugoslavia
impact on transmission. This major collaborative effort during the previous 12 months was related to the goal of poliomyelitis eradication and was carried out with UNICEF, Rotary International, the United States Agency for International Development and the United States Centers for Disease Control and Prevention, as major partners.

The political and economic transformation of the countries of central and eastern Europe and of the newly independent States contributed to the gap in health status. While these countries are searching for new ways to manage and finance their health care systems in order to provide better care, the health care services are hit by inflation, recession, high unemployment and scarcity of vital materials. All these concomitant aspects have increased the pressure for rapid large-scale changes.

It is hoped that the WHO ministerial conference on health care reform to be held in Ljubljana in 1996 will mobilize the political will and awareness required for supporting changes in Europe in general and the newly independent States in particular. Information exchange on aspects of health care reform is taking place through the central Asian republics' network on health care financing and management (CARNET) and MIDNET, which serves the same purpose for the countries of central and eastern Europe. The Regional Office continues its cooperation with Kyrgyzstan and Turkmenistan, which aims at designing national plans for health care reform and at empowering the national authorities to carry them out.

The Second European Conference on Environment and Health (Helsinki, 1994) turned out to be a major stimulus for development. One of its outcomes was the establishment of a permanent mechanism for cooperation in environment and health in Europe between all major organizations dealing with this issue — the European Environment and Health Committee — which met for the first time in March 1995.

Another outcome of the Conference was the commitment that ministers of health and ministers of the environment would jointly produce national environmental health action plans. This work is now under way in six countries, and has already resulted in closer cooperation between the two sectors.

Although the conflict in the countries of the former Yugoslavia has ceased, it has not been possible to scale down, much less abandon the Regional Office's large-scale operations in this area. Donor support has steadily improved, which has facilitated better long-term planning from which the operations in Bosnia and Herzegovina have greatly benefited. Limited assistance has also been given to Tajikistan and the Caucasus countries.

Reviews of the Regional Office's work in the countries of the former Yugoslavia have led to a number of pragmatic managerial and administrative reforms regarding the manner in which the field operations are carried out. However, as a global task force has been established to look at the administrative aspects of WHO's humanitarian assistance programme at global, regional and country levels, the Regional Office will await completion of this work before drawing up detailed regional guidelines.

The Regional Office has been widening its network of international partners, including United Nations bodies, the European Union, governments and their agencies, and hundreds of nongovernmental organizations.

In 1995, a particular effort was made to strengthen partnership with the World Bank. In addition to the Bank's participation in the European Environment and Health Committee, it also takes part in a health care reform project in Kyrgyzstan, and will fund a public health advisory project in Hungary. Plans are in the making for cooperation in Bulgaria, Poland, Romania and the Former Yugoslav Republic of Macedonia.

As regards cooperation with the Commission and the Council of Europe, the project on "health-promoting schools" continued and expanded during the past 12 months to more than 452 schools in 34 countries; in addition, 2,000 schools are linked to the project through national and subnational arrangements. Cooperation with the Commission was particularly close in the field of information, where the Regional Office produced for the Commission a special review of the health status in 12 European countries, was contracted to produce "country highlights" for each of the European Union Member States, and is assisting the Commission in demonstrating the feasibility of electronic exchange of information on communicable diseases and vital statistics among the "G-7" countries.

Cooperation with UNICEF increased considerably through the MECAR poliomyelitis project, the diphtheria project, the joint support for vaccination in newly independent States, the maternal and child health project for central Asian republics, and cooperation in humanitarian assistance projects.
South-East Asia

South-East Asia is a populous and heterogeneous Region, with complex and varied socioeconomic conditions. Most countries depend on agriculture but are increasingly turning to industrialization. Illiteracy, poverty and malnutrition are widespread. Although adult literacy rates in general have improved over the last few decades, female literacy is still below 40% in some countries. During 1995 alone, natural disasters cost hundreds of lives and caused economic losses estimated at more than $20 billion.

The main change in the morbidity and mortality pattern during the last ten years is due to a decline of polio, neonatal tetanus and other vaccine-preventable diseases, as well as to the declining incidence and prevalence of leprosy. In respect of diarrhoeal diseases and acute respiratory infections, increased access to oral rehydration therapy and standardized case management of childhood diseases at health facilities have led to declines in mortality, albeit to a lesser extent.

The successes of the Expanded Programme on Immunization are relatively easy to quantify. Since the beginning of the programme, the immunization rate for all children in the Region has been maintained at 80% or above, while immunization coverage of tetanus toxoid among pregnant women was estimated to be 77%, the highest of all WHO regions. Between 1988 and 1994 reported cases have declined substantially for polio (83%), neonatal tetanus (80%), diphtheria (77%) and pertussis (77%). In 1994, South-East Asia accounted for more than 60% of the worldwide reported cases of polio, and the responses of the Region’s countries have been remarkable, with national immunization days conducted in Bangladesh, Bhutan, India, Indonesia, Sri Lanka and Thailand in 1994–1995.

The number of reported cases of dracunculiasis in India has fallen to 59 in 1995 from a total of 371 in 1994; during the last two years the incidence of visceral leishmaniasis has also declined. If the prevention and control programmes for dracunculiasis and leishmaniasis are intensified, there is a real chance that they may be eradicated or brought to very low levels of incidence during the next few years.

The less optimistic side of the regional health situation is caused by the high incidence and prevalence of acute respiratory infections, diarrhoeal diseases, malnutrition and nutritional deficiency disorders, vector-borne diseases (especially malaria) and tuberculosis. Despite an overall decline in the prevalence of nutritional anaemia, a survey conducted in six countries of the Region indicates that more than 50% of women of childbearing age continue to be af-
ected. Challenges for the future are the persistence of malaria and tuberculosis; the resurgence of plague; the emergence of chronic noncommunicable diseases such as cardiovascular diseases, cancer and diabetes; the emergence of other infectious diseases such as dengue haemorrhagic fever, Japanese encephalitis and cholera (El Tor); and the HIV/AIDS pandemic.

As part of the global malaria control strategy, WHO initiated a regional collaborative programme in South-East Asia on drug-resistant malaria in border areas. A border meeting on malaria and visceral leishmaniasis, with participants from Bangladesh, Bhutan, India and Nepal, drew up a joint action plan to solve the common problems posed by these diseases. Similar border collaboration is being set up between Thailand and neighbouring countries. WHO provided technical assistance and logistics support for control measures in parts of India and Bangladesh affected by floods and epidemics of malaria.

Dengue/dengue haemorrhagic fever is an important emerging health problem in the Region. A significant achievement has been the development of a live attenuated tetravalent vaccine in Thailand. The vaccine has been found to be safe and immunogenic among adults and trials in children are proceeding. This is the first vaccine originating from a developing country.

Though HIV/AIDS is becoming a serious problem, there have been a few notable successes in some countries. The 100% condom use programme in Thailand resulted in a reduction in the incidence of sexually transmitted diseases from 6.5 per 1,000 population in 1989 to 2.1 in 1992, the lowest incidence recorded during the last 20 years. HIV infection rates among young adults such as military recruits are now declining. Following a peer education programme among sex workers in Calcutta (India) which started in 1992, the use of condoms increased from 1% in 1992 to 42% in 1993, resulting in a sharp decline in the prevalence of sexually transmitted diseases.

Leprosy is an important public health problem in South-East Asia, accounting for 70% of the global registered cases. The nine endemic countries are implementing national plans for the elimination of leprosy as a public health problem by the year 2000, based on expansion of multidrug therapy within the framework of primary health care.

The epidemiological transition (the changing pattern of morbidity and mortality in association with demographic changes) is in its early stage in Bangladesh, Bhutan, most Indian states, Maldives, Myanmar and Nepal. Cardiovascular diseases, cancer, diabetes, other noncommunicable diseases and accidents will affect to a greater extent the more advanced countries of the Region which have achieved higher levels of life expectancy. The HIV/AIDS epidemic will be present throughout the Region. It may peak in India, Myanmar and Thailand, with potential to spread rapidly in most other countries.

<table>
<thead>
<tr>
<th>Selected health-for-all (HFA) indicators</th>
<th>1950</th>
<th>1995</th>
<th>2000</th>
<th>IPA targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy at birth (years)</td>
<td>64</td>
<td>68</td>
<td>54</td>
<td>&gt;50</td>
</tr>
<tr>
<td>Infant mortality rate (per 1,000 live births)</td>
<td>113</td>
<td>160</td>
<td>74</td>
<td>&lt;50</td>
</tr>
<tr>
<td>Under-5 mortality rate (per 1,000 live births)</td>
<td>153</td>
<td>219</td>
<td>130</td>
<td>&lt;70</td>
</tr>
</tbody>
</table>
Western Pacific

Member States of the Western Pacific Region have responded to the call for global change by adopting the Regional Office's New horizons in health as the principal instrument for change. Its concepts and approaches form part of policy-making and activity implementation throughout the Region, both at country level and among groups of countries. The approaches have been the subject of commitment at the highest political levels, as in the Ministerial Conference on Health for the Pacific Islands in March 1995, and they have been implemented at functional management levels. The concept of "healthy islands" forms a framework for implementation of this initiative in the Pacific. The Plan of Action for Intensified Malaria Control (1995-1996) being implemented in the Solomon Islands demonstrates at country level the type of active multisectoral response envisaged. The Health Development Plan until the Year 2000 in the Lao People's Democratic Republic and the Seventh Malaysia Plan have also incorporated significant elements of New horizons in health. It should be noted that Mongolia joined the Western Pacific Region in June 1995.

The Regional Office has not only been responsive to well-recognized problems, but also well prepared to react quickly to resurgences of disease, or newly emerging problems, such as requests for cooperation in cholera control or emergency requests related to other urgent disease outbreaks or crisis situations. In 1995, an epidemic of dengue haemorrhagic fever was reported in Cambodia. Responding to a call from the First Prime Minister, WHO set up an emergency dengue control team which moved quickly to work with the national control programme. The Government launched an integrated intervention campaign, with information dissemination, insecticide spraying, and larvicidal distribution, supported by WHO, UNICEF and NGOs.

WHO made a rapid response to a recent outbreak of diptheria in Mongolia, with the supply of vaccine. The Regional Task Force on Cholera Control also has demonstrated the value of a multidisciplinary approach to prevention and timely response to outbreaks.

When intensified efforts to eradicate poliomyelitis began in 1990, there were nearly 6,000 reported cases of poliomyelitis in the Region. In 1996, the Region is practically polio-free. Provisionally as at March 1996, only 13 indigenous wild poliovirus associated cases were reported in 1995, in the Mekong Delta region of Cambodia and Viet Nam, and one imported case in Yunnan, China. The wild poliovirus should be completely eradicated from the Region within the next two years. The Regional Certification Commission will hold its first meeting in 1996, and the Region...
will enter the next stage leading to the eventual global certification of poliomyelitis eradication.

The main control strategy for malaria in the Western Pacific is early case detection and treatment, combined with the use of pyrethroid-treated mosquito nets. Rotary International, with support from over 100 clubs from 13 districts, the majority in Australia and New Zealand, is closely involved with the national efforts in Vanuatu, supporting the effective distribution of impregnated mosquito nets. A new, short-term intensified plan of action is under way in the Solomon Islands, as part of the national antimalaria plan of operation for 1994-1998. The short-term plan combines environmental measures such as opening up of river mouths and drainage, with health promotion in schools, and improvements in solid waste management, water supply and sanitation.

WHO's interventions are country-sensitive and issue-specific, as in the case of leprosy. The prevalence rate per 10,000 population for the Region fell from 1.7 to 0.25 between 1985 and 1994. Although technically this means that the Region as a whole has already reached the elimination target of a prevalence less than 1 case per 10,000, the reality is that there are still countries, and areas within countries, with high endemicity, which the average figure does not reflect. WHO's challenge has been to identify why these areas of high endemicity still remain, and to implement activities which will improve the situation. This is being done through "special action projects for the elimination of leprosy", in Yunnan province in China, and two high plateau provinces in Viet Nam.

The regional strategy on health and environment focuses on urban health development/healthy cities and healthy islands and the integration of health and environment aspects in decision-making for sustainable development.

With regard to health systems reform, a regional policy meeting in New Zealand recommended active exchange of information on reform measures between countries. Pacific island countries have discussed common approaches to financing their health services, and insurance schemes and decentralization of services have been reviewed in Cambodia, China, Lao People's Democratic Republic, Philippines and Viet Nam.

Professional and academic organizations throughout the Region, such as medical schools and professional associations, have worked with each other and with WHO in the development of human resources for health. Postgraduate programmes specifically suited to Pacific island countries and areas have been developed, as advocated by the Yonca Island Declaration. In Cambodia, Lao People's Democratic Republic, Malaysia, Mongolia, Viet Nam, and Pacific island countries and areas, common approaches are being taken towards health workforce planning.

High maternal mortality ratios persist in Cambodia, the Lao People's Democratic Republic, Papua New Guinea and Tuvalu, where ratios are still higher than the regional target of 300 per 100,000 live births. However, the Regional Office is considering changing the target to 100 per 100,000 live births, in which case Mongolia, the Philippines, Solomon Islands, Vanuatu and Viet Nam can also be considered as target countries for intensified action on maternal health issues. The infant mortality rate, similarly, is above the regional target of 50 per 1,000 live births in eight countries. Although infant mortality is below this level in all other countries of the Region, concerted action with WHO's partners in this field, such as UNFPA, is vital.

Noncommunicable diseases (e.g. myocardial infarction, stroke, diabetes mellitus and cancer) are among the major causes of morbidity in most countries of the Region. They consume large amounts of the limited funds available, and therefore WHO participation and support are required in preventive and curative activities at country level. Concern is growing over the rapidly aging population and related health needs, especially in terms of the cost associated with the management of chronic illnesses, rehabilitation services and palliative care.

Considerable success has been achieved in many ventures undertaken in the Region. Apart from significant progress towards the goal of eradication of poliomyelitis, and major gains in limiting tobacco advertising, Member States are committed to the goals of eliminating leprosy, and controlling malaria and tuberculosis. It is essential to consolidate the gains already achieved in making the Region a safer place to live, safe from infectious diseases. The challenges now faced and the opportunities available to achieve positive results for health are increasing.