REGIONAL COMMITTEE FOR THE EASTERN MEDITERRANEAN

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PROGRESS IN THE EASTERN MEDITERRANEAN REGION ON AIDS, TOBACCO-FREE INITIATIVE, POLIOMYELITIS ERADICATION, MEASLES ELIMINATION, TUBERCULOSIS CONTROL AND THE GLOBAL ALLIANCE FOR VACCINES AND IMMUNIZATION (GAVI)

PROGRESS REPORTS
CONTENTS

ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS) IN THE EASTERN MEDITERRANEAN REGION ................................................................. 1
1. OVERVIEW OF THE EPIDEMIOLOGICAL SITUATION .......................................................... 1
2. NATIONAL COMMITMENT AND RESPONSE .................................................................. 2
3. ACTION AT REGIONAL LEVEL ......................................................................................... 4
4. SPECIFIC PLANS FOR THE BIENNium 2002–2003 .................................................. 7

Annex

HIV/AIDS AND STD REGIONAL ADVISORY GROUP (ARAG) .............................................. 8

TOBACCO-FREE INITIATIVE ............................................................................................................... 9
1. INTRODUCTION ..................................................................................................................... 9
2. WORLD NO TOBACCO DAY 2001 ...................................................................................... 9
3. BUILDING CAPACITY ......................................................................................................... 10
4. THE WHO FRAMEWORK CONVENTION ON TOBACCO CONTROL ............................. 11
5. THE ADVOCACY FRONT ..................................................................................................... 11
6. PUBLICATIONS .................................................................................................................... 11

Annex

CAIRO DECLARATION ON TOBACCO CONTROL ........................................................................ 13

ERADICATION OF POLIOMYELITIS .............................................................................................. 15
1. THE ROLE OF THE REGIONAL COMMITTEE FOR THE EASTERN MEDITERRANEAN IN POLIOMYELITIS ERADICATION ................................................................. 15
2. PROGRESS TOWARDS POLIOMYELITIS ERADICATION ................................................ 16
3. STATUS OF IMPLEMENTATION OF THE BASIC POLIOMYELITIS ERADICATION STRATEGIES IN THE REGION ................................................................. 19
5. REGIONAL AND GLOBAL PARTNERSHIP ......................................................................... 26
6. FUTURE CHALLENGES ...................................................................................................... 26

ELIMINATION OF MEASLES .......................................................................................................... 28
1. BACKGROUND ..................................................................................................................... 28
2. OVERVIEW ........................................................................................................................... 28
3. INTEGRATION OF RUBELLA IN THE MEASLES ELIMINATION PROGRAMME ................ 37

TUBERCULOSIS CONTROL .............................................................................................................. 42
1. INTRODUCTION ..................................................................................................................... 42
2. ACTIVITIES UNDERTAKEN IN RESPONSE TO RESOLUTION EM/RC44/R.6 .................. 42
3. NEW DIRECTIONS IN TUBERCULOSIS CONTROL IN THE REGION ................................ 46

THE GLOBAL ALLIANCE FOR VACCINES AND IMMUNIZATION (GAVI) ............................... 51
1. INTRODUCTION ..................................................................................................................... 51
2. CURRENT SITUATION .......................................................................................................... 54
3. CURRENT ISSUES ................................................................................................................. 57
ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS) IN THE EASTERN MEDITERRANEAN REGION

1. OVERVIEW OF THE EPIDEMIOLOGICAL SITUATION

The HIV/AIDS threat in the WHO Region of the Eastern Mediterranean may appear relatively modest when compared to other regions. However, this is due in part to under-reporting because of the stigma associated with the disease and to the inadequacy of surveillance systems in many countries. As the HIV epidemic is still relatively recent, infections are only beginning to emerge, however, the trend now is not only on the rise, but three countries (Djibouti, Somalia and Sudan) are already in a generalized epidemic situation and account for the majority of HIV infections estimated in the Region. Other countries, such as Islamic Republic of Iran and Libyan Arab Jamahiriya have seen local outbreaks among injecting drug users. The number of annual reported new AIDS and HIV cases in the Region more than doubled in the past 8 years, having been very low for more than a decade since the start of the epidemic. Only 3831 AIDS and HIV cases were reported to the Regional Office in 2001, but it is estimated that hundreds of thousands more cases exist. HIV estimates were revised to take into account the changing profile of the epidemic in the Region, far surpassing all previous projections. It is estimated that by the end of 2001, more than 680 000 adults of reproductive age were living with HIV, 80 000 of whom were infected in 2001. About one-third of adults living with HIV in the Region are women. The estimated rate of new HIV infections in 15 to 49 year-old populations varies from one per several thousand in most countries in the Region, to more than 1% in the countries of the Region with generalized epidemics. HIV/AIDS takes a heavy toll on productivity since the age group most susceptible to the infection is also the most productive. In 2001, about 90% of all reported AIDS cases were among people in the age group 15–49 years.

It is commonly believed that the Region’s conservative sociocultural norms, and the relatively good health expenditures in some countries have helped to limit HIV spread. Nevertheless, the Region faces tremendous challenges which have potential implications for the spread of HIV: war-related displacement of populations, economic and physical embargoes in some countries, rapid urbanization and poverty in certain countries, as well as a population structure in which the majority are young people. In addition, the subregion comprising Member States of the Gulf Cooperation Council has hundreds of thousands of travellers and expatriate workers who enter and leave each year. The persistence of other diseases in the Region adds to the complexity of the situation. Tuberculosis, including multidrug-resistant varieties, especially in Sudan and Pakistan, is highly problematic and hepatitis B and C significant, with Egypt reporting the highest prevalence worldwide of hepatitis C. Tuberculosis is exacerbated by HIV and the combination increases mortality. There are also signs that the rates of HIV infection among tuberculosis patients are on the rise. By mid-2001 these rates stood at 8% in Sudan, 4.8% in Oman, 4.2% in the Islamic Republic of Iran, 2.1% in Pakistan, and 0.6% in Egypt.

The HIV epidemics in the Eastern Mediterranean Region differ in character between countries. However, from a regional point of view, factors that seem to drive the course of the epidemic are increasing injecting drug use (IDU), population mobility, which carries
increased risk of unprotected sex, and transmission among men who have sex with men, which has become more significant recently. The issue of blood safety and HIV transmission remains of persistent concern in the Region, where millions of blood units are donated each year and screening is still far from comprehensive in several countries.

The increasing number of deaths due to AIDS in the countries of the Region is expected to rise further in the near future since access to appropriate care and antiretroviral drugs as it stands at present is very limited and seldom sustainable. Furthermore, action targeted at behavioural change is lacking in many countries, and this, coupled with the high cost of treatment, portends increases in AIDS deaths in the future.

Sexually transmitted diseases (STDs) are an important cause of morbidity in the Region; however they are a problem that is still neglected by the majority of countries. Millions of curable STDs occur in the Region, with only a fraction actually recognized by the public health system and even fewer reported. In Morocco, for example, recent well-structured efforts to strengthen and decentralize STD surveillance and case management have resulted in estimates of 600 000 STD infections per year. The National AIDS Programme in Egypt carried out with support from Family Health International, an evaluation of selected reproductive infections in various Egyptian population groups in Greater Cairo between 1999 and 2000. Findings reveal high prevalence of curable STDs, reaching 36.55% and 23.8% in a small group of prostitutes and men who have sex with men, respectively. In addition, 8.3% of women attending family planning clinics, 5.35% of drug users and 4% of women attending antenatal clinics had at least one STD. The Egyptian study indicates the need for a strong national STD prevention and control strategy and for a doubling of efforts to address vulnerable and high-risk groups.

2. NATIONAL COMMITMENT AND RESPONSE

Some countries in the Region have started renewing their approaches and strategies for prevention and control of HIV/AIDS/STD through a national process of comprehensive situation analysis and strategic planning. Morocco and Pakistan have successfully developed a multisectoral national strategic plan for HIV/AIDS. Djibouti, Lebanon, Egypt, Sudan, Tunisia and Yemen are expected to complete their planning by end of 2002. In addition, innovative projects are in place in some countries, which are expected to strengthen their response and introduce new methodologies in how to communicate with and address vulnerable groups. Djibouti has advanced in the development of the national strategy for STD case management and control; Egypt is carrying out a comprehensive assessment of the HIV/AIDS situation and response to it; the Islamic Republic of Iran is implementing a project on prevention of HIV/AIDS among drug users, including needle exchange and other harm reduction methods; Jordan has begun to concentrate on young people not enrolled in school using peer education methodologies; Lebanon is implementing a number of preventive interventions including peer education among sex workers, men who have sex with men and injecting drug users; Morocco is in the process of preparing HIV/AIDS essential packages for care and prevention including guidelines; Oman is implementing a project on HIV peer education among young people; the Syrian Arab Republic is developing approaches to target youth in slum areas through
community-based HIV/AIDS education and communication activities; and Tunisia has engaged in innovative HIV/AIDS/STD information education, and communication campaigns at various levels and is active in youth mobilization and counselling for young people.

Areas of weakness remain however in most countries in the following: establishing sustained school-based HIV education; effective STD prevention and care; HIV voluntary counselling and testing; and specific interventions targeted at vulnerable groups. While impressive scientific advances have been obtained through treating pregnant women thus reducing mother-to-child transmission of HIV infection by almost 70%, women in the Region are still deprived of appropriate care. Development of an effective HIV surveillance system has not been achieved because of inadequate coordination and funding, as well as lack of capacity in many countries. A major obstacle to effective control measures is the political fear that public disclosure of the existence of the disease in countries will affect national reputation and tourism. Most of the countries in the Region continue to play down the extent of the HIV/AIDS problem within their borders, and a few countries continue to deny the problem. Health care systems focus on case detection and HIV screening, rather than counselling and support, and because of the implications of case detection in some countries this discourages use of the system on the part of those most in need. When this happens, national AIDS programmes run a greater risk of the spread of disease and of not finding cases until a late stage. Only a few countries, such as Morocco, Islamic Republic of Iran and Lebanon are committed to visible preventive efforts addressing hard-to-reach groups, such as drug users, men who have sex with men and sex workers.

Health system capacity to confront the challenges for care of AIDS and related conditions is limited in most of the countries of the Region. Additional resources are needed to make HIV treatment possible. The potential for HIV/AIDS to become a chronic infection requiring primarily outpatient care is an added challenge to the health care system.

HIV antiretroviral therapies are expensive and even prohibitive in cost in many countries, in particular those already suffering from poverty and instability. Cost is not the only constraint; rapid development of resistance and complex dosage regimens require strict patient compliance, trained practitioners, a functioning health and social system for monitoring, follow-up care and support, and a drug regulatory system to ensure reliable supplies of safe and quality products. Despite the agreement of the Accelerating Access initiative with the pharmaceutical industry to provide antiretroviral drugs to countries at affordable prices, only Morocco from the Region has succeeded in negotiating up to a 60% price reduction for antiretroviral drugs. Tunisia and Lebanon have prepared their plans for HIV care and have submitted them for negotiation with the pharmaceutical industry.

The private sector and nongovernmental organizations are increasingly involved in the delivery of HIV and STD prevention and care in some countries of the Region. However, with the exception of Morocco and Pakistan, who have completed the national strategic planning process for HIV, most countries are still in the early stages of developing national HIV/AIDS strategic plans. Thus the role and contributions of various partners as well as non-health sectors at country level are not clearly defined.
3. ACTION AT REGIONAL LEVEL

There is hope that the situation will change. At the Forty-eighth Session of the Regional Committee for the Eastern Mediterranean in October 2001, Member States adopted resolution EM/RC48/R.4, which endorsed the Regional Strategic Plan 2002–2005 for Improving Health Sector Response to HIV/AIDS and STD in the Countries of the WHO Eastern Mediterranean Region. The regional strategic plan aims at strengthening and scaling up the national health sector response to HIV/AIDS and STDs, with a view to achieving a measurable impact on the spread of HIV/AIDS and STD epidemics in the countries of the Region. The strategic plan takes into account the cultural and sociopolitical characteristics of the Region and builds on the commitment of the Member States to the internationally agreed targets and the principles outlined in the United Nations General Assembly Special Session (UNGASS) Declaration on HIV/AIDS and 2000 World Health Assembly resolution WHA53.14. Thus, it aims at mobilizing commitment, resources and technical assistance to:

- reinforce protective factors at individual and community levels, especially among young people;
- reduce the number of people at risk of STD and HIV infections;
- ensure that all those who have the infection recognize their status and have access to comprehensive and integrated care and support services.

The WHO Regional Office assists in achieving these objectives through support for raising political commitment, for public information and for advocacy; generation of knowledge through operational research and appropriate monitoring of the epidemic; and capacity-building and development of comprehensive and integrated prevention and care approaches.

In addition, resolution EM/RC48/R4 specifically requests the Regional Director to provide the necessary technical support for the implementation of the strategic plan with special emphasis on countries in complex emergencies and to establish a regional steering committee to promote political commitment and resource mobilization in support of implementation.

Accordingly, the Regional Director formed the HIV/AIDS and STD Regional Advisory Group for the Eastern Mediterranean (ARAG) which had its first meeting in April 2002 (see Annex). ARAG will focus on three main lines of action: 1) to act as an advocacy group with the task of informing community and national leaders, policy makers, public opinion and the media; 2) to follow up and review the status of implementation of the regional strategy; and 3) advise on practical means to scale up the response to HIV/AIDS in the Region. ARAG has outlined its action plan for the year 2002 and will report to the Regional Director about its activities.

The twelfth intercountry meeting of the national AIDS programme managers was held in Beirut, Lebanon, in April 2002 with the main objective of translating EM/RC48/R4 into effective and relevant national strategies and actions. Countries’ representatives thus
developed action plans for 2002–2003 which allow implementation of the regional strategic plan from the country’s perspective in areas of both care and prevention. The meeting recognized the need to improve data through sentinel surveillance, behavioural surveys and rapid assessment studies. The meeting also recognized that one of the basic steps to improve the quality of life of people living with AIDS and to enhance prevention efforts targeted at those at high risk, is to decrease the stigma attached to the disease. All the countries committed themselves to the issue of fighting stigma for the forthcoming World AIDS Day Campaign 2002. The meeting noted the growing problem of substance abuse and in particular injecting drug use and related health hazards, including HIV/AIDS, and recommended the adoption of multisectoral and interministerial approaches at national level to allow the health sector to be involved in issues related to drug demand and harm reduction. The countries also committed themselves to intensifying their action in STD control as an essential strategic component of limiting the spread of HIV and requested more support to increase access to antiretroviral therapy at country level.

Based on the regional discussions, the countries have integrated strategies and activities of the regional strategic plan in their plans of work for 2002–2005.

In addition to the technical support agreed through the JPRM, and in line with the regional strategic plan, the Regional Office has intensified its support as follows.

1. The Horn of Africa Initiative will hold a cross-border coordination meeting on HIV/AIDS and TB involving three countries; Djibouti, Ethiopia and Somalia. The coordination meeting is intended to help country officers to share experiences, establish close links, identify strategies and develop a joint plan for future collaboration on prevention and control of HIV/AIDS and tuberculosis at cross-border level, and also to support the nationals to formulate a project proposal for the sub-region.

2. With regard to accelerating access to antiretroviral therapy, joint headquarters and EMRO missions assisted Lebanon and Egypt to develop their national strategies and plans for HIV care as well as the negotiation plan to obtain antiretroviral drugs at affordable prices from the pharmaceutical industry. Five more missions are planned for 2002–2003 for Djibouti, Jordan, Oman, Syrian Arab Republic and Sudan.

3. A regional briefing of consultants was held in Cairo in early July 2002 in collaboration with headquarters and UNAIDS, to support countries to develop proposals to the Global Fund for AIDS, Tuberculosis and Malaria. A plan of action for country support to facilitate preparation of proposals to the Fund was outlined and implemented in order to meet the submission deadline in October 2002. Short-term consultants, including national consultants, have been fielded to selected countries in order to support them in developing proposals to the Fund.

4. The Regional Office has introduced for the first time the subject of HIV/AIDS into the Small Grants Scheme. In the latest round, 25 research proposals were received from seven countries. Four proposals obtained grants in the areas of: sexually transmitted
diseases, HIV knowledge, attitudes, beliefs and risk perception among health care workers in laboratories and haemodialysis units, and HIV and tuberculosis risk in injecting drug users.

5. The international donor community has so far been slow to assist the countries of the Region and to assure appropriate funding, on the misleading basis that the Region is comparatively less affected than other regions. For the first time, the AIDS unit participated in the Regional Interagency Coordination Committee (RIACC) Meeting for Poliomyelitis, Expanded Programme on Immunization and Other Communicable Diseases, held in Cairo in June 2002, and attended by major partners in disease control such as the Centers for Disease Control and Prevention (CDC), Rotary International, International Medical Centre of Japan (IMCJ), the World Bank, USAID and Italian Cooperation. The Regional Office, as well as representatives from the AIDS programmes in Egypt, Somalia and Sudan presented their programmes and the estimated budgetary needs to scale up their response to the situation.

Collaborative efforts with the World Bank were promoted during the conference on Meeting the Public Health Challenges in the 21st Century in the Middle East North Africa/Eastern Mediterranean Region, held in 2002 in Beirut, Lebanon. The objective of the conference was to brief policy-makers, including ministers of health and of finance, on critical public health challenges including HIV/AIDS. The conference sessions and discussions on HIV/AIDS aimed to break the silence on the issue and to bring about dialogue in order to obtain stronger political commitment, to encourage more studies and research to improve quality of data, and to mobilize resources, especially in countries with low HIV prevalence, which applies to most countries of the Region.

6. Integrated disease control is an important strategic initiative in EMRO. A meeting on integrated communicable disease control activities in the Eastern Mediterranean Region was held in EMRO in February 2002. It reviewed the regional strategy on integrated communicable disease control, and formulated national plans of action in line with the regional strategy. Representatives of national programmes dealing with communicable disease surveillance and control in Pakistan, Sudan and Republic of Yemen discussed the different strategies for integration and the cross-cutting activities in different communicable disease programmes, including HIV/AIDS/STD. Participants concluded that integration would lead to better outcome of health plans and ensure optimum use of resources.

7. The annual World AIDS Day Campaign was, as every year, one of the major activities of the AIDS Information Exchange Centre during 2001. The campaign had as its slogan ‘I care... do you?’. The main principles were that it would be a regional campaign, concentrating on young people, and stressing the value of the family. It aimed to stimulate and maintain the commitment of individuals, especially men, to participate in the fight against HIV/AIDS through their roles in the family and the community. The campaign materials tackled different aspects of the HIV/AIDS epidemic: magnitude of the problem, preventive measures, role of family, care of people living with HIV/AIDS, modes of transmission, injecting drug use and importance of health education. At the
country level, nearly all countries of the Region implemented advocacy activities for the World AIDS Day Campaign 2001.

8. With regard to country programme review and support, programme evaluation and planning were supported in the Islamic Republic of Iran.


The Regional Office plans to concentrate efforts on scaling up activities in the following areas during 2002–2003:

- HIV/AIDS/STD epidemiological surveillance;
- developing essential packages of health services to provide HIV/AIDS comprehensive care, including voluntary counselling and testing, prevention of mother-to-child transmission, infection control especially safe injection and blood safety, STD syndromic case management, and access to HIV care and antiretroviral therapy, drug abuse and HIV;
- operational research in support of scaling up the health sector response to HIV/AIDS/STD;
- negotiation for cost reduction of antiretroviral therapy;
- sustained public information and advocacy activities about HIV/AIDS/STD;
- support to national strategic planning.
Annex

HIV/AIDS AND STD REGIONAL ADVISORY GROUP (ARAG)

Members

1. H.E. Mr Ejaz Rahim, Secretary of Health, Federal Ministry of Health, Pakistan
2. H.E. Mr Marwan Hamadeh, State Minister for Displaced People, Member of Parliament, and Member of the UNESCO International Committee on Ethics, Lebanon.
3. Dr Abdallah Sid Ahmed Osman, Under-Secretary for Health, Federal Ministry of Health, Sudan.
4. Dr Mehammad Mehdi Gouya, Director of Disease Control, Ministry of Health and Medical Education, Islamic Republic of Iran.
5. Dr Jaouad Mahjour, Director of Epidemiology and Disease Control, Ministry of Health, Morocco.
6. Dr Amal Ben Said, Manager of the National AIDS Programme, Ministry of Public Health, Tunisia.
7. Dr Jacques Mokhbat, infectious disease specialist, Lebanese University; member of the Lebanon National AIDS Committee and founder of the Lebanese AIDS Society, Lebanon.
8. Dr Salah Al Owaidy, Director of Disease Control, Oman

Membership is for two years.

Terms of reference

The HIV/AIDS and STD Regional Advisory Group (ARAG) will:

1. Review periodically the HIV/AIDS and STD situation in the Eastern Mediterranean Region and the status of progress in the implementation of the regional strategic plan for improving the health sector response to HIV/AIDS and STD.
2. Advise on issues related to HIV/AIDS/STD programme development in the Region and examine practical means and ways for successful scaling up of the response.
3. Act as an advocacy group whenever necessary with the task of informing leaders, policy-makers and public opinion.
1. INTRODUCTION

Tobacco consumption is a major preventive cause of premature death and disease, and the prevalence of tobacco use continues to rise in the Eastern Mediterranean Region, as elsewhere. The Regional Office for the Eastern Mediterranean is working in many directions in line with its regional plan of action, covering a variety of areas of work, such as: raising levels of awareness about the dangers of tobacco use; documenting the activities of the tobacco industry in their efforts to stimulate the tobacco market and increase the number of smokers; and exchanging and disseminating information on the most successful strategies and best practices in tobacco control.

Despite the high levels of consumption, there are signs at the decision-making level that tobacco control is gaining more ground every year. Nearly 60% of the countries of the Region have national tobacco control plans and, of those, about 70% have adopted a multisectoral approach to tobacco control.

Some 70% of the Member States of the Region are directly involved in developing the Framework Convention on Tobacco Control (FCTC). It is hoped that with the high level of political commitment evident in the Region, the status of tobacco control will improve all the more in the coming years.

2. WORLD NO TOBACCO DAY 2001

In response to the regional World No Tobacco Day theme for 2001 *Break free: choose to breathe, not to smoke* and the global “Clear the air” campaign for cities in different regions in tobacco control, the Holy Cities of Mecca and Medina were declared tobacco-free. The Saudi authorities developed, in collaboration with WHO, a plan of action to free the two cities of public use of tobacco, and implementation started in October 2001. Full implementation will take a year and the Regional Office is following up with the national authorities to ensure that the initiative is implemented in the best possible way. It is hoped this declaration will have a major impact on strengthening tobacco control, not only in these two cities, but throughout the Region. In recognition of the importance of this declaration, the Director-General’s World No Tobacco Day award for 2001 was presented to King Fahd Bin Abdul Aziz at a private ceremony in October.

Also in celebration of World No Tobacco Day, the Regional Office organized a training workshop, in collaboration with Reuters Foundation, to enhance the role of the media in tobacco control, in which more than 25 journalists from all over the Region participated. Four television spots were produced for World No Tobacco Day and distributed to all countries, in addition to the usual advocacy and press kit. Throughout the Region different events took place, with many countries developing their own materials for the occasion.
3. BUILDING CAPACITY

The Regional Office organized a training workshop to train national coordinators on the implementation of the Health Professional Survey. Nine countries participated in the workshop and all of these countries are now in the process of implementing the survey.

Seven countries completed the Global Youth Tobacco Survey and another six are in the implementation phase. The Regional Office will hold the first regional data management and analysis workshop to review the survey results, at the Regional Office in Cairo in July 2002. The second round of the survey will be carried out during 2002, when five more countries will be trained in implementation.

In collaboration with the World Bank, Egypt and Morocco completed two studies on the economic aspects of the tobacco problem. The Islamic Republic of Iran is currently carrying out a similar study. The results of the first two studies were presented at the Mediterranean Consultation on Economics of Tobacco, in Malta in September 2001. The Regional Office in cooperation with Cairo University Faculty of Economics and Political Sciences is organizing a two day meeting to present the findings of the studies at the regional level in June 2002.

The Regional Office joined with WHO headquarters, the Regional Office for Europe and the Regional Office for Africa, in organizing the Malta Consultation, in which all the Member States participated. For the first time representatives from the Ministries of Finance were present, side by side with the focal points of tobacco control in the Ministries of Health to discuss ways of possible collaboration and areas where joint action could lead to a concrete change at the tobacco control front.

In collaboration with the Arab Forum of Social and Medical Sciences, the Regional Office organized a one day workshop, during which more than 30 participants from 16 countries developed a unified survey on the use of the waterpipe (shisha). The Regional Office is planning to implement the survey as a pilot study in six countries, and is raising funds for this purpose.

A one week training course for the scouts on tobacco control-related matters took place in the Libyan Arab Jamahiriya, which resulted in development of 10 community-based projects to strengthen tobacco control at the country level. This course will be repeated in other countries. The Regional Office was able to provide the funds needed for the implementation of the 10 projects and they are due to be completed by the end of 2002.

Cessation is a very important component of the tobacco control programmes in all countries and there are numerous cessation clinics in various countries now. In order to strengthen their capacity and raise their technical level, the Regional Office signed a contract with St Georges Hospital, London, to organize the first course to train and update the knowledge of eight national doctors on cessation-related services. The training will take place during July 2002 in the United Kingdom.
4. THE WHO FRAMEWORK CONVENTION ON TOBACCO CONTROL

At a regional consultation organized by the Government of the Islamic Republic of Iran, a text for the liability and compensation section in the Framework Convention on Tobacco Control was finalized and the text was proposed to the convention chairman by Member States of the Region during the third session of the intergovernmental negotiating body (INB3), which was held in Geneva in November 2001; 15 Member States of the Region participated in that round of negotiations. Few regional concerns with regard to the convention text and the participation of nongovernmental organizations in the regional meetings were raised. In March 2002, the Regional Office organized a regional meeting on FCTC-related matters which resulted in a declaration by participants and a unified position on most articles of the FCTC. The declaration emphasized the role of governments in supporting the FCTC (Annex 1). At the national level it is clear that there is great support for the Framework Convention.

5. THE ADVOCACY FRONT

The WHO global advocacy project “Don’t be duped, tobacco kills,” has been one of the most successful initiatives in the Region, in Egypt, Islamic Republic of Iran, Jordan, Lebanon, Pakistan and Syrian Arab Republic. The project is now in its second year and various advocacy and media projects are being conducted under its umbrella. Each country is concentrating on one theme in its campaign. For example, in Egypt the campaign has concentrated on dissemination of the Islamic ruling on smoking; in Jordan and the Syrian Arab Republic on youth and tobacco; in Lebanon on media and tobacco; and in the Islamic Republic of Iran and Pakistan on tobacco control messages for the public.

As a continuation of the Regional Office’s efforts in disclosing the plans and strategies of the tobacco industry in the Region, and following the release of the regional report Voice of truth, the Regional Office received requests from three countries to conduct country-specific inquiries. The first one to be completed was on the smuggling activities of the tobacco industry in the Islamic Republic of Iran, and was released officially at a press conference held in the Islamic Republic of Iran in January 2002. The other two country-specific inquiries will be completed during 2002.

6. PUBLICATIONS

The second edition of the Arabic version of Islamic ruling on smoking was released at the Forty-eighth Session of the Regional Committee for the Eastern Mediterranean in October 2001.

Three new documents are in the publishing process: studies on the economics of tobacco in Egypt and in Morocco, and a manual for journalists on how to use the tobacco industry documents on line. Countries have issued a variety of publications on tobacco control.
The Regional Office finalized the first regional tobacco profile comprising complete data on the tobacco situation in each country. It aims to provide a clear picture of tobacco control status in the Region and the magnitude of the problem. The profile was released during the World No Tobacco Day 2002 celebrations.
ANNEX

CAIRO DECLARATION ON TOBACCO CONTROL

CONSULTATION ON THE FRAMEWORK CONVENTION ON TOBACCO CONTROL

March 2–4, 2002

Cairo, Egypt

- Recognizing that the tobacco epidemic in the Eastern Mediterranean Region is a major public health problem and a great challenge;

- Acknowledging that every individual and relevant sector has the right and obligation to participate in the implementation, maintenance and improvement of tobacco control efforts at all decision-making levels, and that the tobacco industry should not participate in these activities;

- Recognizing that the mass media have a pivotal role to play in tackling this important public health problem, as key disseminators of information and knowledge locally, regionally and globally;

- Acknowledging that governmental and nongovernmental organizations are key players, who should be involved in designing and implementing tobacco control-related activities at all levels;

- Recognizing the importance of adopting and implementing the Framework Convention on Tobacco Control (FCTC), once completed, as the first international legal instrument of its kind to support national, regional and global tobacco control efforts;

- Recognizing the importance of a total ban on tobacco advertising, sponsorship and promotion, and the establishment of mechanisms to eliminate the illicit trade of tobacco products.

The participants of the meeting hereby:

- Urge all Member States of the Region to participate in all meetings relevant to the FCTC;

- Call upon all governments of the Region to participate in the FCTC negotiations by sending a delegation that represents all concerned sectors;

- Request all the relevant national authorities in the Region to review and update their national tobacco control laws to provide the strongest protection for public health;

- Urge all Member States of the Region to ratify, support and implement the FCTC once completed;
• Urge all Member States of the Region to involve nongovernmental organizations, in accordance with their national laws, in developing and designing relevant tobacco control strategies;

• Call upon all the relevant national authorities in the Region to develop comprehensive plans of action for tobacco control at the national level and to allocate the funds needed for implementation;

• Urge nongovernmental organizations in the Region to include tobacco control in their list of priorities and to coordinate with all the relevant national authorities whenever possible;

• Call upon the media in the Region to play a continuous and active role in mobilizing the FCTC and in raising public awareness with regard to tobacco control-related issues;

• Urge international lending institutions, such as the World Bank and the International Monetary Fund, and other UN Organizations to harmonize their strategies for tobacco control at regional level and to explore mechanisms to reallocate funds to encourage alternative livelihoods for tobacco growers and workers;

• Encourage international organizations and donors to enhance their support for tobacco control activities.
ERADICATION OF POLIOMYELITIS

1. THE ROLE OF THE REGIONAL COMMITTEE FOR THE EASTERN MEDITERRANEAN IN POLIOMYELITIS ERADICATION

In May 1988 the Forty-first World Health Assembly declared the commitment of the World Health Organization to the global eradication of poliomyelitis (WHA41.28). In October of the same year, the Thirty-fifth Session of the WHO Regional Committee for the Eastern Mediterranean endorsed a regional plan for poliomyelitis eradication and urged Member States to develop and strengthen national poliomyelitis eradication programmes and to implement all the strategies for poliomyelitis eradication, namely:

- to accelerate and sustain high immunization coverage;
- to intensify surveillance for poliomyelitis; and
- to ensure adequate resources to accelerate and sustain national poliomyelitis eradication programmes.

The Regional Committee has maintained an active role in directing the national programmes towards eradication. To this effect, it has passed 8 progressive resolutions on poliomyelitis eradication during the last 13 years.

In addition to resolutions passed, the Committee has provided continuous support to guide the regional poliomyelitis eradication programme. The Committee has consistently reviewed in detail the status of polio eradication and regional plans of action. The continued interest, support and guidance of the Regional Committee has been one of the most significant driving forces towards achieving the goal of poliomyelitis eradication in the Eastern Mediterranean Region.

The Regional Director for the Eastern Mediterranean has continued to give special priority to the programme. Actions taken in this regard have included the following:

- The Regional Director visits priority countries and meets with Ministers and Heads of State, to ensure sustainability of political commitment and quality implementation of activities.
- The Regional Director has established a Polio Unit in the Regional Office for the Eastern Mediterranean (EMRO) as a Special Programme reporting directly to the Regional Director. This step has been instrumental in ensuring immediate response and overcoming bureaucratic delays. The Polio Unit plays a coordination role and provides ongoing technical and operational support to all countries in their efforts to eradicate poliomyelitis.
- The Regional Director has established a Regional Inter-Agency Coordination Committee in order to secure the support needed for the programmes in priority
countries and to strengthen partnerships with governments, international agencies and civil society. EMRO has also facilitated bilateral funding support to priority countries.

- Eradication activities are coordinated between countries through planning meetings and regular exchange of information. The Polio fax is issued by the Polio Unit on a weekly basis and is communicated to all ministries of health and to more than 200 institutions and professionals in the Region and around the world.

- As directed by the Regional Committee, coordinated polio eradication activities between 8 neighbouring countries of the Eastern Mediterranean Region and 12 countries of the European Region are being conducted as part of ‘Operation MECACAR’. Specially coordinated immunization and surveillance activities are continuing in selected border areas of the Islamic Republic of Iran, Iraq, Syrian Arab Republic and Turkey as well as between Afghanistan, Islamic Republic of Iran and Pakistan. Coordinated activities have been initiated with the WHO Regional Office for Africa, targeting countries in the Horn of Africa. Activities are also under way to identify and cover gaps between government and rebel-controlled areas in south Sudan.

- The Regional Director has established a regional Technical Advisory Group and individual technical advisory group for the Member States still endemic in order to monitor closely and review progress and provide technical advice.

2. PROGRESS TOWARDS POLIOMYELITIS ERADICATION

Extraordinary progress towards poliomyelitis eradication has been made since 1988. A broad coalition spearheaded by WHO, Rotary International, Centers for Disease Control and Prevention (CDC) in Atlanta, USA, and the United Nations Children’s Fund (UNICEF) has been established to achieve this goal. The eradication goal was set as the end of the year 2000, with certification of eradication by 2005. Poliomyelitis transmission has been interrupted in the American, European and Western Pacific regions. From 1988 through the end of 2001, the number of countries where polio was endemic decreased from more than 125 to 10. The number of poliomyelitis cases worldwide decreased from an estimated 350,000 in 1988 to less than 500 in 2001, a decrease of more than 99%.

Rapid and significant progress towards the eradication of poliomyelitis continues to be witnessed in all countries of the Eastern Mediterranean Region. In 1988, poliomyelitis cases were reported from 22 of the 23 countries of the Region, with more than 2000 cases reported by weak surveillance systems that did not reflect the true incidence of poliomyelitis. By 2001, poliovirus transmission had been interrupted in 18 of the 23 countries of the Region, and virus transmission had become more geographically localized in the remaining five countries (Afghanistan, Egypt, Pakistan, Somalia and Sudan). Sudan has not reported a poliomyelitis case for more than one year, indicating possible interruption of wild poliovirus transmission.
in the presence of a very well developed and efficiently performing surveillance system, the number of confirmed cases of poliomyelitis reported during 2001 in countries of the Region has decreased to only 143 (virologically confirmed cases) (Figures 1 and 2). Through the end of June 2002, 28 cases were reported from only 3 countries (Afghanistan, Pakistan and Somalia), as compared to 41 for the same period in 2001. In 2001, wild polioviruses types 1 and 3 were detected in Afghanistan and Pakistan, type 1 was detected in Egypt and Sudan, and type 3 was detected in Somalia. Wild poliovirus type 2 has not been isolated in the Region since 1997.

During 2001, Pakistan continued to report the largest number of virus-confirmed cases in the Region, although the total number of cases reported declined by nearly 45% compared
with 2000 (119 compared to 199). The geographical extent of transmission was reduced to a few districts in each province. During 2001, cases were reported from 39 districts, compared to 59 districts in 2000. The decline in the number of cases has been sustained in the first half of 2002, with 24 cases reported from 17 districts.

The extent of virus transmission, both the number of virus isolates and number of affected districts, has been greatly reduced in Afghanistan. By the end of 2001, 11 confirmed cases of poliomyelitis were reported. Compared with 2000, this represents a nearly 60% decline in the number of reported polio cases. More importantly, 9 of the 11 cases were reported from areas in and around Kandahar City in the southern region. The other two cases were reported in September and October from Eastern provinces bordering Pakistan. As at end June 2002, the laboratory has confirmed only two cases, with onset in February and May and reported from the same areas in the southern and eastern regions of the country.

In Somalia, the outbreak of poliomyelitis that occurred in Mogadishu in 2000 was controlled, and during 2001 a total of 7 cases were identified in the highly populated regions of Lower Shabelle and Banadir (Mogadishu), mostly representing the tail of the 2000 epidemic. Two further cases have been reported to date in 2002, from Mogadishu and a region nearby.

In Sudan only one virus was isolated from the southern region of the country in April 2001, after a gap of 9 months since the isolation of the last virus from the northern states, in July 2000. No cases of poliomyelitis have been discovered in Sudan for more than one year.

Localized wild poliovirus transmission in Upper Egypt continued in 2001. Five virologically confirmed poliomyelitis cases were reported, 3 from the southern governorate of Minya and 2 from Qena. In addition, wild poliovirus was isolated from different sites included in the environmental surveillance.

Genetic sequence analyses are now routinely performed on all wild poliovirus isolates found in the Region, providing useful information on relationships between virus lineages, as well as on the pathways and patterns of wild virus transmission within and between countries. Recent sequence data have clearly indicated the presence of shared virus reservoirs between Pakistan and Afghanistan. Sequence analysis has also helped in identifying the sources of viruses in the importations that occurred in the Region. With improvements in surveillance, independent and unique transmission chains of poliovirus have been identified in Sudan (type 1) and Somalia (type 3). Continued circulation of a limited number of viral lineages in Egypt has been confirmed by sequence analysis of isolates from both AFP cases and sewage samples. The decreasing genetic diversity of viruses points to the significant progress being made towards achieving the poliomyelitis eradication goal in the remaining endemic areas.

Poliomyelitis eradication programme activities are very closely monitored in the remaining endemic countries of the Region. Technical and managerial reviews are frequently undertaken by independent international experts. In addition, the Regional Director has established a Technical Advisory Group (TAG) for each of the priority countries to review the situation regularly and provide technical advice. These groups have reviewed the
epidemiological situation and national plans, and their collective conclusions indicate that if high-level commitment to achieve polio eradication is continued with enhanced strategy implementation, it is likely that poliovirus transmission in the Region will be interrupted by the end of 2002 or early 2003.

3. STATUS OF IMPLEMENTATION OF THE BASIC POLIOMYELITIS ERADICATION STRATEGIES IN THE REGION

3.1 Routine immunization coverage

Achieving and sustaining high routine immunization coverage of infants with at least 4 doses of oral poliovaccine (OPV) is being given high priority in the Region. The regional coverage has improved after a decline in the early 1990s. In 2001, the average regional reported coverage of infants with at least three doses of oral poliovaccine (OPV3) remained at 80%. Coverage levels of less than 80% were reported from six countries, representing more than half of the total population of the Region: Afghanistan (45%), Djibouti (49%), Pakistan (74%), Somalia (30), Sudan (71%) and the Republic of Yemen (76%).

3.2 Supplementary immunization activities with OPV

The intensification of national immunization days (NIDs) and other supplementary immunization activities, which started during 1999 in endemic and recently endemic countries (Afghanistan, Egypt, Iraq, Pakistan, Somalia and Sudan), reached a peak in 2001. All of these countries conducted more than two NID rounds.

Afghanistan and Pakistan conducted five rounds of intensified NIDs in addition to subnational immunization days (SNIDs). In Afghanistan, 2 fall rounds were conducted after 11 September. Adjustments were made to address difficulties in access and large population movements, and resulted in high coverage. NIDs were carried out even in the middle of military actions, with apparent success. In Pakistan, great efforts were made to identify reservoir districts and high-risk populations and to cover them in targeted high quality campaigns.

During 2001, Somalia and Sudan (including war-affected parts of southern Sudan) conducted four NID rounds, plus subnational campaigns. Iraq conducted 2 spring and 2 fall rounds of NIDs. Egypt conducted targeted subnational campaigns in addition to 3 rounds of NIDs. In total, high-risk areas in Upper Egypt were covered by 8 rounds over a 12-month period.

These intensified NIDs and other mass campaigns were characterized by detailed microplanning, multisectoral involvement, intensified supervision, greater focus on high-risk areas and, most importantly, house-to-house vaccine delivery. Monitoring and evaluation activities showed that these intensified campaigns were very effective in further increasing the coverage of children under 5 years of age.
The allocation of additional financial resources by partners has made it possible to undertake these intensified activities by ensuring the recruitment of national and international experts.

During 2001, most polio-free countries conducted NIDS or SNIDs, targeting provinces and areas at risk of poliovirus importation and/or with sub-optimal immunization coverage and/or inadequate surveillance.

The accelerated eradication activities are continuing in 2002. It is planned that by the end of 2002, using the house-to-house vaccine delivery strategy, Afghanistan will have conducted a total of 4 NID rounds (2 in spring and 2 in fall) and 2 rounds of SNIDs in high-risk districts. The same will be done in Pakistan, with an additional SNID round. Somalia will have conducted two pairs of NIDs and 2 SNID rounds in the densely populated areas with persistent virus circulation. In Sudan, in addition to two pairs of NIDs, one round of SNIDs will be conducted. Egypt will have a total of 5 NID rounds; the 3 fall rounds are aimed to be of the highest quality and to reach all children through house-to-house immunization throughout the country.

The Regional Office has ensured the availability of technical assistance in all aspects of NID planning, implementation and evaluation, particularly for Afghanistan, Iraq, Pakistan, Somalia, Sudan and the Republic of Yemen, through fielding more than 100 international experts and 700 national staff.

The substantial experience gained by national and district level staff in planning immunization campaigns, including cold chain logistics, workforce, transportation and social mobilization, represents a major contribution to human resource development in all countries. The impact has been most apparent in countries faced with difficult circumstances (Afghanistan, Somalia and Sudan). The experience gained in planning mass campaigns and accessing children in high-risk areas and previously unreached children constitutes the basis for delivering other health services including prevention, control and elimination of other diseases. The mass immunization campaigns have also been used to deliver other health interventions, particularly vitamin A, to reduce childhood morbidity and mortality from malnutrition and complications of measles.

### 3.3 Surveillance for acute flaccid paralysis

One of the main achievements in poliomyelitis eradication in the Region is that all countries of the Region have established well functioning national systems for acute flaccid paralysis (AFP) surveillance, which has also improved capacity for detection and reporting of other EPI target diseases. Establishment of effective AFP surveillance in countries affected by war and in areas with rudimentary or virtually non-existent health care services, such as in Afghanistan, Somalia and south Sudan, has been a great achievement.

During 2001, AFP surveillance continued to improve throughout the Region, and the required level of sensitivity (non-polio AFP rate exceeding one case per 100,000 children under 15 years of age) that was reached at regional level for the first time in 1999 was further
improved in 2001 (1.87 cases per 100 000 children under 15 years). In addition, AFP rates of one or more case per 100 000 children under 15 years of age were reported from all countries of the Region except Djibouti (Figures 3 and 4).

Figure 3. Regional non-polio AFP rate, 1993–2001 (target >1)

Figure 4. Non-polio AFP rate, countries of the Eastern Mediterranean Region, 2001 (target >1)
The second key indicator for quality of AFP surveillance is the adequacy of specimen collection: at least 80% of all AFP cases should have adequate stool specimens. In 2001, 16 countries (Djibouti, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Morocco, Oman, Pakistan, Palestine, Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia, United Arab Emirates and Republic of Yemen) met or exceeded this criterion and in 2 other countries (Afghanistan and Sudan) adequate specimens were collected from >70% of cases. Region-wide, the percentage of AFP cases with adequate stool specimens increased from 70% in 2000 to 83.1% in 2001 (Figures 5 and 6). Further improvement was noted in 2002 (as at end June), with 88% of AFP cases having adequate specimens.

1 Adequate specimens: 2 stool specimens collected at least 24 hours apart within 14 days of the onset of paralysis and arriving at the laboratory in good condition.
As part of acceleration efforts, active AFP surveillance was initiated and strengthened in all countries, with recruitment of sufficient national surveillance officers and provision of required supplies, equipment and technical support from the Regional Office. In view of continued progress of surveillance, all countries of the Region used the virological scheme in classification of AFP cases. This high quality surveillance is also guiding targeted immunization activities in countries.

Establishment of AFP surveillance has provided an opportunity for training of national staff in communicable disease surveillance and has helped strengthen capacity and infrastructure for disease reporting. Moreover, in some countries, AFP surveillance has been the first disease reporting system ever established and is being used as the first step towards phased development of communicable disease surveillance. The AFP surveillance system in Afghanistan and the Republic of Yemen has been expanded to include reporting of other vaccine-preventable diseases, such as measles and neonatal tetanus.

However, it must be emphasized that much remains to be done in order to maintain the standard of surveillance required to target efforts and to certify eradication all over the Region.

3.4 Regional laboratory network

Laboratory surveillance for wild poliovirus, the core component of AFP surveillance, made substantial progress. In 2001, 11 out of the 12 poliovirus network laboratories were fully accredited by WHO, and the remaining laboratory was provisionally accredited. During 2001, virological investigations were performed on 3818 of the 3865 reported (99%) AFP cases in the Region. Approximately 8948 specimens were tested in network laboratories, of which 7620 were from AFP cases, 1096 were from contacts of AFP cases, and 232 were from environmental samples, healthy children and other sources.

During 2001, only 58% of specimens were received in laboratories within 3 days of collection from AFP cases, a slight increase from the 52% received within 3 days during 2000. During 2002, this concern is being addressed, with the percentage at 71% at the end of June. During 2001, 94% of specimens were received in good condition. Results were reported within 28 days for 78% of samples, and non-polio enteroviruses were isolated from 16% of samples. Compared with previous years, laboratory indicators improved during 2002. The regional poliovirus laboratory network is supported by WHO/EMRO through training, monitoring, supervision and the provision of supplies and equipment.

3.5 Certification of poliomyelitis eradication

According to recommendations of the Global and Regional Commissions for Certification of Poliomyelitis Eradication, all countries except Somalia have established National Certification Committees (NCC) with appropriate membership. The revised manual for the preparation of certification reports is being utilized. The NCCs of 15 Member States (Bahrain, Cyprus, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia, United Arab Emirates and Republic of
Yemen) that have high quality AFP surveillance and have not reported cases of poliomyelitis for at least 3 years submitted reports and national documentation to the Regional Commission for Certification of Poliomyelitis Eradication (RCC). The RCC has reviewed these reports and provided appropriate feedback. The RCC has also reviewed several annual updates, to be provided by all countries with satisfactory initial reports until regional certification. The RCC continues to guide all aspects of the certification process in the Region. Some of its members have made country visits to review the status of the certification activities and available documentation.

3.6 Containment of laboratory poliovirus stocks

High priority is given to secure containment of laboratory stocks of wild poliovirus. This is part of a global initiative to prevent the chance introduction of viruses from laboratories into communities after polio eradication and cessation of immunization. A regional plan for containment was developed and endorsed by the Regional Committee in 2000, and guidelines were also developed to help countries in formulation of national plans. WHO is providing support to countries in developing and implementing their plans through consultant visits and organization of meetings for national containment coordinators.

As at June 2002, 18 of the 23 countries of the Region had prepared a national containment plan. The first phase of the plan is to inventory laboratories that handle or store poliovirus isolates or potentially infectious materials and to ensure appropriate biosafety levels. This phase has been successfully completed in Bahrain, Oman, Qatar and United Arab Emirates and is currently being implemented in Cyprus, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Morocco, Saudi Arabia, Syrian Arab Republic and Tunisia.

Thus far, national containment coordinators have been nominated in 18 countries, 13 of which have also established national containment committees.

4. STRATEGIC PLAN FOR POLIOMYELITIS ERADICATION, 2002–2005

The Strategic Plan of Action for Poliomyelitis Eradication has been updated and estimated resource requirements calculated for 2002 through 2005. This activity was required due to the dynamic nature of the eradication initiative, and was conducted in close consultation with national health authorities and appropriate international agencies within each country, in particular UNICEF. The Strategic Plan is also based on recommendations of global, regional and country level technical advisory groups on polio eradication.

The largest share of the costs of poliomyelitis eradication in the Region has been provided by the Member States of the Eastern Mediterranean Region. External financial assistance is needed to support poliomyelitis eradication activities in seven countries. The external funds needed in support of activities in Egypt, Iraq, Pakistan, Sudan and the Republic of Yemen are to bridge the shortfall that remains after the major share of the total cost has been committed by these national governments. However, in Afghanistan, Somalia and the
southern parts of Sudan, all activities have to be supported through funds provided by international partner agencies and donor governments. The Strategic Plan also includes the required funding for intercountry activities undertaken and coordinated at the level of the WHO Regional Office.

Components of the Regional Strategic Plan for Poliomyelitis eradication include intensified supplementary immunization activities, enhancing AFP surveillance and the laboratory network, containment of laboratory stocks, certification and strengthening EPI.

a) *Intensified supplementary immunization activities*

Intensified and high quality NIDs and mop-up campaigns are required to interrupt the remaining chains of transmission in endemic countries and to prevent resurgence of poliomyelitis in recently endemic countries, especially in countries with low routine immunization coverage. During the remainder of 2002 and 2003, the primary focus will be on intensifying NIDs and mop-up immunization to interrupt virus transmission in the remaining endemic countries.

In addition to the use of house-to-house immunization strategy, emphasis will be placed on better local planning, increased supervision and better logistical support to reach all children. NIDs and SNIDs will include coordinated cross-border immunization activities.

In 2003, the plan for supplementary immunization activities will be similar to that of 2002, with some phasing down in Egypt, Iraq and the Republic of Yemen. It is expected that in 2003 all the countries in the Region will have succeeded in interrupting wild virus transmission and from 2004 to 2005 these priority countries will be conducting one pair of NIDs plus subnational campaigns in some countries.

b) *Enhancing AFP surveillance and the laboratory network*

Efforts will continue to improve and sustain high quality AFP surveillance. All countries in the Region are expected to achieve “certification-standard” surveillance. It is hoped that all laboratories will be fully accredited during 2002. Certification-standard surveillance should be maintained through global certification.

c) *Containment of laboratory poliovirus stocks*

Efforts will be made to ensure implementation of the Regional Plan of Action for Laboratory Containment in its different phases and to align containment activities with certification.

d) *Certification*

From 2002 to 2005, certification activities will be further accelerated to provide documentation of the absence of wild poliovirus for the Regional and Global Certification Commissions. The Regional Certification Commission (RCC) will continue to meet twice a
year and will review documentation including national annual reports. Members of the RCC will visit countries as required to validate data.

e) Strengthening EPI

EPI strengthening has already been initiated through advocacy, social mobilization and human capacity-building through poliomyelitis eradication activities. From 2002 to 2005 and beyond, the initiative will continue to work in partnership with the Global Alliance for Vaccines and Immunization (GAVI) to strengthen routine EPI, ensuring maximum utilization of lessons learned from poliomyelitis eradication.

5. REGIONAL AND GLOBAL PARTNERSHIP

The impressive progress towards eradication of poliomyelitis in the Region is the result of the extraordinary efforts of national authorities and the support provided by a consortium of partners spearheaded by WHO, UNICEF, Centers for Disease Control and Prevention in Atlanta, USA, and Rotary International. Significant support has also been received during 2001 and 2002 from the UK Department for International Development, United Nations Foundation, Bill and Melinda Gates Foundation, Government of the Netherlands, United States Agency for International Development, International Federation of the Red Cross and Red Crescent Societies and many others.

The largest share of human and financial resources for the eradication efforts in the region has been committed by the countries, who continue to support large-scale eradication activities in close collaboration with EMRO and partners.

6. FUTURE CHALLENGES

Despite the significant achievements in the remaining endemic areas, the eradication programme still faces a number of challenges and constraints that must be overcome to reach the final eradication goal.

- **Maintaining political support.** The eradication effort has now entered its final and most difficult phase, requiring consolidation of strong political commitment to reach the eradication goal in remaining endemic countries as well as in polio-free countries. Commitment must be translated into effective action to solve persistent gaps in management and implementation at all levels. In polio-free countries, political commitment is needed to maintain supplementary immunization activities to protect against importation of poliovirus, attain certification standard surveillance and achieve laboratory containment of poliovirus stocks.

- **Ensuring access to all children.** Securing continued access to all children, particularly in countries and areas affected by war and conflict, is needed to allow implementation of quality immunization and surveillance activities. This will require extraordinary
efforts from UN and other agencies, as well as considerable additional human and financial resources.

**Securing financial resources.** One of the remaining challenges facing the programme is to ensure the financial support required to implement the regional plan for eradication through 2005. Financial resources must be provided in a timely fashion to secure technical and operational support to ensure high-quality eradication activities. All needs for 2003 through 2005 are considered unmet. Continued support is needed (Figure 7) from partner agencies donors, and efforts should be made to raise funds from within the Region to support countries of the Region.

![Figure 7. External resource shortfalls, by activity, Eastern Mediterranean Region, 2002–2005](image)
ELIMINATION OF MEASLES

1. BACKGROUND

In October 1997, the Regional Committee for the Eastern Mediterranean adopted a resolution (EM/RC44/R.6) for elimination of measles from the Region by 2010 taking into account that activities should not jeopardize poliomyelitis eradication activities. It also endorsed the proposed elimination strategy, which was based on the experience of the WHO Region of the Americas and includes four basic elements: catch-up campaigns to reduce the number of children susceptible to measles, maintaining high routine immunization coverage, follow-up campaigns to prevent accumulation of susceptible children and a strong measles surveillance system with laboratory confirmation of all suspected cases.

Based on the resolution the countries were divided into two groups according to the status of poliomyelitis eradication and the progress of measles control activities. The first group included countries that should fully implement the elimination strategies (elimination group) and included Bahrain, Cyprus, Jordan, Kuwait, Lebanon, Morocco, Oman, Palestine and Palestinian populations served by the United Nations Relief and Works Agency (UNRWA), Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia and United Arab Emirates. The second group included countries that were still or until recently endemic for poliomyelitis or whose surveillance system was unable to demonstrate interruption of poliovirus circulation. These countries were supposed to accelerate their measles control activities to reduce measles morbidity and mortality, as a step towards moving to the elimination group and included Afghanistan, Djibouti, Egypt, Islamic Republic of Iran, Iraq, Libyan Arab Jamahiriya, Pakistan, Somalia, Sudan and Republic of Yemen. Currently, Egypt, Islamic Republic of Iran, Iraq, Libyan Arab Jamahiriya and Republic of Yemen have joined the elimination group and it is planned that the other countries join this group as soon as they become eligible. Hence, currently the acceleration group includes Afghanistan, Djibouti, Pakistan, Somalia and Sudan.

The main strategies for the acceleration activities include increasing routine immunization coverage, improving measles surveillance with laboratory confirmation of outbreaks and proper management of measles cases.

2. OVERVIEW

2.1 Measles routine immunization schedule

Measles immunization was introduced in most of the countries during the 1970s and early 1980s. Currently, different measles immunization schedules are adopted by different Member States. Some countries, including all the countries currently in the acceleration group (Afghanistan, Djibouti, Pakistan, Somalia and Sudan) as well as Morocco and Republic of Yemen from the elimination group, are adopting a single-dose schedule using the measles vaccine at the age of 9 months (Table 1). The other countries are using a two-dose schedule, with either both doses as single antigen measles vaccine (Islamic Republic of Iran and Tunisia), or with the first dose being measles followed by a second dose of measles–mumps–rubella (MMR) vaccine (Egypt, Iraq, Jordan, Lebanon, Libyan Arab Jamahiriya, Palestine and
Palestinian populations served by UNRWA, Oman, Saudi Arabia, Syrian Arab Republic and United Arab Emirates), or with both doses MMR (Bahrain, Cyprus, Kuwait and Qatar) . Thus seven countries are using a one-dose measles routine immunization schedule while all the other 16 countries have a two-dose schedule.

Table 1. Measles routine immunization schedule, Eastern Mediterranean Region, 2001

<table>
<thead>
<tr>
<th>Country</th>
<th>Immunization schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>M (9 m)</td>
</tr>
<tr>
<td>Bahrain</td>
<td>MMR (18 m) MMR (4–6 y)</td>
</tr>
<tr>
<td>Cyprus</td>
<td>MMR (13–5 m) MMR (4–6 y)</td>
</tr>
<tr>
<td>Djibouti</td>
<td>M (9 m)</td>
</tr>
<tr>
<td>Egypt</td>
<td>M (9 m) MMR (18 m)</td>
</tr>
<tr>
<td>Iran, Islamic Republic of Iraq</td>
<td>M (9 m) M (15 m)</td>
</tr>
<tr>
<td>Jordan</td>
<td>M (10 m) MMR (18–4 y)</td>
</tr>
<tr>
<td>Kuwait</td>
<td>MMR (12 m) MMR (4–y)</td>
</tr>
<tr>
<td>Lebanon</td>
<td>M (9–10 m) MMR (15–8 m)</td>
</tr>
<tr>
<td>Libyan Arab Jamahiriya</td>
<td>M (9 m) MMR (15 m)</td>
</tr>
<tr>
<td>Morocco</td>
<td>M (9 m)</td>
</tr>
<tr>
<td>Oman</td>
<td>M (12 m) MMR (18 m)</td>
</tr>
<tr>
<td>Pakistan</td>
<td>M (9 m)</td>
</tr>
<tr>
<td>Palestine</td>
<td>M (9 m) MMR (15 m)</td>
</tr>
<tr>
<td>Palestinian population served by UNRWA</td>
<td>M (9 m) MMR (15 m)</td>
</tr>
<tr>
<td>Qatar</td>
<td>MMR (12 m) MMR (4–y)</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>MMR (12 m) MMR (18 m)</td>
</tr>
<tr>
<td>Somalia</td>
<td>M (9 m)</td>
</tr>
<tr>
<td>Sudan</td>
<td>M (9 m)</td>
</tr>
<tr>
<td>Syrian Arab Republic</td>
<td>M (9 m) MMR (15 m)</td>
</tr>
<tr>
<td>Tunisia</td>
<td>M (15 m) M (5–6 y)</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>M (9 m) MMR (15 m)</td>
</tr>
<tr>
<td>Yemen, Republic of</td>
<td>M (9 m)</td>
</tr>
</tbody>
</table>

M = measles MMR = measles-mumps-rubella (m) = vaccination age in months (y) = vaccination age in years
2.2 Routine immunization coverage

The estimation of immunization coverage is based on the reports received from the countries. Vaccination coverage is measured routinely based on administered doses and the target population estimates. These represent the proportion of children immunized by 1 year of age with a measles-containing vaccine (MCV) since the majority of countries are giving the first dose before 12 months of age. In a few countries the first dose of MCV is currently administered between 12 (Bahrain, Cyprus, Kuwait, Oman and Qatar) and 15 months (Tunisia) and coverage is estimated at 24 months. Even though coverage results may not be precise it is an indication of the status of immunization in these countries and one that is further demonstrated by the gradual decrease in measles cases in the presence of adequate surveillance.

During the early 1980s, the routine immunization coverage was still very low in most of countries with average regional measles immunization coverage of 4% (Figure 1). The average regional coverage rate reached 81% in 1992, but was not maintained and fell to 78% in 1993, 76% in 1994 and to 75% in 1995. Higher regional rates, around 80%, have been reported since 1996. In 2001 the average regional coverage rate was 80%.

In 2001, 16 countries reported routine very high measles immunization coverage rates (90% or more). These are all the countries in the elimination group except Iraq and Republic of Yemen, where the coverage rates were 80% and 82%, respectively. The five countries that are currently in the acceleration group reported lower coverage rates. Pakistan and Sudan reported rates of 75% and 80%, respectively, and very low rates were reported from Afghanistan (46%), Djibouti (49%) and Somalia (35%). For countries in which a second routine dose is included in the routine immunization schedule very high coverage rates (90%
or more) for the second dose coverage were reported from Egypt, Islamic Republic of Iran, Kuwait, Oman, Saudi Arabia, Syrian Arab Republic, Tunisia and United Arab Emirates. Lower coverage rates were reported from the remaining eight countries (Bahrain, Cyprus, Iraq, Jordan, Lebanon, Libyan Arab Jamahiriya, Palestine and Qatar).

### 2.3 Disease occurrence

Prior to vaccine introduction in the Region it is estimated that between 1 million and 2 million measles cases occurred every year, with approximately 10,000–50,000 deaths due to measles. Although data are not available there are historic recollections of massive outbreaks in the 1960s and 1970s with thousands of deaths.

Data available on measles incidence in the Eastern Mediterranean Region show that during the early 1980s very large numbers of measles cases were reported (346,000 in 1980 and 455,000 in 1981). Thereafter, the number of reported cases started to decline as routine immunization coverage (Figure 2). However, it should be noted that the reported number of cases is based on passive reporting through the routine surveillance system. Moreover, almost all the mild cases and a considerable proportion of moderate cases are missed by the routine surveillance system as these cases are considered to be natural events and so are not presented at health facilities. Great improvements in the surveillance systems were witnessed during the past 5 years, but mild and moderate cases are still omitted in many countries. There is also gross under-reporting of cases as only cases admitted to hospitals are reported and cases seen in basic health facilities (health units and centres) are not reported. In addition, in most Member States, no reports are obtained from the private sector which is usually very active. It should also be noted that outbreaks/epidemics are still occurring due to the accumulation of
susceptible children. The increase in the number of reported cases in 1997–1998 was a reflection of the improvement in the surveillance system together with outbreaks that occurred in Jordan, Morocco, Syrian Arab Republic and Republic of Yemen.

During 2001, countries reported a total of 40 619 measles cases: 20 001 cases (49.24%) were reported from the 18 Member States in the elimination group (Bahrain, Cyprus, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Palestine and Palestinian populations served by UNRWA, Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia, United Arab Emirates and Republic of Yemen). The great majority of these cases (19 486) were reported from the group of countries that have not yet conducted the catch-up campaign (Egypt, Islamic Republic of Iran, Iraq, Libyan Arab Jamahiriya and Morocco), with an incidence rate of 9.84 per 100 000, and only 515 cases (1.27%) were reported from the 13 countries which had conducted the catch-up campaign with an incidence rate of 0.75 per 100 000. The remaining 20 618 (50.76%) cases were reported from the five Member States that are in the acceleration group (Afghanistan, Djibouti, Pakistan, Somalia and Sudan), with an incidence rate of 10.14 per 100 000. It should also be noted that the surveillance system is good in the countries in the elimination group which have conducted the catch-up campaign, somewhat less sensitive in other countries in this group, and very weak in the countries in the acceleration group.

A sensitive surveillance system is required to monitor progress towards measles elimination. Every suspected measles case should be immediately investigated using the case investigation form and reported to the district preventive medicine department. A computerized system for reporting and analysis of “rash and fever” using the case line-listing methodology was developed and a workshop for training of national officers from the countries in the elimination group on the use of the system was conducted.

2.4 Supplementary immunization

It is evident that high routine measles vaccination coverage with either one or two dose measles immunization schedules is not enough to eliminate measles. Though less frequent and of lower magnitude than in the pre-vaccination era, outbreaks/epidemics of measles continue to be reported from most of the countries including those where the two-dose schedule is adopted. This is mainly due to the fact that measles vaccine is not 100% effective and universal vaccination coverage is not achievable. So, even with high vaccination coverage, the proportion of children susceptible to the disease increases over time and eventually reaches a level that sustains measles transmission. Susceptible children are those who did not receive the vaccine or who failed to sero-convert. In addition, coverage with the second dose is usually less than that of the first and those who did not receive the first are usually also missed by the second. However, with high coverage rates the accumulation of susceptible children is slow, resulting in an elongation of the inter-epidemic period (4–8 years)

a) Catch-up campaigns

Catch-up campaigns are mass vaccination campaigns to achieve rapid reduction in the number of susceptible children in the population and to interrupt the transmission of measles
virus by achieving a high level of coverage in a broad-target age group (generally children between 9 months and 15 years of age). Campaigns should be nonselective and should disregard disease history and vaccination status.

National initial mass catch-up campaigns have been conducted in 13 out of the 18 countries in the elimination group (Table 2). The first catch-up campaigns were conducted in 1994 in both Oman and Kuwait. Other countries implemented catch-up campaigns from 1997. Only Cyprus, Islamic Republic of Iran, Libyan Arab Jamahiriya, Morocco and Palestine have not yet conducted initial mass catch-up campaigns. Cyprus and Palestine have been able to sustain the elimination status with very high coverage by two routine doses. The Islamic Republic of Iran and Libyan Arab Jamahiriya are planning to conduct the catch-up campaign during 2002 and Morocco in 2002-2003.

Over 29.4 million children have been immunized since 1994 to date in nationwide mass catch-up measles vaccination campaigns conducted in Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia, United Arab Emirates and Republic of Yemen with an overall coverage of 97.5% (Table 2). The largest nationwide campaign in the Region was conducted in Egypt in 2001 targeting above 7.2 million children aged 6 to 11 years. This campaign achieved coverage above 98%.

b) Follow-up campaigns

Periodic follow-up campaigns are conducted to prevent the accumulated number of susceptible children from approximating the number of a typical birth cohort (usually every 3–7 years depending on routine immunization coverage and vaccine efficacy). These campaigns should include all children above the age of 1 year born since the previous campaign (initial or follow-up).

Measles immunization follow-up campaigns were conducted in two countries, Kuwait and Tunisia (Table 2). Kuwait conducted the follow-up campaign in 1998 using MMR vaccine. Children aged 6–11 years were targeted with coverage of 93%. Measles vaccine was used in the follow-up campaign in Tunisia in 2001 targeting children aged 9 months–5 years and the coverage achieved was 94%. These follow-up campaigns targeted more than 670 800 children with an overall coverage of 93.9%.

Other countries in the elimination group which had already conducted the catch-up campaign are continuously monitoring the accumulation of susceptible children based on the routine immunization coverage and the vaccine efficacy. Follow-up campaigns will be considered based on the accumulation of susceptible children and it is expected that some countries will be conducting follow-up campaigns during 2002–2003.
Table 2. Measles supplementary immunization campaigns conducted in the Eastern Mediterranean Region, 1994–2001

<table>
<thead>
<tr>
<th>Country</th>
<th>Type of activity</th>
<th>Dates of campaign (month/year)</th>
<th>Type of vaccine</th>
<th>Target age-group</th>
<th>Target population</th>
<th>Campaign coverage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>High-risk area</td>
<td>02–05/1999</td>
<td>M</td>
<td>&lt; 2 years</td>
<td>140 000</td>
<td>53</td>
</tr>
<tr>
<td>Bahrain</td>
<td>Catch-up</td>
<td>03–06/1998</td>
<td>MR</td>
<td>6–18 years</td>
<td>131 023</td>
<td>97</td>
</tr>
<tr>
<td>Egypt</td>
<td>High-risk area</td>
<td>10/1998</td>
<td>M</td>
<td>1–5 years</td>
<td>1 883 383</td>
<td>99</td>
</tr>
<tr>
<td>Iraq</td>
<td>High-risk area</td>
<td>12/1995</td>
<td>M</td>
<td>1–5 years</td>
<td>3 227 620</td>
<td>74</td>
</tr>
<tr>
<td>Jordan</td>
<td>Catch-up</td>
<td>02/2002</td>
<td>M</td>
<td>1–5 years</td>
<td>3 655 962</td>
<td>99</td>
</tr>
<tr>
<td>Kuwait</td>
<td>Catch-up</td>
<td>10/1997</td>
<td>M</td>
<td>6–15 years</td>
<td>1 401 263</td>
<td>99</td>
</tr>
<tr>
<td>Lebanon</td>
<td>Catch-up</td>
<td>11/1998</td>
<td>MR</td>
<td>1–14 years</td>
<td>1 040 000</td>
<td>73</td>
</tr>
<tr>
<td>Oman</td>
<td>Catch-up</td>
<td>03–05/1994</td>
<td>MR</td>
<td>9 months–18 years</td>
<td>750 000</td>
<td>94</td>
</tr>
<tr>
<td>Qatar</td>
<td>Catch-up</td>
<td>02/1999</td>
<td>M</td>
<td>6–16 years</td>
<td>85 175</td>
<td>94</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>Catch-up</td>
<td>10–11/1998</td>
<td>M</td>
<td>12–18 years</td>
<td>1 691 275</td>
<td>115</td>
</tr>
<tr>
<td>Sudan</td>
<td>High-risk area</td>
<td>07/1998</td>
<td>M</td>
<td>9 months–5 years</td>
<td>240 000</td>
<td>48</td>
</tr>
<tr>
<td>Tunisia</td>
<td>Catch-up</td>
<td>11/1998</td>
<td>M</td>
<td>6–16 years</td>
<td>1 846 567</td>
<td>99</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>Catch-up</td>
<td>11/1998</td>
<td>M</td>
<td>9 months–5 years</td>
<td>547 766</td>
<td>94</td>
</tr>
<tr>
<td>Yemen, Republic of</td>
<td>Catch-up</td>
<td>06/2001</td>
<td>M</td>
<td>1–5 years</td>
<td>2 346 227</td>
<td>94</td>
</tr>
<tr>
<td>Total</td>
<td>Catch-up</td>
<td></td>
<td></td>
<td></td>
<td>30 186 899</td>
<td>97.5</td>
</tr>
<tr>
<td></td>
<td>Follow-up</td>
<td></td>
<td></td>
<td></td>
<td>714 233</td>
<td>93.9</td>
</tr>
<tr>
<td></td>
<td>High-risk area</td>
<td></td>
<td></td>
<td></td>
<td>13 075 139</td>
<td>91.5</td>
</tr>
</tbody>
</table>

* Estimates
b Excluding private schools and out-of-school children
c Sub-national in districts with routine coverage <90%
d Including Palestinian refugees served by UNRWA in Jordan, Lebanon and Syrian Arab Republic

M Measles single antigen
MR Measles and rubella vaccine
MMR Measles-mumps-rubella vaccine

(c) High-risk area campaigns

Measles campaigns in urban high-risk areas are one of the basic strategies for prevention of outbreaks. Such campaigns were conducted in four countries, Afghanistan, Egypt, Islamic Republic of Iran and Iraq (Table 2). Since 1996 more than 13 million children...
in these countries have received measles vaccine through high-risk area campaigns, with coverage of 91.5%.

High-risk area campaigns have now been discontinued as it was recently proved that they have very limited impact on measles control.

2.5 Injection safety

Accelerated measles control and elimination activities require strict attention to injection safety. Administration of millions of doses of measles vaccine during a mass campaign necessitates careful planning to ensure: 1) training for behaviour change among patients and healthcare workers to ensure safe injection practices are adhered to; 2) provision of sufficient quantities of autodisable syringes and sharps boxes at national, provincial and district levels; and 3) adequate sharps waste management.

Such planning may be more effective and implemented at lower cost if a rapid assessment of injection practices using a newly developed WHO tool is conducted before the campaign. The tool is designed for rapid assessment of the injection situation through surveying 80 health facilities from eight districts that are chosen at random. It includes a questionnaire about and observation of all injection practices, not only those of the immunization programme. In addition, the safety of injection practices should be documented during campaigns as part of campaign monitoring to estimate the proportion of safe injections so that: 1) awareness raised about injection safety during mass measles vaccination campaigns carries over into routine immunization practices; and 2) injection safety plans beyond the campaign are updated on the basis of the lessons learned with regard to effectiveness of the injection safety plan implemented for the campaign.

Assessment of injection safety was conducted in Cyprus, Djibouti, Egypt, Morocco, Oman, Pakistan, Sudan, Syrian Arab Republic and Tunisia. Assessment included all injection practices, with emphasis on the immunization programme, and revealed a number of issues that need to be addressed:

1. Risk to recipients is moderate to high, essentially because of the over-use of injections, reuse of syringes and/or needles, as well as the use of non-sterile equipment.

2. Risk to health workers is also moderate to high, because of very frequent recapping of used syringes resulting in a high proportion of needle-stick injuries.

3. Risk to the community is very high, because of the lack of safe collection and disposal of used syringes and needles.

In this respect, it was emphasized that all measles campaign plans should include sections on immunization safety and that only autodisable syringes should be used in the campaign, with proper collection of used syringes using safety boxes as well as proper disposal. In addition, the plans should include activities for monitoring of injection safety and occurrence of adverse events during the campaigns.
2.6 Vitamin A supplementation

In vitamin A-deficient countries, WHO recommends that vitamin A supplements are provided at the time of routine measles vaccination (e.g. at 9 months). In addition, poliomyelitis and measles supplementary campaigns should be used as an opportunity to provide vitamin A capsules. Also, in vitamin A-deficient areas, a measles outbreak may provide an important opportunity to administer vitamin A supplementation to all children whose age puts them at risk of measles, whether they have been immunized or not. In countries with a vitamin A deficiency problem, the provision of high-dose vitamin A supplements every 4–6 months not only protects against blindness, but also reduces the risk of all-cause mortality by 23%, measles mortality by 50%, and diarrhoeal disease mortality by about 33%.

Currently administration of vitamin A supplementary doses through the routine immunization system is conducted in eight countries, Afghanistan, Egypt, Morocco, Oman, Somalia, Sudan, Syrian Arab Republic and Republic of Yemen. Also, supplementary doses were given during the poliomyelitis campaigns (national and subnational immunization days) and measles supplementary immunization activities in Afghanistan, Djibouti, Islamic Republic of Iran, Morocco, Pakistan, Somalia, Sudan and Republic of Yemen.

2.7 Adequate measles case management

Many children will experience uncomplicated measles cases and will require only supportive measures including vitamin A supplementation, nutritional support and education to mothers about complications. Management of complicated cases includes vitamin A supplementation and adequate treatment of complications. Proper measles case management activities are included in all the countries' national plans of action and emphasis has been put on training health staff in implementation of proper case management activities in line with the strategy of integrated management of childhood illness (IMCI).

2.8 Measles laboratory network

Laboratory support for measles control/elimination programmes is an essential component of the surveillance system.

In the accelerated control phase, suspected measles cases are confirmed on clinical grounds only. However, during outbreaks initial cases (e.g. 5–10 cases in each chain of transmission) should be laboratory-confirmed. Outbreak investigations and sentinel surveillance (e.g. at major city and district hospitals) are useful to monitor changes in measles epidemiology.

A great decrease in measles occurrence is observed after measles catch-up campaigns and the disease then becomes rare. Doctors will not then see cases frequently and, because of the low positive predictive value of the clinical case definition, the role of the laboratory becomes crucial. All suspected cases should be subjected to laboratory confirmation to confirm measles or rubella, and monitor interruption of indigenous transmission. Countries in
the elimination phase that have already succeeded in reducing the number of susceptible children through completion of catch-up campaigns should establish a measles cases-based surveillance system with laboratory confirmation of all suspected cases. Among this group of countries, suspected cases that are negative for measles should also be tested for rubella.

Laboratory confirmation of measles cases is established through serological examination for detection of measles antibodies (IgM). IgM develops 4 days after rash onset and persists for about 30 days; thus, it indicates recent infection. IgG also increases 14 days after rash onset and remains for life and so indicates that the person is immune.

Laboratory support should also include capability for measles virus isolation. Measles virus isolation is not necessary for diagnosis but allows molecular analysis, providing likely geographical origin of strains, and documents the interruption of the indigenous strain. Measles virus can be cultured from urine, nasopharyngeal specimens or peripheral blood lymphocytes during the prodromal and early rash stage of the disease.

Development of the measles laboratory network in Eastern Mediterranean Region has progressed well since 1997 when the first of three training workshops was held. Most countries have now had laboratory personnel trained in standardized methods for testing for measles and rubella and, whenever required, have been supported with kits and equipment.

Many countries have had consultants review their laboratory activities over the past 4 years and currently 18 countries have a functioning national measles laboratory (not yet established in Afghanistan, Djibouti, Iraq, Palestine and Somalia). Also, establishment of subnational laboratories is being considered for large countries. Two regional reference laboratories were designated (Oman and Tunisia)

3. INTEGRATION OF RUBELLA IN THE MEASLES ELIMINATION PROGRAMME

Rubella is endemic in the Region, but the burden of the disease and its complication (congenital rubella syndrome, CRS) is unknown in the majority of countries since most of them have not yet set up surveillance activities covering this disease. Rubella-containing vaccine was used in mass measles campaigns in all countries that conducted them except Egypt, Jordan, Iraq, Tunisia and Republic of Yemen. Rubella vaccination is currently included in the routine EPI schedule in 14 countries (Bahrain, Cyprus, Egypt, Iraq, Jordan, Kuwait, Libyan Arab Jamahiriya, Lebanon, Oman, Palestinian and Palestinian populations served by UNRWA, Qatar, Saudi Arabia, Syrian Arab Republic and United Arab Emirates). However, integration of the vaccine in the routine EPI programme without preliminary precautions may result in increasing susceptibility for rubella in women of childbearing age. To avoid this potential risk, rubella control/elimination strategies should be properly implemented and countries should ensure that they have the ability to achieve and sustain high routine coverage with rubella vaccine before introducing it into their routine programme. These strategies should include supplementary immunization activities as well as surveillance and monitoring/evaluation components.

The regional plan of action for measles control acceleration/elimination, prepared in May 1997 and endorsed by the Regional Committee in October 1997, was revised in May 2001 to include strategies pertinent to expansion of accelerated control/elimination activities and to include rubella. The revised plan also included provision for moving countries from the acceleration group to the elimination group in a phased manner, based on the achievement of poliomyelitis eradication and strengthening of the routine immunization and surveillance systems. According to this plan it is expected that by 2005 all countries will have achieved the basic elements for elimination: high routine immunization coverage, completion of catch-up immunization campaigns and a strong surveillance system. The plan includes the following indicators for monitoring the implementation of activities at country level.

a) **Indicators for countries in the accelerated measles control group**

- Coverage rate monitored nationwide and by district/population group (<50%, 50%–79%, > 80%)
- DPT1–measles or BCG–measles drop-out rate

The quality of the surveillance system will be monitored using the following indicators:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>% completeness/timeliness</td>
<td>≥ 80%</td>
</tr>
<tr>
<td>% of measles outbreaks investigated and confirmed by the laboratory</td>
<td>≥ 80%</td>
</tr>
<tr>
<td>% of reported measles cases with age and immunization status indicated</td>
<td>≥ 80%</td>
</tr>
<tr>
<td>Incidence rate by month, year and geographic area</td>
<td></td>
</tr>
</tbody>
</table>

b) **Indicators for countries in the measles elimination group**

- Coverage rate monitored nationwide and by district/population group (< 50%, 50%–79%, 80%–89%, > 90%)
- DPT1–measles or BCG–measles drop-out rate
The quality of the surveillance system will be monitored using the following indicators:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>• % completeness/timeliness</td>
<td>≥ 80%</td>
</tr>
<tr>
<td>• % cases notified ≤ 7 days of rash onset</td>
<td>≥ 80%</td>
</tr>
<tr>
<td>• % cases investigated ≤ 48 hours of notification</td>
<td>≥ 80%</td>
</tr>
<tr>
<td>• % cases with adequate specimens (3–28 days after rash onset)</td>
<td>≥ 80%</td>
</tr>
<tr>
<td>• % cases with laboratory results within 7 days</td>
<td>≥ 80%</td>
</tr>
<tr>
<td>• % cases with laboratory confirmation</td>
<td>≥ 80%</td>
</tr>
<tr>
<td>• % discarded cases with laboratory specimens among the total discarded</td>
<td>≥ 80%</td>
</tr>
<tr>
<td>• % confirmed cases with infection source identified</td>
<td>≥ 80%</td>
</tr>
<tr>
<td>• % of outbreak investigated</td>
<td>≥ 80%</td>
</tr>
</tbody>
</table>

The revised plan of action also included estimation of the external resources required for implementation of various aspects of the elimination activities (vaccine, syringes, operational cost and ensuring injection safety for supplementary campaigns and strengthening the surveillance system) in the priority countries that are in need of external support and also the resources required for the Regional Office to provide proper technical support to all countries. A summary of the estimated external financial requirement is presented in Tables 3, 4 and 5. In this respect it should be noted that all country activities conducted so far were funded by national resources. It was not possible to obtain the required estimated support for 2001, however, Iraq and Republic of Yemen, which were among the countries considered for such support, were able to meet almost all the requirements from national resources and limited support was provided from the regular budget in Iraq.

In addition to the regional planning, annual meetings for measles/rubella control acceleration/elimination activities have been conducted since 1998. Two meetings are conducted each year: one for the countries in the acceleration group and one for the countries in the elimination group. Progress is discussed and the national plans are revised. These meetings will be continued for at least the coming 5 years.
Table 3. Estimated additional external resource requirements (US$) for regional coordination of measles activities, Eastern Mediterranean Region, 2001–2005

<table>
<thead>
<tr>
<th>Component</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop/revise country plans (Intercountry meetings)</td>
<td>125 000</td>
<td>125 000</td>
<td>125 000</td>
<td>125 000</td>
<td>125 000</td>
<td>625 000</td>
</tr>
<tr>
<td>Development of human resources</td>
<td>70 000</td>
<td>88 000</td>
<td>85 000</td>
<td>85 000</td>
<td>85 000</td>
<td>413 000</td>
</tr>
<tr>
<td>Monitoring</td>
<td>20 000</td>
<td>25 000</td>
<td>20 000</td>
<td>15 000</td>
<td>15 000</td>
<td>95 000</td>
</tr>
<tr>
<td>Country assessment and evaluation</td>
<td>90 000</td>
<td>80 000</td>
<td>80 000</td>
<td>80 000</td>
<td>80 000</td>
<td>410 000</td>
</tr>
<tr>
<td>Strengthening management and administration</td>
<td>160 000</td>
<td>160 000</td>
<td>160 000</td>
<td>160 000</td>
<td>160 000</td>
<td>800 000</td>
</tr>
<tr>
<td>Support to planning in priority countries</td>
<td>63 000</td>
<td>63 000</td>
<td>63 000</td>
<td>42 000</td>
<td>42 000</td>
<td>273 000</td>
</tr>
<tr>
<td>Total</td>
<td>528 000</td>
<td>541 000</td>
<td>533 000</td>
<td>507 000</td>
<td>507 000</td>
<td>2 616 000</td>
</tr>
</tbody>
</table>

Table 4. External resource requirements (US$) for measles laboratory network in the Eastern Mediterranean Region, 2001–2005

<table>
<thead>
<tr>
<th>Component</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional laboratory coordination</td>
<td>55 000</td>
<td>55 000</td>
<td>60 000</td>
<td>55 000</td>
<td>70 000</td>
<td>295 000</td>
</tr>
<tr>
<td>Development of human resources</td>
<td>20 000</td>
<td>50 000</td>
<td>20 000</td>
<td>35 000</td>
<td>25 000</td>
<td>150 000</td>
</tr>
<tr>
<td>Laboratory equipment and reagents</td>
<td>88 000</td>
<td>58 000</td>
<td>80 000</td>
<td>45 000</td>
<td>70 000</td>
<td>341 000</td>
</tr>
<tr>
<td>Support to national and regional laboratories</td>
<td>100 000</td>
<td>110 000</td>
<td>115 000</td>
<td>120 000</td>
<td>125 000</td>
<td>570 000</td>
</tr>
<tr>
<td>Monitoring</td>
<td>17 500</td>
<td>12 500</td>
<td>5 000</td>
<td>0</td>
<td>10 000</td>
<td>45 000</td>
</tr>
<tr>
<td>Quality assurance</td>
<td>50 000</td>
<td>50 000</td>
<td>50 000</td>
<td>50 000</td>
<td>50 000</td>
<td>250 000</td>
</tr>
<tr>
<td>Total</td>
<td>330 500</td>
<td>335 500</td>
<td>330 000</td>
<td>305 000</td>
<td>350 000</td>
<td>1 651 000</td>
</tr>
</tbody>
</table>
Table 5. Estimated additional external resources required (US$) by activity in priority countries and at regional level, Eastern Mediterranean Region, 2001–2005

<table>
<thead>
<tr>
<th>Year</th>
<th>Supplementary vaccination</th>
<th>Country level operation</th>
<th>Regional level operation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bundled vaccine</td>
<td>Operational cost</td>
<td>Surveillance</td>
<td>Injection safety</td>
</tr>
<tr>
<td>2001</td>
<td>591 600</td>
<td>2 550 000</td>
<td>30 000</td>
<td>30 000</td>
</tr>
<tr>
<td>2002</td>
<td>17 349 540</td>
<td>7 020 000</td>
<td>115 000</td>
<td>55 000</td>
</tr>
<tr>
<td>2003</td>
<td>29 682</td>
<td>72 750</td>
<td>125 000</td>
<td>20 000</td>
</tr>
<tr>
<td>2004</td>
<td>826 200</td>
<td>0</td>
<td>173 000</td>
<td>55 000</td>
</tr>
<tr>
<td>2005</td>
<td>10 434 600</td>
<td>25 575 000</td>
<td>127 000</td>
<td>35 000</td>
</tr>
<tr>
<td>Total</td>
<td>29 231 622</td>
<td>35 217 750</td>
<td>570 000</td>
<td>195 000</td>
</tr>
</tbody>
</table>
1. INTRODUCTION

Tuberculosis control is a priority programme in the WHO Eastern Mediterranean Region. The Region still suffers from a serious burden of tuberculosis. Tuberculosis kills 136 000 people and affects 630 000 people in the Region every year. This means that every 5 minutes someone in the Region dies of tuberculosis, and every minute, someone develops tuberculosis.

The Regional Office, together with the Member States, started strengthening national tuberculosis programmes through the introduction of the directly observed treatment, short-course (DOTS) strategy from 1995. The Regional Committee for the Eastern Mediterranean, at its Forty-fourth Session held in Teheran, Islamic Republic of Iran, 4–7 October 1997, discussed the subject and adopted resolution EM/RC44/R.6 in which it:

a) Urged Member States:
   • With low incidence of tuberculosis which have not yet adopted the target of tuberculosis elimination by the year 2010 to do so;
   • With intermediate to high incidence of tuberculosis to implement the strategy of DOTS ALL OVER as a prerequisite for elimination.

b) Requested the Regional Director to report regularly to the Regional Committee on progress made towards the elimination of tuberculosis.

The Member States and the Regional Office have made considerable progress in tuberculosis control. This report summarizes the progress made since then and highlights the future direction of tuberculosis control in the Region.

2. ACTIVITIES UNDERTAKEN IN RESPONSE TO RESOLUTION EM/RC44/R.6

2.1 Expansion of DOTS activities

In the early phase of DOTS introduction, namely in 1995, efforts were made in training the managers of national tuberculosis programmes (NTPs) and raising awareness about the importance of DOTS in order to develop a baseline for DOTS implementation. From 1996 to 1997, efforts were made to start DOTS pilot areas as a first step to DOTS expansion, and the countries and the Regional Office jointly undertook several key activities, including field visits, development of DOTS starting plans, training of tuberculosis coordinators and other health personnel at all levels, and negotiations with decision-makers to obtain political commitment. Ten countries had started DOTS pilot activities by the end of 1997 (Figure 1). All these DOTS areas achieved good treatment success rates.
From 1998, the Regional Office assisted countries in expanding DOTS activities with a view to achieving nationwide coverage: DOTS ALL OVER. The activities undertaken included comprehensive in-depth review of programmes, country missions, exchange visits of national tuberculosis programme (NTP) managers, annual meetings of NTP managers, regional training courses and sub-regional initiatives. In-depth reviews were carried out in Egypt, Islamic Republic of Iran, Sudan and Republic of Yemen to evaluate DOTS activities, identify constraints and develop expansion plans. WHO missions visited almost all countries to improve DOTS activities. Many NTP managers, through exchange visits, gained experience from NTPs in other countries. Annual meetings of NTP managers assisted managers to review and develop comprehensive plans for DOTS ALL OVER, and more importantly, fostered an invaluable sense of solidarity and mutual trust among them. Through this process, a steadily increasing number of countries achieved DOTS ALL OVER. By the end of 2000, 18 out of 23 countries in the Region had achieved it (Figure 1).

Figure 1. DOTS expansion (1997–2000)
2.2 Innovative activities in the countries and the Region

The successful expansion of DOTS activities was the result of a number of innovative approaches in tuberculosis control at country and regional levels.

A private–public mix approach was initiated in many countries. One encouraging example has taken place in Egypt, where the NTP established a national tuberculosis board representing all partners in health, including the private sector. Pilot projects involving general practitioners and private laboratories started in 2000 for case referral and notification. Universities also started notification of tuberculosis cases. Egypt is one of the few countries in the world that receives case-notifications from the private health sector as well as universities. Another encouraging example took place in the Syrian Arab Republic, where anti-tuberculosis drugs used to be widely sold in private pharmacies, sometimes even without prescription. After long discussion with the private sector, the Ministry of Health issued a decree to ban the sale of anti-tuberculosis drugs in private pharmacies.

Community participation took place in several countries. For example, the Jordanian Anti-Tuberculosis Association (JATA) gives valuable assistance to tuberculosis patients. In collaboration with the NTP, JATA provides financial support to all tuberculosis patients in Jordan: JOD 20 every month to each patient during the treatment period. This has contributed to the high treatment success rate.

Countries in a situation of complex emergency, such as Iraq and Somalia, have also achieved good progress. Iraq managed to achieve DOTS ALL OVER. The NTP manager took a strong leadership role in initiating and expanding DOTS activities, and although tuberculosis incidence has increased by almost 200% in the past 10 years, tuberculosis cases are being managed effectively through DOTS. Somalia has achieved 88% treatment success rate. The WHO country office has taken a coordination role in developing partnerships with nongovernmental organizations, local authorities and international partners, and has provided them with drugs, laboratory supplies and technical assistance.

Collaboration with medical schools has become a priority. The Regional Office established a link between NTPs and medical schools through two meetings: one in Amman, Jordan in 2000 and the other in Tunis, Tunisia in 2001. A combined report of the meetings was published as a guide for countries to integrate tuberculosis control and DOTS into medical education.

Operational research has been promoted. In 2000, the Regional Office, in collaboration with the UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR) and the International Union Against Tuberculosis and Lung Disease, held a tuberculosis research workshop in Alexandria, Egypt. In the workshop, NTP managers and researchers from 10 countries developed operational research protocols and submitted them to the EMRO/TDR Small Grants Scheme, and many of them were funded. In addition, the cost-effectiveness of DOTS was endorsed by a study carried out in Egypt and the Syrian Arab Republic with the Royal Tropical Institute, Netherlands. In the study DOTS delivered through
the primary health care network was found to be a highly cost-effective intervention for tuberculosis control.

2.3 Analysis of DOTS expansion

By the end of 2001, 18 out of 23 countries had achieved DOTS ALL OVER. Of the five remaining countries, The Republic of Yemen and Sudan achieved high DOTS coverage: 95% and 85% respectively, and are expected to achieve DOTS ALL OVER in 2002. Somalia also achieved 70% coverage despite a situation of complex emergency. Two countries, Pakistan and Afghanistan, are seriously lagging in DOTS expansion: 24% and 15% DOTS coverage, respectively. Accordingly, the 23 countries of the Region can be categorized into two groups: countries that have achieved DOTS ALL OVER, and countries that lag in DOTS expansion.

Table 1. DOTS coverage as of 31 March 2002

<table>
<thead>
<tr>
<th>DOTS coverage</th>
<th>No. of countries</th>
<th>Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOTS ALL OVER (100% DOTS coverage)</td>
<td>18</td>
<td>Bahrain, Cyprus, Djibouti, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia, United Arab Emirates</td>
</tr>
<tr>
<td>DOTS lagging (&gt; 50% DOTS coverage)</td>
<td>3</td>
<td>Republic of Yemen (95%), Sudan (85%), Somalia (75%)</td>
</tr>
<tr>
<td>DOTS lagging (&lt; 50% DOTS coverage)</td>
<td>2</td>
<td>Pakistan (24%), Afghanistan (15%)</td>
</tr>
</tbody>
</table>

The second group can further be divided into two: those achieving more than 50% DOTS coverage and those with less than 50% coverage (Table 1).

DOTS expansion and accomplishment of DOTS ALL OVER are urgent issues in the five DOTS lagging countries, particularly Pakistan and Afghanistan. These two countries jointly account for 55% of the regional burden of tuberculosis: Pakistan 43%, and Afghanistan 12%. Due to their low DOTS coverage, these countries had low case detection rates in 2000: 5% and 3%, respectively. These rates have affected the overall case detection rate of the Region, which remains low (22% in 2000). Somalia has expanded DOTS activities to the maximum level. Sudan and Republic of Yemen are expected to achieve DOTS ALL OVER in 2002.

The 18 countries that achieved DOTS ALL OVER have paved the way for establishing effective tuberculosis control. For them, the issues now are quality and comprehensiveness of DOTS activities. The quality of DOTS activities is measured by the case detection and treatment success rates. The status in countries is illustrated in Figure 2. It is clear that the countries have achieved good treatment success rates in general. The main problem is low case detection rates.
Table 2. Status of tuberculosis notifications by different health sectors in the Region (as at June 2001)

<table>
<thead>
<tr>
<th>Health care provider</th>
<th>Full notification</th>
<th>Notification but in pilot areas only</th>
<th>Diagnose and refer cases to NTP</th>
<th>No notification</th>
<th>No tuberculosis-related activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministries of Interior</td>
<td>9</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Ministries of Defence</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Private health sector</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

Comprehensiveness of DOTS activities is measured by the involvement of different health care providers. In the past few years, countries have been busy in expanding DOTS within the health services of ministries of health, and the involvement of other health care providers, particularly the private health sector, has been generally limited. For example, notification of tuberculosis cases is compulsory in almost all countries, however health care providers do not always make notification (Table 2).

3. NEW DIRECTIONS IN TUBERCULOSIS CONTROL IN THE REGION

3.1 New targets for tuberculosis control

In light of the situation analysis mentioned above, and because of the need for continued facilitation of activities in countries, the Regional Committee for the Eastern Mediterranean, at its Forty-seventh Session held in Cairo, Egypt, 1–4 November 2000, endorsed a new set of targets for tuberculosis control. The previous target was a service target, aiming to expand DOTS activities nationwide. The new targets are to ensure high performance of programme activities (case detection, treatment success, and treatment enrolment) and, more importantly, reduce the burden of tuberculosis (prevalence, mortality and incidence). In addition, since epidemiological and programme situations vary among countries, the new targets are both regional and country-specific.
Regional targets

- Detect at least 70% of all cases of tuberculosis in the Region, and successfully treat at least 85% of them by 2005, and sustain the achievements.
- Enrol all detected tuberculosis patients in the DOTS strategy by 2005.
- Reduce prevalence of and deaths from tuberculosis in the Region by 50% by 2010.

Country-specific targets

- All countries, except for Afghanistan, Pakistan and Somalia who are lagging in DOTS implementation, should detect at least 70% of all cases of tuberculosis and successfully treat at least 85% of them by 2003.
- Countries with intermediate incidence of tuberculosis should reduce the incidence of tuberculosis by at least 50% by 2010. This is based on epidemiological evaluation that shows that in the presence of effective tuberculosis control, prevalence of and deaths from tuberculosis decline first, followed by reduction in incidence.
- Countries with low incidence of tuberculosis should reduce the incidence of smear positive pulmonary tuberculosis to at least as low as 1 per 100,000 population by 2010, in line with the 1997 resolution EM/RC44/R.6.

3.2 Strategic plan for tuberculosis control in the Region: 2002–2005

The Regional Office has developed a strategic plan for tuberculosis control for 2002 to 2005 in order to ensure the accomplishment of the above targets. The strategic plan specifies the vision, targets and objectives of tuberculosis control in the Region. The vision is to eliminate tuberculosis from the Region by 2050, and the objectives are to achieve high quality and comprehensive DOTS activities, establish beyond-DOTS strategies and develop partnership.

The strategic plan outlines two components of supportive activities. The first one is country support which includes direct country-level activities. The main activities are summarized by being grouped under the most relevant objectives to which the activities would contribute, as follows.

Quality

- Develop national multi-year strategic plans
- Provide direct country support
- Develop tuberculosis surveillance as an integrated part of communicable disease surveillance
- Implement national anti-tuberculosis drug resistance surveillance
Comprehensiveness

- Establish an intersectoral collaboration mechanism for all health care providers
- Develop cooperation mechanisms between NTP and medical schools
- Develop national network for operational research

Beyond DOTS

- Establish national beyond-DOTS strategies
- Conduct epidemiological surveys, such as tuberculosis prevalence surveys

Partnership development

- Develop a national inter-agency coordination committee
- Establish collaboration with global initiatives, such as the Global Fund to Fight AIDS, Tuberculosis and Malaria

The second component is regional operations, which focuses on regional, subregional and intercountry activities. The main activities included are as follows: (a) human resource development, such as regional training courses and on-the-job training of future consultants; (b) focused meetings, such as the annual NTP managers meeting; (c) subregional activities, such as the Horn of Africa Tuberculosis Control Initiative and the Tuberculosis Elimination Initiative; (d) regional surveillance; (e) operational research, such as support to the Small Grants Scheme; (f) strengthening managerial capacity of Regional Office leadership; and (g) creating an Inter-Agency Coordination Committee (IACC) within the Regional Communicable Disease Control IACC, and a Regional Technical Advisory Group.

3.3 Anticipated challenges and solutions

Fully implementing the strategic plan and accomplishing the objectives and targets is a considerable task. Key challenges and possible solutions that countries, the Regional Office and other concerned partners can bring to bear are summarized below.

DOTS activities in weak health services

The countries that suffer most from tuberculosis spend the least on health. In Afghanistan, Pakistan, Somalia, Sudan and Republic of Yemen, public expenditure on health is less than US$ 20 per capita. This has resulted in inadequate development of general health services, lack of financial resources and shortages of drugs. Activities to cope with the challenges include: development of a national multi-year strategic plan to outline needs; establishment of a national inter-agency coordination committee to mobilize resources; promotion of partnership with global initiatives; and promotion of an integrated approach in communicable disease control.
DO Ts in countries with security instability

Afghanistan, Somalia and the southern part of Sudan are affected by conflict and DOTS implementation needs special preparation and management. Somalia is a good example in this regard, implementing DOTS through a network of local authorities and NGOs, and achieving 88% treatment success rate. Therefore it is planned to promote the Somalia model for controlling tuberculosis in a complex emergency situation and mobilize financial support through inter-agency coordination committees.

Changes in the health sector

The health sector is changing drastically. The private sector is booming, and is providing a large share of health services to the community. Health insurance services are also widening their coverage. Health sector reform is taking place in an increasing number of countries. Activities to cope with the challenge are to: keep tuberculosis control as an essential component of national health sector development; develop mechanisms for collaborating with health care providers; and promote operational research, particularly into the private-public mix approach.

Multi-drug resistance

According to the recent anti-tuberculosis drug resistance surveys\textsuperscript{1}, drug resistance is ubiquitous. In the Region, multi-drug resistance in new cases was low in Morocco and Oman (2.2% and 0.8% respectively) and high in the Islamic Republic of Iran (5.0%). The start of drug resistance surveillance in all countries of the Region is needed. More importantly, ensuring high quality DOTS activities is the primary intervention against the drug resistance. Introduction of chronic case management (DOTS Plus) is also important in countries with the resources and high quality and comprehensive DOTS activities.

HIV/AIDS

Epidemiological patterns of HIV vary widely in the countries of the Region. An important point is that the countries with an increasing HIV/AIDS burden are also the countries with a high tuberculosis burden, such as Djibouti and Sudan. Effective collaboration is urgently needed, not only between the concerned programmes but also among relevant partners.

3.4 Outlook in Afghanistan and Pakistan

DOTS expansion is still at the beginning in Afghanistan. Within the context of reconstruction of health services, tuberculosis control is considered a priority. The Regional Office raised support from international partners, such as the Governments of Canada, Italy

\textsuperscript{1} WHO/IUATLD Global Project on Anti-Tuberculosis Drug Resistance Surveillance. \textit{Anti-TB drug resistance in the world: prevalence and trends}. Geneva, World Health Organization, 2000
and Norway. A regular supply of drugs and laboratory materials has been secured. An international expert and a number of national experts were recruited to provide technical assistance. A national inter-agency coordination committee was established. DOTS expansion is still a considerable challenge in light of the general devastation and security situation.

Pakistan finally started tangible DOTS expansion in 2001. DOTS coverage increased from 15% at the end of 2000 to 24% by end 2001. Expansion took place as a result of improved technical leadership, good political commitment with funds, and effective international partnership. Pakistan established a national inter-agency coordination committee on tuberculosis, which resulted in good fund-raising. Continued DOTS expansion however remains a challenge in Pakistan, particularly in light of the weak infrastructure of public health services and ongoing process of decentralization. The Regional Office will continue to provide comprehensive support to Pakistan.
INTRODUCTION

1.1 Aims

The Global Alliance for Vaccines and Immunization is an alliance of public and private sector partners assembled into a worldwide network, created in 1999, with a common vision to save children’s lives and protect people’s health through the widespread use of vaccines, with a particular emphasis on developing countries.

GAVI partners are seeking to correct three major gaps:

- incomplete immunization and protection against vaccine-preventable diseases of public health concern of nearly 30 million children born every year in developing countries;
- disparity between children in industrialized countries, who are protected against many more diseases, and children in developing countries; and
- lack of investment in vaccines against diseases prevalent in developing countries, including pneumonia, diarrhoea, HIV/AIDS, malaria and tuberculosis;

1.2 Strategic objectives

- Improve access to sustainable immunization services.
- Expand the use of all existing, safe and cost-effective vaccines where they address a public health problem.
- Support the national and international accelerated disease control targets for vaccine-preventable diseases.
- Accelerate the development and introduction of new vaccines and technologies.
- Accelerate research and development efforts for vaccines needed primarily in developing countries.
- Make immunization coverage a centerpiece in international development efforts.

1.3 Mechanisms

- The GAVI Board, comprised of the highest level representation from the partners, has four renewable members, WHO, UNICEF, The World Bank and the Bill and Melinda Gates Foundation, and eleven additional rotating members responsible for representing
the collective expertise and perspective of their constituencies. The Board sets the policies of the alliance.

• The GAVI Working Group is responsible for the implementation of the decisions of the GAVI Board. The Working Group is comprised of middle-level managers in the GAVI partner institutions. These staff are able to translate GAVI priorities into their respective agency workplans.

• The GAVI Secretariat, comprised of five professional staff and two secretaries housed in the European Regional Office of UNICEF in Geneva, facilitates coordination between the partners and manages the review of country proposals to the Vaccine Fund. The Executive Secretary reports to the GAVI Board.

• Four GAVI Task Forces have been established to address specific issues of concern to the Board. Task forces are funded by the alliance and managed by their respective lead agency(ies), and include representatives of the relevant partner agencies. They are the Advocacy Task Force, Task Force for Country Coordination, Financing Task Force and Research and Development Task Force.

• In addition, regional working groups have been formed to help coordinate technical support and information sharing between the national and international levels.

1.4 Vaccine funds

A special funding tool was established with an initial grant of US$ 750 million over 5 years from the Bill and Melinda Gates Foundation. This fund will facilitate purchase of underutilized and new vaccines, providing resources to strengthen immunization infrastructure as well as supporting research for developing new vaccines needed primarily in the developing world against diseases such as malaria, AIDS and tuberculosis.

The fund is used to support four areas:

• introduction of new and under-used vaccines against hepatitis B (hepB), *Haemophilus influenzae* type b (Hib) and yellow fever, along with associated safe immunization materials;

• improvement of routine immunization services through provision of financial support to the national pragrammes. This support is based on the planned increase in routine immunization coverage (DTP3). For each additional child immunized US$ 20 will be provided, with half of this amount paid in advance as per the plan and the remaining US$ 10 as a reward after ensuring achievement of the planned target through annual country progress reports that will be verified by Data Quality Audit (DQA);

• improvement of injection safety and waste disposal for immunization, in countries where a comprehensive national plan is available;
• research and development for vaccines for diseases that are prevalent in developing countries, such as HIV/AIDS, tuberculosis, malaria, pneumonia and diarrhoea.

1.5 Eligibility for support from GAVI

• Countries with incomes of less than US$ 1000 GNP per capita are eligible for support from the Vaccine Fund: 74 countries in all.

• There are four basic conditions for support from the Vaccine Fund:
  – functioning Interagency Coordination Committee (ICC) focusing on immunization (or an equivalent collaborative mechanism) to ensure local coordination and accountability;
  – recent assessment of national immunization services;
  – coherent, multi-year plan for immunization, including plans for sustaining immunization activities after GAVI support is terminated;
  – strategy for improving safety of injections in the immunization system.

Decisions about eligibility for the different forms of support is based on the countries’ DTP3 coverage rates as follows:

• DTP3 < 50%: eligible only for immunization services funding;
• DTP3 between 50% and 80%: eligible for new vaccines and immunization services;
• DTP3 > 80%: eligible only for new vaccines;
• All countries that have been approved for any kind of support: eligible for injection safety equipment.

1.6 Process for getting support

• Eligible countries are invited to submit proposals. The development of the country proposal should be made in close collaboration with the ICC (or equivalent) and the country representatives of the GAVI partners.

• Proposals are reviewed by the GAVI independent review committee

• The review committee recommendations are forwarded to the GAVI Board for decision.
2. CURRENT SITUATION

2.1 Global

Up to end of April 2002, six review rounds were held, resulting in final approval for support for 54 countries, with US$ 832 607 321 committed in total for the next 5 years, mainly distributed between immunization services support (US$ 262 791 000), new and under-used vaccines support (US$ 534 324 321) and injection safety support (US$ 30 892 000).

Two more rounds are planned for 2002, with the last one scheduled for 30 September 2002. This round will constitute the last chance for eligible countries to subscribe to the GAVI initiative. This means that all interested countries should enter the process before that date, by applying for the support they are eligible for or at least by sending a letter to the GAVI secretariat stating their interest in obtaining GAVI support and committing themselves to a certain date to submit their applications. Further review sessions are scheduled for 2003 and subsequent years.

2.2 Eastern Mediterranean Region

According to GAVI support eligibility criteria, only six countries are candidates for GAVI support:

- Pakistan, Sudan and Republic of Yemen are eligible for the immunization services, injection safety and new vaccines subaccounts.
- Afghanistan, Djibouti and Somalia are eligible only for the immunization services and injection safety subaccounts.

2.3 The Regional Working Group on GAVI

In order to maximize the benefit that countries of the Region, particularly the six that are eligible for GAVI support, can obtain through the GAVI initiative, coordinate inputs from interested parties and mobilize other potential partners at regional and country level, the Regional Director decided in November 2000 to establish a Regional Working Group on GAVI. Its main objectives are:

- to develop a regional workplan for activities required to support the GAVI process;
- to ensure proper coordination between Member States, regional and national partners, and GAVI;
- to ensure that country needs are properly estimated and that the support provided is used appropriately.
The Regional Working Group on GAVI includes the main organizations and partners that are active at regional level in immunization, such as the Gulf Cooperation Council, the World Bank, the African Development Bank, the Islamic Bank, UNICEF (Regional Offices for the Middle East and North Africa, Eastern and Southern Africa, and South Asia), national EPI managers from three GAVI eligible Member States, a representative from the GAVI Board and WHO EMRO.

2.4 Country situation

Technical assistance was provided to all eligible countries, to help them in preparing the necessary documentation and filling in GAVI proposal forms. All of them have already submitted applications to at least one of the six preceding country application review rounds with the following results.

a) Pakistan

Pakistan obtained approval for support for immunization services improvement as well as for hepatitis B vaccine introduction. US$ 33,900,000 and US$ 30,135,000 have been allocated for the next 5 years for these two purposes respectively, in addition to a one-time flat payment of US$ 100,000 as a contribution towards HepB vaccine introduction activities.

While hepatitis B vaccine was already introduced in 2001 in 11 pilot areas and plans are ready to expand it to all the country in July 2002, implementation of immunization services improvement activities through GAVI support has not started yet due to delays in release of the allocated funds. To assist the Federal Ministry of Health in Pakistan with proper running of the GAVI process, an in-country immunization adviser has been assigned for 1 year and a second one will also be appointed.

Pakistan submitted an application for support for immunization safety improvement, for the seventh review round planned for end of May 2002. The application was approved.

b) Sudan

Sudan obtained (October 2001) GAVI approval for support for immunization services improvement as well as for injection safety. US$ 8,968,000 have been allocated for the next 5 years for these two purposes. Discussions are currently going on within the national ICC and with the EMRO Regional Working Group and the GAVI secretariat on the best mechanism to ensure equity in sharing the allocated resources with the South and to ensure proper use.

Sudan is also eligible for the new vaccines subaccount and the Federal Ministry of Health is planning to submit an application for support for HepB vaccine introduction in 2002. Technical assistance is planned in this respect.

The recruitment of a national GAVI immunization adviser to assist the Federal Ministry of Health in Sudan with proper implementation of GAVI related activities is in process.
c) Republic of Yemen

The Republic of Yemen obtained approval for support for immunization services improvement as well as for hepatitis B and Hib vaccine introduction. US$ 4 341 000 and US$ 33 591 000 have been allocated for the next 5 years for these two purposes respectively, in addition to a one-time flat payment of US$ 100 000 as a contribution towards HepB and Hib vaccine introduction activities. Implementation has not started yet in either area due to the current shortage in the combined vaccines approved for the Republic of Yemen as well as to delays in disbursement of funds allocated for immunization services improvement.

The Republic of Yemen recently submitted an application for support for injection safety improvement and received conditional approval. A few clarifications were requested and the Ministry of Health is currently working on providing them to the GAVI secretariat.

A national GAVI immunization adviser has been recruited to assist with proper implementation of GAVI-related activities.

d) Afghanistan

A major achievement was the GAVI approval obtained for Afghanistan for support from the subaccount on strengthening immunization services, despite the fact that one of the criteria for countries to be eligible for GAVI support is to have a legitimate government. Strongly encouraged by the Regional Director and technically supported by the Regional Office and the WHO country office, Afghanistan applied with success for support from the immunization services subaccount in the June 2001 review round. US$ 7 255 000 were then allocated for a 5 year period to improve accessibility to immunization in this country. It should be noted that the key component that helped Afghanistan in overcoming the “recognized government” issue was the agreement passed with the ICC which stipulates that the allocated resources be managed by the WHO Office in Afghanistan.

Unfortunately, because of the current situation, implementation has not been possible. Recently, negotiations were resumed with the new Ministry of Health in order to agree on the best mechanism for proper running of GAVI activities.

e) Djibouti

Djibouti submitted a first application for support from the immunization services subaccount in 2001 which was rejected based on a couple of important issues. Two consultants were assigned to assist the Ministry of Health in addressing those issues and developing a new application. A new proposal was then submitted for the May 2002 review round for support from the immunization services subaccount as well as for improvement of injection safety. The support for immunization services improvement and for injection safety was approved.
f) Somalia

Somalia received support from the Regional Office (February 2002) in preparing the necessary documentation and finalizing its GAVI application. The proposal was submitted for the May 2002 review round, for support from the immunization services subaccount as well as for improvement of injection safety. The review committee approved the application related to immunization services.

3. CURRENT ISSUES

Delays in releasing funds allocated to eligible countries through the immunization services subaccount

None of the four countries of the Region approved for support for immunization services improvement has yet received the pledged funds. The main reason for this is that the GAVI secretariat is expecting an official request from those countries for fund release as well as clear information on how these funds will be managed. The GAVI secretariat highly recommends that the funds allocated be managed by the national government itself. If this is not possible, for whatever reason, nationals in coordination with the national ICC have to delegate this responsibility to one of the partners, preferably WHO or UNICEF (regional or country offices).

Shortfall in combined Hib and HepB vaccines

As noted above, the Republic of Yemen has been approved for hepatitis B and Hib combined vaccines introduction. Owing to a shortage of this type of vaccine, the Republic of Yemen was invited by the GAVI secretariat to review its choice according to the currently available vaccines. The Ministry of Public Health and Population in coordination with the national ICC has now opted for HepB monovalent vaccine introduction immediately and has accepted to wait until the end of 2002 to receive the combined Hib-DPT vaccine. This decision will be notified to the GAVI secretariat by the Ministry of Public Health and Population.