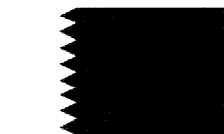




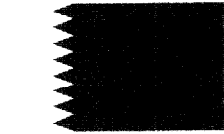
**The Work of WHO
in the Eastern
Mediterranean
Region**



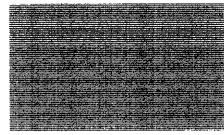
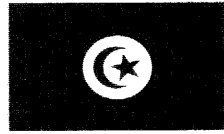
*Annual Report
of the*



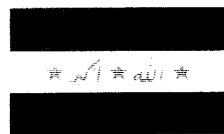
Regional Director



1 January - 31 December 1998



50



WORLD HEALTH ORGANIZATION
Regional Office for the Eastern Mediterranean

***The Work of WHO
in the
Eastern Mediterranean Region***

*Annual Report
of the
Regional Director*

1 January - 31 December 1998



WORLD HEALTH ORGANIZATION
Regional Office for the Eastern Mediterranean
1999

WHO Library Cataloguing in Publication Data

WHO Regional Office for the Eastern Mediterranean

The work of WHO in the Eastern Mediterranean Region: annual report of the Regional Director, 1 January - 31 December 1998/WHO Regional Office for the Eastern Mediterranean

p.

ISBN 92-9021-256-X

1. Regional Health Planning I. Title

[NLM Classification: WA 540]

Photographic acknowledgements: M. Abou Shabanah, R. Aslanian, A. Beljaev, N. Mojadidi, G. Popal, H. Rathor, A. Verster; WHO Representative's Offices of Afghanistan, Egypt, Lebanon, Oman, Pakistan, Republic of Yemen; WHO headquarters.

The full text of this publication can also be found on www.who.sci.eg

The World Health Organization welcomes requests for permission to reproduce or translate its publications, in part or in full. Applications and enquiries should be addressed to the Director, General Management, World Health Organization, Regional Office for the Eastern Mediterranean, PO Box 1517, Alexandria 21563, Egypt, who will be glad to provide the latest information on any changes made to the text, plans for new editions, and reprints and translations already available.

© World Health Organization, 1999

Publications of the World Health Organization enjoy copyright protection in accordance with the provisions of Protocol 2 of the Universal Copyright Convention. All rights reserved.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitations of its frontiers or boundaries.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned.

Cover and photographic layout by Ahmed Hassanein, EMRO

Design and layout by John Shimwell, EMRO

Printed by WHO EMRO - 750

Colour plates printed by Bafra Graphics, Alexandria, Egypt

1999

Contents

Abbreviations	vi
Introduction	ix
Executive summary, 1998	xv
Governing bodies	1
1.1 World Health Assembly	1
1.2 Executive Board	3
1.3 Regional Committee	3
1.4 Regional Consultative Committee	4
Health policy and management	7
2.1 General programme development and management	7
2.2 Public policy and health	14
2.3 National health policies and programme development and management	18
2.4 Biomedical and health information and trends	25
Health systems and services development	35
3.1 Organization and management of health systems based on primary health care	35
3.2 Human resources for health	43
3.3 Essential drugs	54
3.4 Quality of care and health technology	58
Promotion and protection of health	67
4.1 Reproductive, family and community health and population issues	67
4.2 Healthy behaviour and mental health	73
4.3 Nutrition, food security and safety	81
4.4 Environmental health	87
Integrated control of disease	103
5.1 Eradication/elimination of specific communicable diseases	103
5.2 Control of other communicable diseases	117
5.3 Control of noncommunicable diseases	156
Administrative services	161
6.1 Personnel	161
6.2 General administration	163
6.3 Budget and finance	163

	Country statistical profiles	165
1.	Demographic indicators	166
2.	Socioeconomic indicators	167
3.	Budgetary resources indicators	168
4.	Human and material resources indicators	169
5.	Indicators of coverage with primary health care	170
6.	Health status indicators	172
7.	Selected morbidity indicators	173
	Annexes	
1.	Organizational structure of the WHO Regional Office for the Eastern Mediterranean	176
2a).	Professional staff in the Eastern Mediterranean Region, by number and nationality	177
2b).	Professional staff from Eastern Mediterranean Region Member States, by number and nationality	178
3.	WHO/EMRO meetings held in the Eastern Mediterranean Region	179
4.	New publications and documents issued by WHO/EMRO in 1998	183
5.	WHO collaborating centres in the Eastern Mediterranean Region	189
	Tables	
2.1	Summary of sales, 1998	33
3.1	Total number of fellowships awarded, 1994-98	51
3.2	Duration of fellowships, 1994-98 (%)	51
3.3	Source of funds for fellowships, 1994-98 (%)	53
3.4	Progress in developing national drug policies, essential drug lists, formularies and standard treatment guidelines	55
3.5	Percentage of population with regular access to essential drugs	57
4.1	Progress in control of IDD in the Eastern Mediterranean Region	82
5.1	Reported incidence of poliomyelitis in the Eastern Mediterranean Region, by country, 1988-98	107
5.2	Reported neonatal tetanus cases in the Eastern Mediterranean Region, by country, 1994-98	114
5.3	Reported measles cases in the Eastern Mediterranean Region, by country, 1994-98	116
5.4	Reported immunization coverage of children in their first year and pregnant women in the Eastern Mediterranean Region, 1998	119
5.5	Reported annual morbidity due to EPI target diseases in the Eastern Mediterranean Region, 1994-98	122
5.6	DOTS implementation status in the Eastern Mediterranean Region, 1998	129

5.7	Reported AIDS cases in the Eastern Mediterranean Region	145
5.8	Number of parasitologically confirmed cases in countries with no or sporadic transmission (group 1) and countries with well established malaria control programmes (group 2)	150
5.9	Number of recorded and estimated cases of malaria in countries with severe malaria problems (group 3)	151
6.1	Professional posts as at 31 December 1998 (all sources of funds)	161
6.2	Distribution of recruited consultants by programme area, 1998	162

Figures

2.1	Procurement of supplies and equipment by source of funding, 1994-98	21
2.2	Procurement of supplies and equipment by category of supply, 1994-98	22
3.1	Distribution of fellowships according to region of study, 1994-98	52
3.2	Distribution of fellowships by subject of study, 1994-98	52
4.1	Prevalence of anaemia in countries of the WHO Eastern Mediterranean Region	84
5.1	Reported immunization coverage of children under 1 year of age and pregnant women, Eastern Mediterranean Region, 1992-98	118
5.2	Burden of tuberculosis in the Eastern Mediterranean Region, based on estimated cases by country, 1998	128

Abbreviations

AFP	Acute flaccid paralysis
AGFUND	Arab Gulf Programme for United Nations Development Organizations
AIDS	Acquired immunodeficiency syndrome
ARI	Acute respiratory infection
BDN	Basic development needs
CDC	Centers for Disease Control and Prevention, Atlanta, USA
CDD	Control of diarrhoeal diseases
CEHA	Regional Centre for Environmental Health Activities
CTD	Control of tropical diseases
COME	Community-oriented medical education
DOTS	Directly observed treatment, short course
DPT	Diphtheria, pertussis and tetanus
DTPS	District team problem-solving
EM/ACHR	Eastern Mediterranean Advisory Committee on Health Research
EMRO	World Health Organization Regional Office for the Eastern Mediterranean
ESCWA	Economic and Social Council for Western Asia
EPI	Expanded Programme on Immunization
FAO	Food and Agriculture Organization of the United Nations
GCC	Gulf Cooperation Council
HACCP	Hazard Analysis Critical Control Point
HATCI	Horn of Africa Tuberculosis Control Initiative
HIV	Human immunodeficiency virus
IACC	Interagency Coordination Committee
IAEA	International Atomic Energy Agency
IATF	Inter-Agency Task Force
ICCDE	International Commission for the Certification of Dracunculiasis Eradication
ICD-10	International statistical classification of diseases and related health problems (10th revision)
IDB	Islamic Development Bank
IDD	Iodine deficiency diseases
IMCI	Integrated management of childhood illness
IOMS	Islamic Organization for Medical Sciences
JPRM	Joint programme review mission
MECACAR	Middle East, Caucasus, Central Asian Republics

NID	National immunization day
OPV	Oral poliovaccine
PAPCHILD	Pan Arab Project for Child Development
PAPFAM	Pan Arab Project for Family Health
RCC	Regional Consultative Committee
ROPME	Regional Organization for the Protection of the Marine Environment
STD	Sexually transmitted disease
TDR	UNDP/WHO/World Bank Special Programme for Research and Training in Tropical Diseases
TT	Tetanus toxoid
UNAIDS	United Nations Programmes on AIDS
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commission for Refugees
UNICEF	United Nations Children's Fund
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNRWA	United Nations Relief and Works Agency for Palestinian Refugees in the Near East
WTO	World Trade Organization

Introduction

We are entering a new era of health. 1998 saw the close of the first 50 years of the World Health Organization, and this year, 1999, marks the anniversary of 50 years of the Eastern Mediterranean Regional Office. It has been a remarkable period of progress in world health with concerted efforts made to reduce infant mortality, to improve access to basic health services, safe water and sanitation, and to control and eradicate killer diseases. The Eastern Mediterranean Region has seen its share of this progress, including in its least developed and most populous countries. Nevertheless in some countries of the Region some of the problems that existed 50 years ago remain apparently intractable, exacerbated by similarly intractable political problems—poverty, war, civil upheaval, sanctions—forcing us to search for more innovative and appropriate strategies to tackle them.

The problem of maternal mortality and the goal of safe motherhood, the theme of World Health Day 1998, particularly come to mind in this context. I drew attention to this theme in my introduction last year and have no hesitation in drawing attention to it again. We owe our lives and our childhood to our mothers; it is only right that we should do our best for them and at least to save them from deaths related to pregnancy and delivery, i.e. maternal mortality, which, on the eve of the 21st century, remains unacceptably high in certain parts of the Region. Family planning for health, good reproductive health care, trained health personnel and improved education and social conditions through political commitment are still the prerequisites to safe motherhood.

It is not only the loss of the mother but also the loss of the baby soon after delivery from preventable causes which is still an important problem. Neonatal tetanus still accounts for an unreasonable proportion of infant mortality. The elimination target of 1995 could not be achieved in some countries and I sincerely hope that it will not be delayed beyond the current target of 2000. It is a disease that can be eliminated through ensuring adequate health services in high-risk areas, while pursuing immunization of mothers.

Noncommunicable diseases, which have for many years now represented the largest burden of disease in the industrialized countries of the world, are rapidly advancing in the developing world also, competing with the

existing burden of communicable diseases. Since these are very largely diseases of lifestyle there is a great deal we can do in terms of prevention, in particular with regard to health education and promotion. So far in this Region, and I say this without compunction, countries have not done enough to recognize the threat that noncommunicable diseases pose and to define positive strategies for tackling them in the future. The incidences of diabetes in countries of this Region are among the highest in the world. More than 10% of the population of the Region has diabetes and at least another 25% are at risk, a large section of them for reasons related to diet. Hypertension is another noncommunicable disease of serious concern to us and an important risk factor for cardiovascular disease. After prevention, early detection and treatment are the most important strategies for control of these diseases and I hope that in the coming years countries will address these issues with greater commitment.

Smoking is a major health threat in our Region, as globally, and one that must be fought on all fronts, from the standpoints of health, national economy, social acceptability and trade. Above all we must recognize that smoking is an epidemic that threatens all of us and particularly our children, who are undoubtedly the prime target of the tobacco companies. We must maintain our efforts to control smoking in public places, to prohibit advertising, to outlaw selling of products to our youth, to educate and to persuade people that smoking in any form, whether of standard cigarettes or the fashionable shisha, is socially unacceptable. The launching of the Tobacco Free Initiative by WHO is a very welcome initiative which will raise awareness and address the problem at an international level; I hope governments will also now play their part and not give in to the pressures of the tobacco lobby or the short-term attractions of tax revenue; the long-term consequences in terms of morbidity, mortality and lost productivity are far greater.

Fortunately, the outlook is not entirely gloomy. The eradication of poliomyelitis continues to make excellent progress. The major achievement of 1998 was the immunization of all children in Afghanistan, Somalia and Sudan including southern Sudan, an achievement that truly brings joy to our work. The success of the campaigns is a tribute to the hard work of the local people in the field, in particular in Sudan and the Republic of Yemen, and to the commitment of our partners—governments, donors and implementing agencies alike. At the same time the situation with regard to

surveillance continues to improve. Nevertheless, many cases of poliomyelitis are still occurring and we must double our efforts to ensure that we meet the target.

Awareness is also a major factor in controlling the resurgence of tuberculosis and good progress is now being made in the Region on this front. The DOTS strategy advocated by WHO has been very well received in the Region and many countries have now implemented or are in the process of implementing the strategy nationwide. This is very encouraging and I hope that countries will continue their commitment to DOTS ALL OVER and to public health education about tuberculosis.

The WHO/UNICEF initiative entitled Integrated Management of Childhood Illness is a major step towards reshaping thinking away from management of individual diseases of childhood and into a comprehensive approach to child health and health care. The initiative is currently being piloted in three countries, Egypt, Morocco and Sudan, where intensive training has taken place to reorient primary health trainers, and I look forward to expansion of the initiative in the Region based on the experiences of these countries.

Important progress was made in the regional capability to anticipate and forecast epidemics. This is a vitally important area in efforts to improve local prevention and control of communicable diseases. It has been of great importance in Sudan, particularly in relation to malaria and meningitis. The success in averting a major epidemic of malaria there following the annual rains and also in addressing meningitis have highlighted the importance yet again of good collaboration at an early stage in the process between national authorities, WHO and the various interested collaborators.

Achieving health for all, on the basis of equal opportunity for health and access to health care, will continue to be our ultimate goal for many years to come and the process of developing a strategy for the 21st century is gaining momentum. We have sought and received the views of our Member States on the development of a vision for the future in this regard and will continue to do so. This is all the more important as the budgetary constraints imposed on the Organization for the next biennium begin to make themselves felt. We will have to review our priorities and methods of work and work much harder in seeking out potential partners. The amount of voluntary funds raised within the Region continues to be small relative to other regions and we are addressing very seriously this shortfall in the

certainty that raising awareness of the cause of health will bring a positive response from hitherto untapped sources in the Region. CEHA, the WHO Regional Centre for Environmental Health Activities, has led the way for us, obtaining some 50% of its budget from extrabudgetary resources within the Region. In the meantime we have been successful in raising funds from outside the Region for priority programmes including poliomyelitis eradication, control of micronutrient deficiencies and AIDS. I look forward to continuing close collaboration with existing partners and with our sister agencies, in particular Rotary International, the Centers for Disease Control, UNICEF, the World Bank, the Micronutrient Initiative and UNESCO.

The basic development needs initiative continues to make good progress in the Region and 1998 saw the initiation of a process of evaluation. The problem of iron deficiency anaemia among women of child-bearing age is now widely recognized in the Region and in 1998 many countries developed strategies and action plans to accelerate fortification of flour with iron and other micronutrients.

During the past decade international efforts have gradually raised awareness about the devastating and appalling problem of land mines. The Eastern Mediterranean Region is one of the worst affected regions in the world, being the grim host to mines from as long ago as the Second World War and as recently as the latest conflict. The people of Afghanistan, Somalia and southern Sudan are at particular risk and the international community is now beginning to acknowledge its role in tackling the problem.

Networks of all kinds, whether based on traditional methods of contact or on the latest technology, are gaining in importance with regard to self-reliance in exchange of information and experience in the Region. The coming years will undoubtedly see an increase in the networking capacity of the Region, between institutions, between "healthy cities", between health centres through telemedicine links and between governments. The Regional Office itself is improving its links with its own country offices, creating better accessibility to Regional Office databases and information. I hope that Member States will also link up with us more in the future in the exchange and updating of regional health information.

1999 will see some major changes in the Regional Office, in anticipation of the challenges of the next century and in response to the Director-General's reshaping of the Organization into a more focused and efficient

1999 will see some major changes in the Regional Office, in anticipation of the challenges of the next century and in response to the Director-General's reshaping of the Organization into a more focused and efficient operation, in anticipation of the move to a new building in Cairo, as well as in the spirit of health reform in general. While the process of change is difficult, I look forward to the positive outcomes that will ensue.

A handwritten signature in black ink, appearing to be 'H. Gezairy', written in a cursive style.

Hussein A. Gezairy, M.D., F.R.C.S.
Regional Director for the Eastern Mediterranean

Executive summary, 1998

1

Governing bodies

- The Forty-fifth Session of the Regional Committee was held in Beirut, Lebanon from 3 to 6 October 1998 under the chairmanship of H.E. Mr Sleiman Frangieh (Lebanon).
- Important resolutions adopted by the Regional Committee concerned the adoption of the proposed programme budget for the financial period 2000-2001; emerging and resurging diseases with special reference to malaria; draft regional health-for-all policy and strategy for the 21st century; regional self-reliance in the production of essential drugs and vaccines; acquired immunodeficiency syndrome (AIDS); prevention and control of cardiovascular diseases; establishment of a regional foundation to offer a research prize on Down syndrome; GATT Agreement—its impact on health; and improving the quality of nursing and midwifery.

2

Health policy and management

- 1998 was the year of the intranet at the Regional Office, as it became fully functional with information relevant to the needs of all staff. Development of the *Unified medical dictionary* software took a new direction with the initiation of a new client-server graphical web-based application.
- New telecommunications services include videoconferencing facilities, e-mail access through the Worldwide Web, Internet remote access, and fax transmission and receipt through e-mail. Internet access is now available to 120 users and e-mail service to all Regional Office staff and to 15 WHO Representative's Offices.
- The Regional Office enjoys close collaboration with a number of international and regional organizations, particularly in resource mobilization. Rotary International and the Centers for Disease Control and Prevention (CDC), Atlanta, USA continued to support

- the regional programme for poliomyelitis eradication. Rotary International contributed about US\$ 6 million in support of the programme and CDC provided more than US\$ 1.5 million in technical support.
- Several projects were submitted for funding and were considered by AGFUND. An amount of US\$ 79 000 was approved to support a project on health and environment education in schools in Lebanon. The Islamic Development Bank agreed to cosponsor a multinational workshop on environmental health impact assessment of development projects for French-speaking countries in the Region. The Regional Office assisted the African Development Bank in recruiting expertise for the technical health programme in Egypt.
 - The Regional Office continued its close collaboration with the League of Arab States, in particular the Council of Arab Ministers of Health. The various technical units in the Regional Office participated in the finalization of the Arab Strategy for Health Development and the Arab good manufacturing practices for production of pharmaceutical and biological products.
 - The Government of the Netherlands supported the project on capacity-building for nutrition in countries of the Eastern Mediterranean Region of WHO in the amount of US\$ 897 220.
 - Training activities in the Regional Office included on-entry group briefing sessions for new professional staff and language and computer courses for professional and general services staff, as well as in-service training for professional staff.
 - Most countries of the Region contributed to enrichment of the regional policy and strategy paper for the 21st century which is expected to be endorsed at the Forty-sixth Session of the Regional Committee.
 - Efforts are being made to develop technical expertise in the Regional Office to cater for country needs in managing health sector reform initiatives and in developing evidence-based policies.
 - Countries of the Region were supported in health economics and health care financing. The Maghrebian network on health systems and health economics held its second meeting aimed at preparing the implementation of the regional programme on health economics and health care financing. A joint initiative on national

3

Health systems and services development

- The Regional Office continued its role in preparing the national authorities and local communities for the challenges of the 21st century by building up their capacity to promote and improve health on the basis of equity and need. This process aims at empowering people to take responsibility for health, thus reinforcing self-reliance and self-management.
- The authorities in Egypt implemented activities to consolidate and expand the district health system approach. In Oman, detailed evaluation of the *wilayat* system based on primary health care was performed in the 12 *wilayats*. The Government of Pakistan initiated the integration of primary health care services under the district health system in four districts to develop model areas of an integrated primary health care delivery system.
- In Lebanon, WHO supported the assessment of primary health care services in the underdeveloped areas. This led to the formulation of plans for the strengthening and expansion of primary health care services relevant to the community needs. The development of a health policy was supported for northern Somalia, while concerted efforts were made to develop district-based primary health care services with the active participation of the local communities in other areas of the country.
- The Government of Sudan consolidated and expanded the health area approach to improve the planning and monitoring of primary health care services. The Ministry of Health of Saudi Arabia, in collaboration with WHO, developed a plan for the introduction of the mini-clinic initiative through the primary health care network in order to improve screening and early prevention of important noncommunicable diseases.
- The Islamic Republic of Iran initiated a process of quality management to improve the standard of services at district and community levels. Existing primary health care services in the urban areas were evaluated and expanded to cover additional areas.
- The Republic of Yemen developed the master plan of action for the revitalization of primary health care at the national and governorate levels. In Iraq, strategies and training programmes

July 1998. At the regional level, the guidelines on how to develop or revise a national health statistical information system were finalized and will be issued in 1999.

- The *Eastern Mediterranean health journal* has increasingly attracted the attention of the scientific community within and outside the Region. This was reflected in increased contributions, from 128 manuscripts in 1995 to 293 in 1998, in peer reviewers, from 43 in 1995 to 273 in 1998, and in positive appraisals and feedback from readers.
- A set of three books on nursing education in the Eastern Mediterranean Region were the significant publications in English in 1998. A number of high quality documents were also issued, including *Mental health promotion for schoolchildren*.
- The WHO Arabic Publications programme handled and/or issued a considerable number of publications, documents and journals during 1998. The Language Services unit continued to shoulder efficiently the work of translating, revising and editing correspondence, reports and documents in Arabic and French. In addition, the unit translated into Arabic the manual for persons in charge of the Blue Trunk Library as well as nine training modules for the Blue Trunk Library project, issued by WHO headquarters.
- The Regional Office website on the Internet was enriched with many new features and contents including online statistical information, full text of technical documents and publications, directory information and library databases. Publications of the Regional Office are now routinely made available on its website.
- The first intercountry meeting of the Eastern Mediterranean Library Network (EMLIBNET) focal point libraries was held in 1998. The EMLIBNET focal points continue to be active participants in the network, especially in their interaction with the Regional Office.
- Provision of health and biomedical databases on CD-ROM expanded in terms of the number of sites and of countries. Publishing of the *Index Medicus for the WHO Eastern Mediterranean Region* took a new direction in 1998 as a quarterly current contents bulletin was initiated. One of the most significant efforts in health literature services was the introduction of the Blue Trunk Library of basic documents in the Region.

consultation on organizational structure of ministries of health was held in December 1998.

- Regional Office experts are developing guidelines for restructuring the national health system, proposing possible reasons for restructuring, as well as mechanisms of restructuring, and the resources required to be made available for this process.
- The Regional Office continued its collaboration with the Ministry of Health, Syrian Arab Republic, in developing the Quality Management Training Centre, established in November 1997.
- The Regional Office continued its support to a number of countries in strengthening their planning capabilities at central and district levels. A manual for planning and management was produced in Arabic with support from WHO. Efforts were made to promote strategic planning in ministries of health.
- Procurement of supplies and equipment for WHO-supported national programmes during 1998 from all sources of funds amounted to US\$ 9 025 072. Of this, supplies and equipment in the amount of US\$ 1 121 038 were obtained through local purchase.
- The regional programme on emergency preparedness and humanitarian action continued to provide technical support to countries of the Region in their efforts to develop disaster management programmes. An intercountry workshop on emergency preparedness and response was held in November 1998. The workshop standardized the country profiles' format and recommended the essential components of the regional plan of action for emergency and humanitarian action for the coming three biennia.
- In the area of assistance to victims of land mines, the Regional Office designated a focal point in order to strengthen its collaboration and cooperation with WHO headquarters, other agencies and, most important, with countries.
- Strengthening national capacity-building in health statistical information disciplines, namely health statistical methods, use of informatics tools and health statistical information development methodology, continues to be the focus of the current programme, in addition to enhancement of the regional health situation and trend assessment database. An intercountry meeting on identification and development of essential indicators was held in

health accounts development funded by WHO, Partnerships for Health Reform and the World Bank, will be launched following a preparatory workshop held at the end of January 1999.

- Efforts are being made to promote bioethics and to establish national and subnational bioethics committees, particularly in approving grants for research.
- The Regional Office participated in several meetings relating to the advancement of women. A contribution was made to the document *Gender-responsive development in Africa: compendium of good practice*, issued by the Economic Commission for Africa. WHO organized a three-day intercountry consultation in February 1999 at the Princess Basma Women's Resource Centre, Jordan, on the role of women in health and sustainable development. The main aim of the consultation was to share major lessons learnt in the countries with reference to gender mainstreaming and, based on these experiences, to propose regional strategies and recommendations to further enhance and promote the role of women in health and development.
- The regional programme on research policy and strategy coordination continued to support countries in developing their health research capabilities, and providing financial support to research projects in several priority areas.
- The regional initiative to develop modules for training in research methodology, scientific paper writing and journal editing attracted the interest of several countries. Workshops were held in Islamic Republic of Iran, Egypt and Saudi Arabia.
- The Eastern Mediterranean Advisory Committee on Health Research (EM/ACHR) held its 19th session in April 1998 in Beirut, Lebanon. The EM/ACHR made several important recommendations related to the topics discussed, as well as special recommendations on the establishment of regional and national health research policy and strategy.
- Three WHO collaborating centres were designated in the Region.
- Many countries took a greater interest in improvement of health management. An expert group meeting on evaluation of the district team problem-solving (DTPS) approach in the Eastern Mediterranean Region was held in May 1998 and a regional

were formulated for enhancing the participation of the communities in support of primary health care services.

- The basic development needs (BDN) approach, based on the principle of integrated total development through active community involvement and intersectoral collaboration, is now widely accepted in the Region and at present 13 countries are at different stages of implementation. During 1998, field observation missions were organized by WHO to obtain an overview of the BDN programme in Somalia, Pakistan and Sudan. The missions made recommendations for the improvement of the BDN programme including the need to adopt standardized and systematic approaches. The Regional Office developed a simple set of guidelines for the planning and implementation of BDN initiatives.
- The regional programme on support to secondary and tertiary care provided technical support to Member States in several areas including: hospital management, establishment of efficient referral systems, development of medical emergency services, and maintenance and repair of medical equipment.
- Consultants to the Libyan Arab Jamahiriya reviewed the referral system and advised on appropriate guidelines for the development of an efficient system while consultants to Iraq and Yemen reviewed the medical emergency services and advised on national plans for the development of medical emergency services.
- Special attention continued to be given to continuing education for health personnel as one of the best management tools for improving workforce performance.
- Up to 1998 five leadership development courses had been conducted benefiting a total of 64 participants from 15 countries of this Region and 2 countries from the African Region, in Arabic, English and French. The sixth course began in September 1998 at the High Institute of Public Health, Alexandria, Egypt.
- The programme on educational development of human resources supported activities which would enhance achievement of its major shared goals with countries including: review and reform of curricula to ensure relevance to community needs and the adoption of effective and up-to-date training methodology; developing and

facilitating educational skills and capacities to manage the educational process; and facilitating access to and local production of relevant and essential educational materials.

- Development of nursing and midwifery is still a challenge and a priority for almost all ministries of health in the Region. Numerous strategies have been adopted and a wide range of activities are being undertaken to meet the demands of the health care system both from qualitative and quantitative aspects. These activities in 1998 included developing strategic plans, strengthening nurses' involvement in policy-making through the nursing unit in the ministries of health, improving basic nursing education, expanding continuing education activities, building up the managerial capacity of nurse leaders, to strengthen nursing services delivery, and providing a regulatory framework for both nursing education and nursing practice.
- The regional strategy for nursing and midwifery development in the Eastern Mediterranean Region, published in 1997, was widely distributed. Consultants and members of the Regional Advisory Panel on Nursing and Midwifery provided technical assistance to Bahrain, Islamic Republic of Iran, Republic of Yemen and Sudan to develop and/or to revise their strategic plans for nursing development.
- Of a total of 829 official requests for fellowships, 612 were awarded for studies both in the fellows' country of origin and abroad in 1998. The trend of favouring short-term fellowships is relatively stable; 429 fellows undertook courses of less than 2 months' duration.
- The thirteenth meeting of national fellowships officers was held in November 1998. WHO headquarters and all Regional Offices are currently working on the elaboration of a new computer program for fellowships which will enable extraction of exact data for proper quantitative and qualitative evaluation.
- Despite the fact that national drug policies are a cornerstone for the development of the pharmaceutical sector in general and the planning and implementation of national essential drugs programmes in particular, only a minority of countries have up-to-date national policies and corresponding implementation plans.

- The regional capability to monitor adverse drug reactions of products in the market is being strengthened. Morocco and Tunisia have established systems and other countries are at various stages of setting up their national programmes.
- The second edition of the WHO standard monographs for selected medicinal plants, which was prepared with technical input from eight countries, has now been finalized. Sudan produced a national list of medicinal plants and the Syrian Arab Republic is in the process of developing a comprehensive national policy and implementation plan. Pakistan is preparing a series of national training activities on policy development, quality control, rational use and curriculum development.
- The Regional Office continued to support countries in establishing and upgrading their national networks of health laboratory services and their national quality assurance programmes, so that they are well integrated and have proper referral systems. Emphasis was on the role of the peripheral level in support of primary health care.
- A regional meeting of directors of health laboratory services was held in November 1998. An overall evaluation of the achievements with regard to the regional plans of action was carried out. Particular difficulties are encountered in countries that are affected by either prolonged United Nations sanctions or civil war.
- The development of blood transfusion services is continuing according to regional and national plans of action. In the few countries where there is still a percentage of paid donors, considerable efforts are being made to phase out paid blood donation. "Replacement donation" is widely practised in the Region. The regional policy aims to establish organization of a long-term national programme for a community-based blood-donor system on a purely voluntary, nonremunerated basis and to enforce blood transfusion regulations by law.
- Collaboration with the International Atomic Energy Agency continued in support to nine countries in provision of film-badge services and thermoluminescent dosimetry. The Regional Office continues to encourage the development of national capabilities in the area of radiation protection.

In 1999 the Regional Office will organize a regional consultation with the aim of developing a common approach to planning, implementing and evaluating national drug policies

- Availability and equity of access to, essential drugs remain problems in many countries. While for some countries in the Region the overall availability is sufficient, essential drugs are not always equally accessible for all parts of the population. In other countries there are shortages of essential drugs, especially Afghanistan, Iraq, Somalia, Sudan and the Republic of Yemen. WHO provided limited emergency supplies of essential, often life-saving, drugs to affected countries.
- The various approaches in the Region towards promoting the rational use of drugs included the publication and updating of national drug formularies and standard treatment guidelines, national and regional workshops, distribution of reference and training materials, operational research and the provision of fellowships. The Arabic translation of the WHO manual *Guide to good prescribing* became available in 1998 and has been distributed widely as a tool for problem-based teaching of pharmacology and therapeutics in medical schools.
- Self-reliance in essential drugs and vaccines is a priority objective for the Region. Production capacity has increased spectacularly, and some countries now produce over 85% of their requirements. However, up to 90% of raw materials are still being imported from outside the Region. The Forty-fifth Session of the Regional Committee discussed regional self-sufficiency and, in preparation, a consultation on regional self-sufficiency in producing essential drugs and raw materials as a component of a national drug policy was held in April 1998. 1998 saw continued momentum in the production of high-quality vaccines in Egypt, the Islamic Republic of Iran, Pakistan and Tunisia through technical support, fellowships and supplies. An in-depth analysis of the current situation in Pakistan was conducted in collaboration with WHO headquarters.
- WHO continued to provide support to countries in strengthening their drug quality assurance systems. Several countries were assisted in sourcing materials for their national quality control laboratories.

4

Promotion and protection of health

- Safe Motherhood was the theme for World Health Day 1998 and the Regional Office continued to promote safe motherhood as a priority issue. An intercountry meeting was held in May 1998 to assess achievements so far in safe motherhood in the Region. Establishment of a regional task force, the creation of a technical network between Member States and the measurement and monitoring of the status of maternal and perinatal mortality in Eastern Mediterranean countries were the key recommendations.
- AGFUND, the League of Arab States, UNICEF and UNFPA, in collaboration with the Regional Office, completed the implementation of the PAPCHILD maternal and child health surveys. A revised model, focusing on reproductive health, was introduced in Morocco as a pilot project for the new PanArab Project for Family Health (PAPFAM).
- In collaboration with the Islamic Organization for Medical Sciences and the Islamic Scientific, Educational and Cultural Organization (ISESCO), the Regional Office completed the development of guidelines on adolescent health education within the framework of the cultural and religious norms of the Region. Senior boy scouts and girl guides from several countries received training in adolescent health at workshops conducted with the technical support of the Regional Office.
- Protection and promotion of women's health received increased attention in Member States. The Regional Office provided technical support to several countries in preparing a database for developing a country health profile for women.
- The Regional Office promoted integration of health care of the elderly into the primary health care system. Physical activity was advocated as having an important role in healthy ageing. The theme of World Health Day 1999 is "active ageing makes the difference" and WHO collaborated with countries to celebrate this event.
- A set of module-based regional guidelines for the training of community health workers in occupational health was developed by the Regional Office, which also maintained its collaboration with the Arab Institute for Occupational Health and Safety to

- conduct two meetings, one on surveillance of occupational diseases and injuries and the other on prevention of industrial accidents.
- Education and health complement and enhance each other. The Regional Office continued to support revitalization and promotion of national school health programmes, in recognition of their importance to healthy growth and development towards adolescence and adulthood.
 - The implementation of two demonstration projects in Egypt and the Republic of Yemen continued in collaboration with the WHO Nations for Mental Health programme. A meeting on the development of indicators for mental health programme evaluation will be held in May 1999.
 - Substance abuse continued to be an important health and socioeconomic problem in the Region. The Regional Office collaborated with the Islamic Association for Medical Sciences in a meeting on substance abuse and is following up on the implementation of its recommendations.
 - A consultation was held in Islamabad, Pakistan, to formulate guidelines on methods and techniques of developing health education materials on communicable diseases. The Regional Office maintained its collaboration with the Islamic, Educational, Scientific and Cultural Organization and implemented 12 programmes in the field of health education and health promotion in countries of the Region.
 - The action-oriented school health curriculum has now been fully implemented in 17 countries and the curriculum material has been translated into Dari, Farsi and Urdu. The Regional Office provided technical and financial support for the conduct of national training workshops for teachers of primary schools in several countries.
 - All countries have developed health education materials on the hazards of passive smoking. The Regional Office provided technical assistance in planning, implementation, monitoring and evaluation of national tobacco control programmes. The Regional Office technically supported the first interregional meeting on the Tobacco Free Initiative, in December 1998, the aim of which was to review the global situation of tobacco use and to develop a global strategy for tobacco control.

- Activities and programmes promoting healthy lifestyles continued to be supported in most countries, including collection of information, raising awareness and building national capacity for action.
- Preventive oral health programmes targeting children continued to be singled out for further support as did efforts to introduce the atraumatic restorative treatment approach, which needs no electrically driven equipment. An intercountry workshop in November 1998 developed guidelines on planning and managing preventive oral health programmes for children.
- More than half of the countries were assisted by the Regional Office in 1998 to improve the capacity of their food control laboratories, especially through training of laboratory staff and through quality control reviews. The Regional Office organized an intercountry workshop on the use of HACCP in national food control programmes in April 1998. The participants worked through an actual food manufacturing process and developed all the steps of a HACCP plan of action.
- Many countries continued to keep up the momentum in providing their populations with increased water supply and sanitation coverage. However, in view of the severe water scarcity the Regional Office and CEHA have paid special attention to water conservation and wastewater reuse. As part of the activities of the Inter-Agency Task Force on Land and Water Resources the Regional Office and CEHA are collaborating with FAO on wastewater reuse in the Region.
- Sanitation coverage in the rural areas continues to be an obstacle to health development. The Regional Office has paid increasing attention to promoting and mobilizing sanitation projects in the countries that have low sanitation coverage. CEHA sanitation initiatives included assessment of needs in nine countries and promotion of low-cost sewerage systems.
- Special attention was given to hazardous solid wastes, including medical and healthcare waste management, and collaboration continued with many countries. CEHA developed guidelines on healthcare waste management.
- The healthy cities and healthy villages programmes and projects continue to attract sustained interest and popularity among the national and city authorities in the Region. The Ministry of Health

of Saudi Arabia, in collaboration with the authorities in Al Qassim Province, launched a healthy city programme at a symposium in the city of Al Bukariya inaugurated by HRH Prince Faisal bin Bander bin Abdulaziz, Governor of Al Qassim. The healthy cities projects are expanding particularly in Egypt and the Islamic Republic of Iran.

- A successful regional technical consultation on healthy villages was held in June 1998 in the Islamic Republic of Iran. This consultation elaborated on different components of the healthy village projects and outlined technical guidelines to be prepared in collaboration with WHO headquarters. The projects are particularly active in Egypt, Islamic Republic of Iran and Syrian Arab Republic.
- Preparation of national plans of action for health and environment is well under way.
- National drinking-water quality standards, based on WHO guidelines for drinking-water quality, have been adopted in at least 13 countries in the Region. Volumes 1 and 3 of the guidelines are being translated into Arabic. Several countries have significantly improved their drinking-water quality surveillance and control systems but much work remains to be done.
- A number of collaborative activities were undertaken with the GCC countries by WHO, in collaboration with other organizations, particularly AGFUND, ROPME and UNDP. These included several training workshops, a meeting on environmental and health effects of exposure to static and time-varying electromagnetic fields, a workshop on microbiological methods for monitoring coastal recreational waters and a workshop on technical guidelines to assess marine pollution and to control associated risks.
- The Regional Office and the Arab Atomic Energy Agency are planning to collaborate on radiation protection.
- The regional programme on promotion of chemical safety continued its cooperation with countries of the Region to strengthen their national capacity and capability for safe management of chemicals, with particular emphasis on the development of a national profile on chemical safety. Databases on internationally validated chemical risk assessment, particularly INTOX and INCHEM CD-ROMs, were provided on a regular basis to

a number of countries. Training of national staff on various aspects of chemical safety was supported in a number of countries.

- Countries were encouraged to participate in reduction and elimination of persistent organic pollutants (POPs) and the Prior Informed Consent (PIC) scheme for the prevention of transboundary movement of hazardous chemicals.
- The regional vector control programme continued to provide effective support for the prevention and control of vector-borne diseases that are still major public health problems in the Region. Technical advice and support for national meetings were provided in relation to development of national strategies for integrated vector control. The use of impregnated bednets was further enhanced; activities included a regional consultation in November 1998.
- A subregional training course, supported by AGFUND, on environmental protection from disease vectors was held in February 1999.
- CEHA continued to contribute to the strengthening of the institutional capabilities and programmes of the countries of the Region. Support to countries included demonstration projects and six special studies. Other major activities included launching a project on environmental health information systems, and support for improvement of environmental health in refugee camps in Jordan. CEHA also provided support to a few countries for food safety, healthy market places and healthy schools. A training package on low-cost water supply and sanitation was produced consisting of 20 video programmes and seven booklets.
- More than 20 project proposals were submitted by CEHA to AGFUND, the Islamic Development Bank, the Arab Fund for Social and Economic Development and other donor agencies for funding.
- In collaboration with the Islamic Development Bank, CEHA organized a regional seminar on environmental health impact assessment of development projects, and finalized a basic environmental health textbook for university students in English.
- In collaboration with AGFUND, CEHA launched two regional projects on training relating to health and environment with special reference to mothers and children's health.

5

Integrated control of disease

- The Regional Office continued to provide assistance to countries in the process of certification of dracunculiasis eradication. Saudi Arabia submitted all necessary documents to the International Commission for Certification of Dracunculiasis Eradication on the absence of dracunculiasis transmission in its territory and applied for certification of dracunculiasis eradication. The Republic of Yemen reported no cases of dracunculiasis during 1998 and hopes to be certified as free from dracunculiasis transmission by the year 2000.
- Progress towards elimination of leprosy as a public problem continued. All countries of the Region reached the target of elimination at the national level. The Regional Office encouraged endemic countries to strengthen activities in pockets of infection in order to reach the target of elimination at district level. The main endemic countries initiated stratification according to the size and density of the problem through introduction of WHO computerized forms on leprosy trends at district levels. The WHO Action Programme for Elimination of Leprosy continued to support the national programmes in Afghanistan, Egypt, Oman, Somalia, Sudan and the Republic of Yemen through provision of free drugs for multidrug therapy of leprosy patients.
- Rapid progress towards eradication of poliomyelitis from the Region continued. All parts of Somalia and Sudan were included in successful national immunization days. Significant improvement was made in acute flaccid paralysis (AFP) surveillance in the Region, particularly in endemic countries such as Afghanistan, Iraq, Somalia and Sudan. The number of confirmed cases of poliomyelitis decreased from 1255 in 1997 to 551 in 1998.
- The upward trend in the average regional measles immunization coverage rate reported in 1996 and 1997 was maintained in 1998 (80%). High immunization coverage rates (90% or higher) were reported by 15 countries. The number of reported cases of measles in the Region was higher than that reported in 1997.
- The total reported cases of neonatal tetanus in 1998 was comparable to previous years.

- The improvement in regional immunization coverage observed since 1996 for all EPI antigens was maintained in 1998. This was mainly due to the sustained high coverage rates in most countries.
- *Haemophilus influenzae* b conjugate vaccines have been introduced into the routine immunization schedule in three countries of the Region.
- Unsafe injection practices pose a major health problem and in view of the fact that immunization programmes should lead the drive for safe injection practices, this topic was addressed in most EPI intercountry meetings. Assessment of injection practices in immunization sessions was conducted in three countries (Egypt, Sudan and the Republic of Yemen). Support is provided to countries to develop plans for safe injection practices.
- The first consultation on vaccine supply and quality and local production in the Eastern Mediterranean Region was held in September 1998 with the objectives of reviewing the status of vaccine supply and production in the Region and developing country plans of action to ensure vaccine quality.
- Efforts continued to be made to further improve quality of acute respiratory infection (ARI) and diarrhoeal diseases (CDD) control programmes through better coordination and integration of their activities.
- As a move towards Integrated Management of Childhood Illness in the Region special emphasis was given to a combined implementation of activities, such as organizing combined CDD/ARI training courses and training units, surveys and programme reviews. IMCI has now made good progress in the early use countries (Egypt, Morocco, Sudan) and is being introduced in two more (Islamic Republic of Iran and Pakistan).
- Increased support was provided to countries in strengthening national tuberculosis control programmes and in implementing the highly effective strategy of directly observed treatment, short-course (DOTS). Implementation/expansion of the DOTS strategy was further promoted in the Region and, at the end of 1998, 20 countries were actively involved in implementation of the strategy. The tuberculosis control activities launched in the countries of the Gulf Cooperation Council and the Horn of Africa continued to

progress satisfactorily and another initiative was launched for the countries in the Near East.

- Increased assistance was provided to countries in strengthening their national surveillance systems through updating of national surveillance plans, training of trainers and distribution of a surveillance manual and technical guidelines.
- WHO continued to strengthen national capacities in forecasting, early detection and management of epidemics of emerging and re-emerging infectious diseases through follow-up on implementation of national plans, training of trainers and distribution of technical materials on epidemic preparedness and response.
- The Regional Office collaborated with countries in implementation of their national plans for emergency preparedness and control of meningococcal meningitis through distribution of technical guidelines, strengthening of laboratory capacities and expansion of training activities.
- Tropical diseases continued to be an important public health problem in some countries of the Region. WHO supported these countries with a view to reducing the burden of these diseases through sustainable implementation of their control programmes.
- The Regional Office continued to provide technical assistance and support to the national programmes of schistosomiasis control in endemic countries of the Region. Particular attention was given to improvement of diagnostic capabilities and training of different categories of public health staff in surveillance and control of schistosomiasis.
- The main activities of the Regional Office in the field of prevention and control of zoonoses were directed towards the improvement of surveillance systems at national and subnational levels, training of staff, strengthening of diagnostic facilities and promotion of health education.
- The Regional Office continued to cooperate with national programmes on leishmaniasis control in the study of different forms of leishmaniasis, strengthening of surveillance, integration of control activities within public health systems, promotion of training and support of health education.

- The AIDS epidemic continued to spread in the Region, slowly but surely. WHO continued to provide technical and financial support to national AIDS/sexually transmitted disease (STD) programmes through consultancy, training of trainers, provision of necessary supplies and equipment and conduct of STD prevalence studies. In addition, the Regional Office continued to collaborate with UNAIDS in the implementation of intercountry as well as country activities.
- The Regional Office continued to support countries in implementing the Regional Plan of Work for Malaria Control. Countries with afrotropical malaria (Djibouti, Somalia, Sudan and Republic of Yemen) received additional support, as part of the WHO effort to accelerate malaria control in Africa. The first three of these countries participated in the African Initiative for Malaria Control which started in 1998 and was a spearhead to the Roll Back Malaria initiative promulgated by the WHO Director-General. Intensified support allowed malaria control programmes to be strengthened in these countries. However, serious epidemics of malaria took place in the Republic of Yemen. The situation remained serious in Afghanistan and Iraq but malaria-free status was maintained in nine countries that had achieved interruption of malaria transmission. Four countries (Egypt, Oman, Morocco, and United Arab Emirates) made substantial progress towards elimination of local transmission of malaria. In the remaining countries the situation remained more or less stable.
- Special attention was given to strengthening national cancer registry systems in nine countries through national training courses. Fellowships were awarded to strengthen national capabilities in cancer management and control. In addition, technical assistance was provided in six countries for developing national guidelines for cancer management and palliative care.
- The Regional Office supported numerous activities for the control of diabetes mellitus. Technical and financial support was provided to conduct national epidemiological surveys in seven countries.
- Principal activities in control of cardiovascular diseases focused on strengthening country capabilities for the implementation of cardiovascular disease surveillance programmes. Technical support

was provided to several countries in order to strengthen their national prevention programmes.

- The Regional Office maintained its technical support in the field of hereditary disorders through the development of national surveillance and data collection. Training of health professionals and upgrading of the available resources in aspects of control of congenital diseases were supported in four countries.
- Control of blindness continued to receive increasing attention in countries of the Region. Extensive research activities on prevention of blindness were technically supported by the Regional Office in several countries. The national programme on trachoma control in Morocco was evaluated and represents a successful model for other countries to follow.
- Control of deafness also received increasing attention in the Region. Surveys of the prevalence and causes of deafness and hearing impairment are planned in Morocco and the Libyan Arab Jamahiriya to guide national strategy and programme development. Guidelines for screening and early detection of deafness are being developed in collaboration with Bahrain.

6

Administrative services

- Emphasis continues to be focused on the need to recruit well qualified staff from unrepresented and under-represented nationalities, as well as those below the midpoint of the desirable range for adequate representation, and women. The percentage of women among professional staff recruited in 1998 was 14.3%.
- The percentage of professional long-term staff in the Region who were nationals of the Region was 58.6%, while the proportion of short-term consultants who were nationals was 45.9%.
- As at 31 December 1998, US\$ 54 million was obligated under the regular budget, or 62% of the available funds, compared with 67% obligated at the end of the first year of the previous biennium. Obligations incurred against extrabudgetary funds during 1998 amounted to US\$ 19.7 million. The imposition of a 3% global programme budget implementation reduction resulted in lowering

the regional regular budget allocation for the biennium from US\$ 90.2 million to US\$ 87.5 million.

- After a long period of detailed planning and design the contract for the construction of the new Regional Office building in Cairo was signed with Arabian International Construction in September 1998. The completion date of the building is scheduled for end November 1999 and the building should be ready for occupancy in the first quarter of 2000.

Governing bodies

1.1 World Health Assembly

The Fifty-first World Health Assembly, on the nomination of the Executive Board, appointed Dr Gro Harlem Brundtland as Director-General of WHO effective 21 July 1998 for a period of five years. The Health Assembly adopted a World Health Declaration recommitting Member States to the health-for-all principle as a framework for the development of future policy.

In the resolutions of the Health Assembly, the Director-General was requested to establish, with other interested parties and as part of an integrated database for the United Nations system, a clearing-house for information on public health aspects of the use of antipersonnel mines. It also requested the Director-General to encourage Member States and nongovernmental organizations to formulate self-regulatory guidelines for good informational practices and to report to WHO problem cases and aspects of cross-border advertising, promotion and sale of medical products using the Internet.

The Health Assembly requested the Director-General to establish a group,

involving also government experts, with the aim of clarifying concepts and developing guidelines relating to the use of cloning procedures for nonreproductive purposes, and to take the lead in establishing an alliance for global health promotion and to raise health promotion to the top priority list of WHO. With regard to the global elimination of blinding trachoma, the Director-General was requested to intensify the cooperation needed with Member States in which the disease is endemic; with regard to tuberculosis to use all appropriate existing fora where Member States may present problems faced in implementation of the DOTS strategy and other strategies in order to overcome these problems and mobilize external technical, financial and other support needed; and with regard to leprosy to continue to strengthen technical support to Member States in order to eliminate the disease through treatment of patients with multidrug therapy.

The Health Assembly requested the Director-General to support Member States, especially the least developed countries, in giving greater attention, at the highest political level, to the health needs of their poorest people and to strengthen the capacity of ministries of health to play a key role in intersectoral efforts to eradicate poverty. The Assembly also called upon the Director-General to support Member States in implementing sanitation programmes by ensuring that sanitation is being assured by appropriate programmes in a coordinated and coherent way and to integrate sanitation with action such as "Healthy cities/islands/villages/marketplaces" projects and the "school health initiative" and national environmental health action plans. The Director-General was requested to develop further WHO's relations with the World Meteorological Organization and other appropriate organizations of the United Nations system in order to ensure the continuation of international efforts to foster understanding of the correlation of climate and health and the pursuance of ways and means of mitigating public health effects of global environmental change.

With regard to regular budget allocations to regions, the Health Assembly recommended that for future programme budgets to be approved such allocations should, for the most part, be guided by a model that draws upon the UNDP's human development index. The Health Assembly also decided to amend Articles 24 and 25 of the Constitution in order to increase the membership of the Executive Board from 32 to 34.

1.2 Executive Board

1998 sessions

The Executive Board met in January and May 1998. Countries of the Eastern Mediterranean Region having members on the Board in January 1998 were Bahrain, Cyprus, Egypt, Oman, and United Arab Emirates. In May 1998, Bahrain and Egypt were replaced by Qatar and the Republic of Yemen.

The Board awarded the Dr A.T. Shousha Foundation Prize for 1998 to Dr Awad Hussein Abudejaja (Libyan Arab Jamahiriya). The Sasakawa Health Prize was awarded to Dr Ahmed Abdul Qadr Al Ghassani (Oman); Ms Roselyn Mokgantsho Mazibuko (South Africa) and the Gondar College of Medical Sciences (Ethiopia). The United Arab Emirates Foundation Prize was awarded to Ms Hillary Rodham Clinton (United States of America).

The Board endorsed the principle of using a common set of objective criteria to determine the nature and extent of WHO representation at country level and requested that refined criteria in this respect be introduced gradually, to be phased-in over a period of six years.

January 1999 session

At its January 1999 session the Executive Board adopted 17 resolutions which included the following subjects: the revised drug strategy; appointment of the Regional Directors for the Americas, South-East Asia and the Western Pacific; budget presentation and process; reimbursement of travel expenses for attendance at regional committees; establishment of an audit committee; roll back malaria; poliomyelitis eradication; towards a WHO framework convention on tobacco control; and the WHO/UNICEF/UNFPA Coordinating Committee on Health.

1.3 Regional Committee

The Forty-fifth Session of the Regional Committee was held in Beirut, Lebanon, from 3 to 6 October 1998 under the chairmanship of HE Mr Sleiman Frangieh, Minister of Public Health, Lebanon.

Representatives from 20 countries participated in the deliberations. Observers from United Nations agencies, the League of Arab States, the World Bank and a number of intergovernmental, nongovernmental and national organizations were also in attendance.

The opening session was addressed by HE Dr Mohammad Farhadi, Minister

of Health and Medical Education of the Islamic Republic of Iran and Chairman of the Forty-fourth Session of the Regional Committee; HE Mr Sleiman Frangieh, Minister of Public Health, Lebanon; Dr Hussein A. Gezairy, Regional Director for the Eastern Mediterranean, Dr Gro Harlem Brundtland, Director-General of the World Health Organization and HE Mr Elias Hraoui, President of Lebanon.

The Committee adopted 13 resolutions, including those related to the following topics: the proposed programme budget for the financial period 2000-2001; emerging and resurging diseases with special reference to malaria; draft regional health-for-all policy and strategy for the 21st century; regional self-reliance in the production of essential drugs and vaccines; acquired immunodeficiency syndrome (AIDS); prevention and control of cardiovascular diseases; Down syndrome—establishment of a regional research prize foundation; the GATT agreement—its impact on health; and improving the quality of nursing and midwifery.

The Regional Committee nominated the Islamic Republic of Iran and the Republic of Yemen to serve on the subgroup of the Ad Hoc Working Group on the Revised Drug Strategy. The Regional Committee nominated Oman to serve on the Joint Coordinating Board of the Special Programme for Research and Training in Tropical Diseases for a three-year period from 1 January 1999 to 31 December 2001. The Regional Committee also nominated the Islamic Republic of Iran to serve on the Management Advisory Committee of the Action Programme on Essential Drugs for a three-year term from 1 January 1999 to 31 December 2001.

1.4 Regional Consultative Committee

The Twenty-second Meeting of the Regional Consultative Committee was held in Amman, Jordan, from 2 to 3 May 1998. It discussed several subjects including health in border areas, regional allocations, advocacy and resource mobilization, the private sector in the national health system; continuing education as an integral part of health care development systems, and mental health. The recommendations made by the Regional Consultative Committee were subsequently endorsed by the Forty-fifth Session of the Regional Committee.

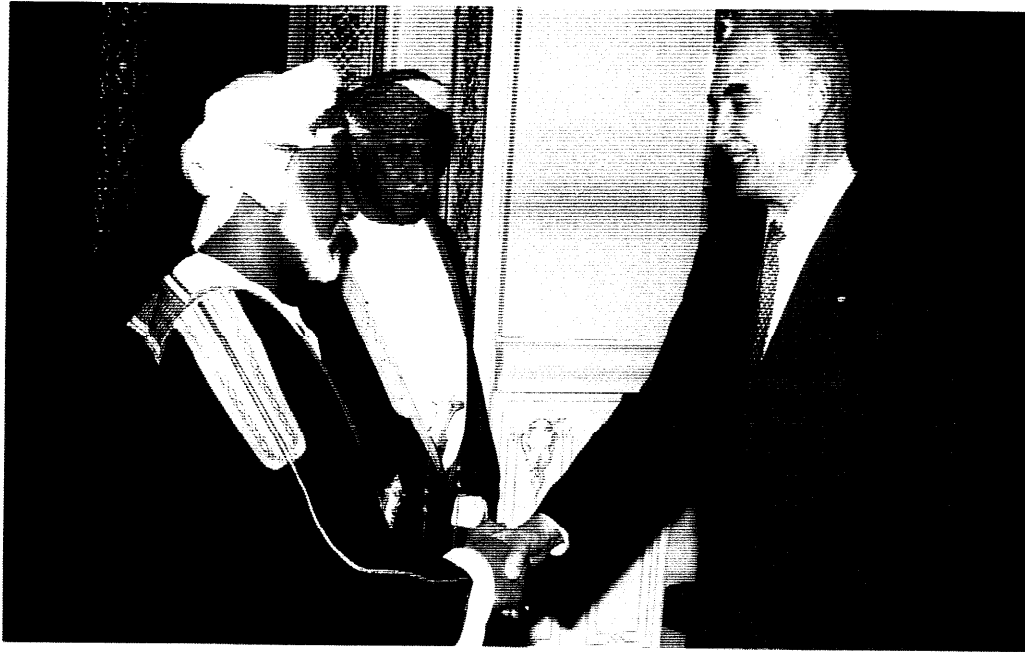
During 1998, the composition of the Regional Consultative Committee was revised and several new members were appointed in place of members whose term of office had ended. The Regional Consultative Committee held

its Twenty-third Meeting in the Regional Office for the Eastern Mediterranean on 24-25 April 1999. The report of the meeting is covered by an agenda item of the Forty-sixth Session of the Regional Committee.



During the Forty-fifth Session of the Regional Committee for the Eastern Mediterranean, which was held in Beirut, Lebanon, in October 1998 and opened by HE Mr Elias Hraoui, President of Lebanon, Dr Gro Harlem Brundtland, Director-General of WHO, visited the site of the reconstruction of the city centre





HM Sultan Qabous Bin Said Al Said, Head of State, and Dr Ali Bin Mohammed Bin Moosa, Minister of Health (centre), received the Regional Director, Dr Hussein A. Gezairy, during a visit to Oman to participate in the 42nd Health Ministers' Council of the Gulf Cooperation Council



The Regional Director presents a commemorative plaque to the Chairman of the Egyptian Medical Syndicate to mark the 50th Anniversary of WHO

Health policy and management

2.1 General programme development and management

WHO programme development

The Regional Office activities in the managerial process for WHO programme development during 1998 included the completion of the work of the Joint Programme Review Missions (JPRMs) for programme formulation for the biennium 1998-99. In February 1998, all 23 JPRM reports had to be modified by the Regional Office in the light of the 3% programme implementation reduction established by the Director-General. In the Eastern Mediterranean Region this reduction was not introduced as an across-the-board reduction in all programmes but on a programme by programme basis. The basis for the reduction was to ensure that priority areas were safeguarded. Only three countries subsequently proposed modifications to the suggested 3% cuts and by the beginning of April 1998 all JPRM reports, including the amendments, were finalized.

During 1998, the proposed programme budget for the financial period

2000-2001 was prepared and endorsed by the Forty-fifth Session of the Regional Committee. This budget is the first to be prepared within the framework of the revised regional allocations which entails reductions in the budget of the Region of 14% (US\$ 13 million) over three biennia. The new regional allocations were calculated taking into account several indicators, applied to countries of each region, and would have resulted in four countries of the Eastern Mediterranean Region receiving no allocation from the regular budget of WHO. In instituting the reduction to the country budgets for the financial period 2000-2001 the following criteria were followed: the least developed countries should not be affected; no country should have an increase; the budgets of the four countries who would have had their budget reduced to zero should be reduced by 50% only; the balance of the reduction should be borne by the remaining countries on a pro rata basis.

The approved regional programme budget for 2000-2001 was prepared within the structure which had been applied for the two earlier budgets in the Ninth General Programme of Work (1996-2001). However, it is understood that this budget will need to be changed to comply with the new global budgeting format approved by the Assembly following the restructuring exercise.

Annual meeting of the Regional Director with WHO Representatives and Regional Office staff

The fifteenth annual meeting of the Regional Director with WHO Representatives and Regional Office staff took place in the Regional Office at the end of June 1998. The agenda of the meeting, prepared in consultation with the staff involved, comprised a mix of administrative and technical subjects, some of which were presented by the Representatives. A relatively large proportion of time was devoted to describing in detail the implications of Executive Board resolution EB101.R10 and the subsequent WHA resolution (WHA51.31) which resulted in the revised regional allocations. This led to discussions on possible efficiency savings at country level and included a demonstration of a computerized tool to monitor programme activities at country level, particularly in the light of the move towards a more decentralized programmatic approach with delegated authority giving greater freedom in implementation. In line with this greater delegation of authority, it is important that Representatives' offices have direct online

access to programmatic and financial data. This is gradually being undertaken through the development of the Regional Activity Management System (RAMS) which will be incrementally upgraded and will eventually constitute a comprehensive integrated package serving both the Regional Office and Representatives' Offices. Efforts are ongoing to specify the needs of the latter.

Other topics included the Eastern Mediterranean Regional Plan for Health and Environment, evaluation of the basic development needs initiative, the Jakarta Declaration on health promotion, poliomyelitis eradication and the regional health-for-all strategy for the 21st century. WHO's policy of achieving a larger representation of women in WHO was also discussed.

Information systems management

The majority of applications have now been re-engineered and converted into a client/server environment with graphical interfaces. The Regional Activity Management System (RAMS) became fully operational in 1998 based on the back-end of the Activity Management System developed by WHO headquarters. RAMS is a web-based application that lets authorized users access data as long as they have a computer with an Internet connection and browser. RAMS presents situation analyses, programme budget and financial information and allows feedback from other allied administrative systems for all collaborative country programmes, intercountry and Regional Office plans, whether supported by the regular budget or from extrabudgetary sources. WHO Representatives' Offices and field offices that have access to the Internet can query the system online.

1998 was the year of the intranet at the Regional Office, as it became fully functional with information relevant to the needs of all staff. The policy of development of Internet-based applications was reinforced and implemented through acquisition of the appropriate tools and training of staff. Maintenance of existing systems continued while major applications development included barcoding for the inventory system, a distribution and sales management system, a personnel policy file system, and installation and operation of a full-text retrieval system. Development of the *Unified medical dictionary* software took a new direction in 1998 as a new client-server graphical web-based application was initiated. The application is now in its testing stage which will enable access to the dictionary from the Internet, the local area network and single user personal computers.

New areas of informatics support to technical units and WHO Representatives' Offices included: development of web-based software to publish *Polio fax* over the Internet; support to technical units to provide training for Member countries on *Epi-Info* software; and participation of the unit in intercountry meetings with specific reference to informatics support.

Access to the local area network at the Regional Office now covers all workstations and users; this was facilitated by the addition of six powerful servers to the network, making a total of 14 servers in addition to two CD-servers holding 24 drives. A network management software was installed to facilitate central monitoring and distribution of applications. New telecommunications services include videoconferencing facilities, e-mail access through the World Wide Web, Internet remote access, and fax transmission and receipt through e-mail. Internet access is now available to 120 users and e-mail service to all Regional Office staff and to 15 WHO Representative's Offices. This has led to the use of e-mail as an official communication method with specific rules and regulations as part of standard mail handling procedures.

Regional Director's Development Programme

In this first year of the biennium the Regional Director's development fund supported a variety of priority programmes and responded to immediate emergencies. Almost half the biennial allocation was directed towards supporting development projects in various fields. In the areas of health technology, support was given for the production of technical guidelines and strengthening of blood transfusion services. In the area of health care financing and health economics, support was given to furthering the concept of comprehensive national health accounts. The joint EMRO/CTD/TDR small research grants scheme and the safe motherhood initiative were also supported, as was emergency hospital repair in Iraq.

External coordination and resource mobilization

The Regional Office enjoys close collaboration with a number of international and regional organizations, particularly in resource mobilization.

Rotary International

Rotary International continued to support the regional programme for poliomyelitis eradication. During 1998 pledges were made for nearly US\$ 6

million in support of national programmes of priority countries and also for intercountry and regional activities related to surveillance for acute flaccid paralysis and national immunization days. Further support was pledged for 1999.

Centers for Disease Control and Prevention

The Centers for Disease Control and Prevention (CDC), Atlanta, USA continued to give strong support to poliomyelitis eradication through provision of technical experts and funding of a number of posts at the Regional Office and in the field. This support was instrumental in ensuring that poliomyelitis eradication efforts at national and regional level had the technical support required.

AGFUND

During 1998, several projects were submitted for funding and were considered by AGFUND. Close evaluation of existing projects was also conducted. AGFUND agreed to continue its financial support to several projects. During the 40th Session of the AGFUND Administrative Committee held in Riyadh in December 1998, an amount of US\$ 79 000 was approved to support a project on health and environment education in schools in Lebanon.

Arab Atomic Energy Agency

After two years of exploratory discussion, the prospects for collaboration with the Arab Atomic Energy Agency (AAEA) in the area of environmental aspects of radiation protection are now quite good. As a first step, a training workshop is proposed in collaboration with WHO headquarters and AAEA on medical preparedness for nuclear and radiation accidents and during emergencies, and a study of radon gas concentration around phosphate plants will be conducted.

Islamic Development Bank

A letter of agreement between the Islamic Development Bank (IDB) and the Regional Office and its Regional Centre for Environmental Health Activities (CEHA) in Amman, was signed in June 1998 whereby IDB agreed to cosponsor a multinational workshop on environmental health impact assessment of development projects for French-speaking countries in the Region.

In consultation with the Regional Office, IDB organized an expert consultation in August 1998 to advise on priorities in the field of health development in Islamic countries, with regard to possible IDB support. The consultation identified several priority areas including: strengthening the national health care system; promotion of Islamic lifestyles for health protection; self-reliance in vaccine production; poliomyelitis eradication and tuberculosis control. The Regional Office, in consultation with governments, then submitted a detailed proposal for priority to be given to self-reliance in vaccine production in the Islamic world.

African Development Bank

The Regional Office assisted the African Development Bank (ADB) in recruiting expertise for the technical health programme in Egypt. As part of the early responses made by donors to the United Nations appeal for emergency assistance to Sudan following heavy rains and floods, ADB pledged US\$ 500 000 to be used for disease control and provision of medicine, particularly for malaria and diarrhoeal disease.

League of Arab States

The Regional Office continued its close collaboration with the League of Arab States, in particular the Council of Arab Ministers of Health. The Regional Director attended all the regular meetings of this Council. The various technical units in the Regional Office participated in the finalization of the Arab Strategy for Health Development and the Arab good manufacturing practices for production of pharmaceutical and biologicals, and in technical meetings organized by the technical secretariat of the Council of Arab Ministers of Health. In reproductive, family and community health, the Gulf Family Health Survey, the Pan Arab Project for Child Development and the Pan Arab Project for Family Health are excellent examples of close collaboration between the Regional Office and the League of Arab States, as well as other concerned agencies such as AGFUND, UNFPA and UNICEF.

Close collaboration is also ongoing with the Arab Labour Organization in provision of technical support to develop a database on occupational diseases and work accidents in Member States.

Cooperation also continued with the League of Arab States with regard to environmental impact of industrial activity and air quality guidelines.

Working relations are ongoing through the Council of Arab Ministers Responsible for Environment and three of its bodies: the Joint Committee of the Programme on Environmental Education, Information and Awareness in the Arab countries and the **Standing Committee on the Control of Industrial Pollution in the Arab countries.**

UNDP/LIFE/WHO Healthy Cities Project

A donation from UNDP/LIFE of US\$ 80 000 has been provided to WHO Healthy Cities projects in Quetta, Pakistan and Fayoum, Egypt, to implement activities related to healthy schools, water and wastewater, hygiene and sanitation, reducing pollution, awareness-raising, city beautification including tree plantation, neighbourhood improvement and resource mobilization.

Government of the Netherlands

The Government of the Netherlands supported the project on capacity-building for nutrition in countries of the Eastern Mediterranean Region of WHO in the amount of US\$ 897 220. The project is aimed at strengthening of the regional training course on nutrition and decentralization of nutrition training to country level. The support for the project focuses on three main aspects: regional capacity-building through institutional strengthening of the Nutrition Institute, Cairo, Egypt, WHO Collaborating Centre for Research and Training in Nutrition; national capacity-building through training national core teams in the regional training course, Nutrition Institute, Cairo; and capacity-building at national level through decentralized training courses at country level by country teams and using the flexible modules for training in management of nutrition programmes.

Staff development and training

The Regional Office's Personnel unit, as the regional focal point for staff development and training, continued to promote and facilitate staff training in its efforts to increase and maintain the highest level of staff skills. During 1998, training activities included on-entry group briefing sessions for new professional staff, and language and computer courses for professional and general services staff. Professional staff benefited from in-service training. Future plans include managerial and supervisory workshops for professional and support staff and continuing to support language proficiency.

2.2 Public policy and health

Formulation of health policy

Most countries of the Region contributed to enrichment of the regional policy and strategy paper for the 21st century which is expected to be endorsed at the Forty-sixth Session of the Regional Committee. The United Arab Emirates were supported in completing their national exercise on sectoral assessment and in preparing the policy and strategies document on health for all for the 21st century. Technical support was provided to Lebanon to prepare for the implementation of the World Bank-supported project on rehabilitation of the health system, particularly in the finalization of the household expenditure and utilization questionnaire and in preparations for national health accounts analysis.

Efforts are being made to develop technical expertise in the Regional Office to cater for country needs in managing health sector reform initiatives and in developing evidence-based policies. Particular interest will be paid to strengthening national information and surveillance systems, to measuring the national and regional burden of diseases and to improving cost analysis in health systems.

The first phase of the health sector reform process (1998-2002) in Egypt was initiated. The components of the reform process include the provision of universal access to a basic package of primary health care, based on the district health system approach and through implementing the primary health care insurance system and improving primary health care quality and efficiency in three pilot governorates. Another component concerns reforming the Health Insurance Organization and adapting its institutional structure to provide the primary health care package in the three governorates.

Countries of the Region were supported in health economics and health care financing. An actuary was fielded to Saudi Arabia to support the preparation for the implementation of a health insurance scheme. Fellowships for long-term and short-term training in health economics were awarded for participants from Egypt, Islamic Republic of Iran and Tunisia.

The Maghrebian network on health systems and health economics held its second meeting aimed at preparing the implementation of the regional programme on health economics and health care financing. Short training courses in health economics for health managers at various levels are planned to start by April 1999. In collaboration with the World Bank, efforts were

made to coordinate training in health economics and health sector reform management, particularly with respect to the implementation of the Arabic and French versions of the “Flagship” course organized by the World Bank.

A joint initiative on national health accounts development funded by WHO, Partnerships for Health Reform and the World Bank, will be launched following a preparatory workshop held at the end of January 1999. Djibouti, Egypt, Islamic Republic of Iran, Jordan, Lebanon, Morocco, Tunisia and Republic of Yemen will be covered in the first round of the initiative.

Health legislation and bioethics

The Regional Office contributed to the exchange of experiences and expertise in health legislation between countries of the Region as a means of technical cooperation among developing countries. Collaboration with the Arab League in the development of common Arab health legislation continued. Palestine and the Syrian Arab Republic were supported in updating their health legislation and in developing databases for health legislation.

Efforts are being made to promote bioethics and to establish national and subnational bioethics committees, particularly in approving grants for research. The Regional Office continued its collaboration with the Islamic Organization for Medical Sciences in the field of health ethics and contributed to the planning exercise of the Islamic Educational, Scientific and Cultural Organization in identifying areas of potential collaboration in genetic engineering, organ transplants and other areas of bioethics.

Promotion of the role of women in health and development

During 1998, the Regional Office participated in several meetings relating to the advancement of women, including the meeting African Women, Economic Development in Addis Ababa, Ethiopia. A contribution was made to the document *Gender-responsive development in Africa. Compendium of good practice*, issued by the Economic Commission for Africa.

The Regional Office took part in the Alexandria College of Nursing Organizing Committee for the International Congress on Women's Health and presented a paper on “the voice of women in the community”. Some of the original articles in the proceedings for the Congress will be published in forthcoming issues of the *Eastern Mediterranean health journal*. The Regional Office actively participated in the Expert Group Meeting on Women and Health—Mainstreaming the Gender Perspective into the Health Sector which

took place in Tunis, Tunisia, in September/October 1998. The meeting was jointly organized by the United Nations Division for the Advancement of Women, UNFPA and WHO. It also participated in the Second Arab Meeting for Follow-up to the Beijing Conference, held in Beirut in December 1998. Government experts from all members in the League of Arab States, gender-oriented nongovernmental organizations concerned with the advancement of women, other national experts and international organizations were invited to the meeting. The objective of the meeting was to provide assistance to countries in preparation for the "Beijing plus five" meeting which is envisaged for the year 2000.

The Regional Office continued to support the women in health and development programme in countries of the Region, taking a proactive approach. During 1998, the number of countries with such activities tripled.

In Afghanistan, a gender-sensitive planning methodology was developed and is being used for health planning processes at central, regional, provincial and district levels. District health and disease profiles were prepared using the new gender-disaggregated format, checklists and indicators to prioritize gender-sensitive health issues. New strategies were developed to bring local women into healthy city and basic development needs initiatives in order to promote women's role in health and sustainable development. Work on development of a manual on gender mainstreaming has been initiated. Gender sensitivity was built into the promotional and advocacy materials for a BBC special radio programme for Afghanistan.

In Egypt, the WHO/Plan International collaborative project entitled "Healthy Cities and Women's Development" has now spread to 10 more shanty towns. In Jordan, work is under way to launch the Princess Basma Women's Resource Centre as a WHO collaborating centre and to implement the plan regarding the role of women in environmental health and health promotion. WHO organized a three-day intercountry consultation in February 1999 in Amman, Jordan at the Princess Basma Women's Resource Centre on the role of women in health and sustainable development. The main aim of the consultation was to share major lessons learnt in the countries with reference to gender mainstreaming and, based on these experiences, to propose regional strategies and recommendations to further enhance and promote the role of women in health and development.

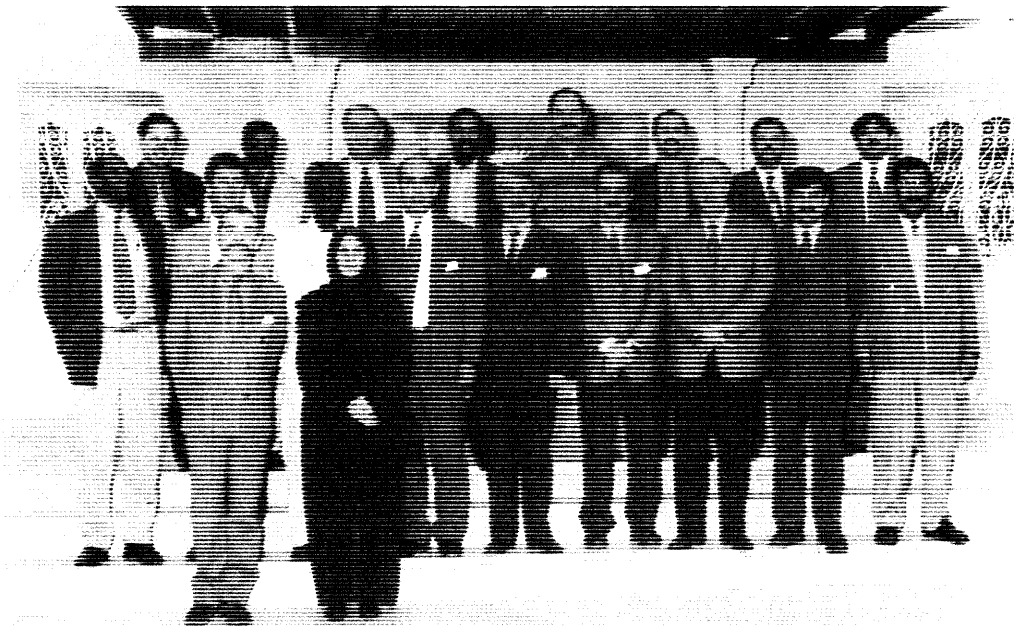
During 1998, a multidisciplinary national workshop was convened in Palestine to discuss women's activities in support of health and development,



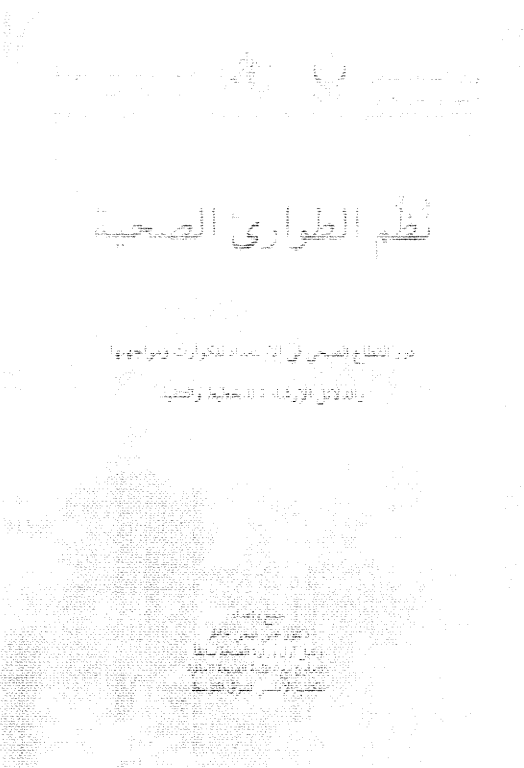
On a field trip to Irbid, Jordan in February 1999 participants in the Intercountry Consultation on the Role of Women in Health and Sustainable Development met local women involved in the Noor Al Hussein Foundation Quality of Life Project and observed a health education learning session conducted by and for local women

Female literacy schemes, such as this centre in Pakistan, have a major role to play in improving women's participation in health and development and in enabling them to overcome gender discrimination in their access to health and health care





Participants in the Intercountry Workshop on Emergency Preparedness and Response, Hammamet, Tunisia, November 1998



Health emergency systems, an Arabic copublication of WHO and the Ministry of Health of Egypt, was distributed to ministries of health throughout the Region

and a demonstration project on the role of women in support of local health and development was initiated. In the Republic of Yemen, a national plan to promote the role of women in national development was prepared by two national experts under the guidance of the Regional Office.

A new World Health Day project was prepared within the framework of the basic development needs initiative in Djibouti in collaboration with the community through nongovernmental organizations, local authorities and development agencies. The aim is to produce outreach health workers and community leaders who can engage in health promotion activities in order to improve the health of women and the family and reduce maternal and infant mortality.

A country profile study on women in development was conducted by the Japan International Cooperation Agency for Morocco as a guideline tool with regard to cooperation between the Agency and the government.

Research policy and strategy coordination

The regional programme on research policy and strategy coordination continued to support countries in developing their health research capabilities, and providing financial support to research projects in several priority areas.

Technical support in the area of health systems research in the form of WHO short-term consultants was provided to Iraq, Kuwait, Oman and Tunisia to review the present situation with regard to health systems research, develop comprehensive plans for such research, and identify priority areas for health research. Technical contracts were offered to national experts and funds were provided for national training activities in Islamic Republic of Iran, Iraq, Jordan, Oman, Sudan, Syrian Arab Republic and Republic of Yemen to develop national capabilities in the area of health systems research.

The regional initiative to develop modules for training in research methodology, scientific paper writing and journal editing attracted the interest of several countries in 1998. Workshops were held in Islamic Republic of Iran, Egypt and Saudi Arabia.

The Regional Office also contributed to the work of the WHO Working Group on Policies and Strategies to support WHO in Health Research held in Geneva in March 1999.

The Eastern Mediterranean Advisory Committee on Health Research (EM/ACHR) held its 19th session in April 1998 in Beirut, Lebanon. Topics included: a global overview of science and technology—a research agenda, prion

diseases, health policy research, the regional small grants initiative, environmental impact on health development and monitoring antimicrobial resistance. The EM/ACHR made several important recommendations related to the topics discussed, as well as special recommendations on the establishment of regional and national health research policy and strategy.

Modest financial support was provided to eight research projects in the following areas: schistosomiasis as a public health problem, monitoring cardiovascular diseases, causes of blindness (a hospital-based study), rationality of drug prescribing, effects of vitamin A in enhancing humoral immunity, factors influencing iodine intake, Iranian traditional plant medicine and antimycobacterial activity, and tobacco use and oral health.

Three WHO collaborating centres were designated in the Region: the National Centre for Diabetes, Endocrine and Inherited Diseases, Jordan, as a collaborating centre for diabetes research, education and primary health care; the Drug and Pharmacy Directorate, Ministry of Public Health, Tunisia, a collaborating centre for pharmaceutical regulation and drug registration; and the National Radiation Protection Centre, Rabat, Morocco, as a collaborating centre for radiation protection. Several WHO collaborating centres were redesignated during 1998, making the total number of such centres in the Eastern Mediterranean Region 61 (see Annex 5).

2.3 National health policies and programme development and management

Health management support

Many countries took a greater interest in improvement of health management in 1998, considering better management of their national health systems to be among their major needs and priorities. In order to respond adequately to national and regional expectations, needs and priorities, great efforts are being made by the Regional Office to provide necessary support to countries in the development and improvement of health management in the Region. This has been done through a variety of approaches including contractual services agreements, fellowships, national training activities, consultancy services and regional consultations, particularly on developing and expanding use of the district team problem-solving (DTPS) technique.

An expert group meeting on evaluation of the DTPS approach in the Eastern Mediterranean Region was held in Muscat, Oman, in May 1998,

attended by four senior national staff and five Regional Office experts, as well as 20 observers from Oman. The objectives of the consultation were to review and discuss country experiences in implementing the *wilayat* team problem-solving (WTPS)/DTPS approach; and to evaluate and determine whether and how DTPS will be extended to other countries and institutionalized in the health services system; valuable and practical recommendations were made at this regional consultation. In Oman, *wilayat* health management teams have been trained in the WTPS/DTPS process of all 59 *wilayat* in 10 regions of the country. In Iraq, the DTPS approach is being expanded; an evaluation workshop on the DTPS process was conducted in Baghdad with technical support from the Regional Office.

A regional consultation on organizational structure of ministries of health was held in Limassol, Cyprus, in December 1998. The objectives of the consultation were to review and discuss experiences of Eastern Mediterranean Region countries in restructuring ministries of health; and to develop guidelines for approaches to reviewing and updating the organizational structure of ministries of health. In addition to the attendance of Regional Office senior staff and experts, 14 participants from 12 countries attended this consultation. Based on the recommendations of this consultation, Regional Office experts are developing guidelines for restructuring the national health system, proposing possible reasons for restructuring, as well as mechanisms of restructuring, and the resources required to be made available for this process.

The Regional Office continued its collaboration with the Ministry of Health, Syrian Arab Republic, in developing the Quality Management Training Centre, established in November 1997. The centre, which enjoys full support from policy-makers, is an innovative strategy to improve the quality of health care and health status through quality orientation, health system development and managerial capacity-building. The centre focuses on the core health processes, problem solving and team work. The 12-month modular training programme is action-oriented and product-oriented and follows a learning-by-doing approach designed to build on the knowledge and experience of the trainees.

WHO Representatives' Offices

During 1998 WHO Representatives' Offices in 16 countries managed WHO technical cooperation at country level and provided policy support to

ministries of health on various aspects of health. Desk officers at the Regional Office continued to provide support for countries without WHO Representatives' Offices. In addition to serving as an interlocutor and focal point for contacts between WHO and its countries, the WHO Representatives have a catalytic role in the implementation of health for all, liaising with other UN agencies as well as bilateral donors and nongovernmental organizations. The increasing reliance in recent years on extrabudgetary sources of income due to a combination of higher demands on WIIO and lower regular budget resources in real terms underline the importance of the WHO Representatives' role in resource mobilization. Every effort is being made to make use of recent technological advances to establish communication links between WHO headquarters, its regional offices and country offices as well as countries to permit an efficient flow of information between all parties.

Health planning

The Regional Office continued its support to a number of countries in strengthening their planning capabilities at central and district levels. The United Arab Emirates were supported in developing new functions in the planning department in order to better manage the planned policy changes. Fellowships were awarded to Egypt, Kuwait, Palestine and Tunisia in the areas of health planning and particularly in improving strategic planning. The training of district managers in Egypt continued, with technical support from training institutions in planning and management. A manual for planning and management was produced in Arabic with support from WHO. Efforts were made to promote strategic planning in ministries of health during the eighth round of JPRMs and to disseminate WHO literature on health futures. Support was provided through WHO collaborative programmes to the national institutes of health management. Strengthening of microplanning using the district team problem-solving approach continued in Kuwait, Pakistan and Republic of Yemen.

Logistical support to country programmes

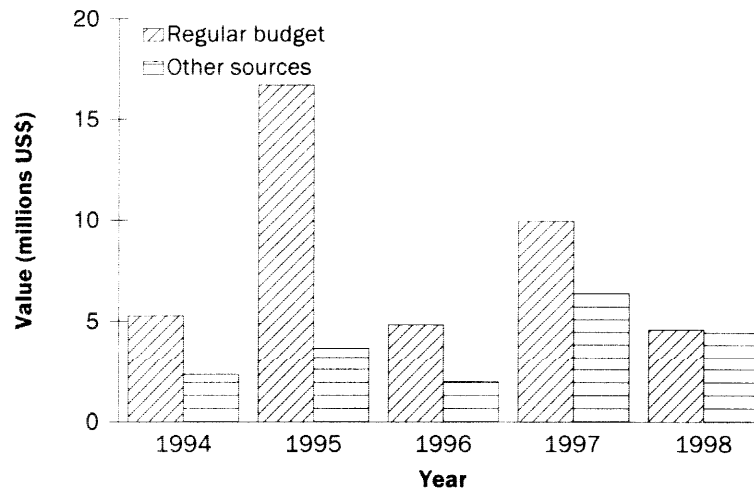
This programme provides the logistical support necessary for the provision of essential supplies and equipment for running the activities of WHO collaborative programmes. It ensures that all due economy and care are exercised within the established rules and regulations for the procurement,

shipment, delivery, insurance and maintenance of inventory records. Procurement includes regular and non-regular budget resources as well reimbursable purchases made on behalf of countries. Figure 2.1 shows the value of procurement of supplies and equipment and the source of funding for 1994 to 1998. Procurement of supplies and equipment for projects during 1998 from all sources of funds, amounted to US\$ 9 025 072. Figure 2.2 shows procurement by category of supply for each of the years 1994 to 1998.

This programme promotes the local purchase of supplies and equipment of acceptable quality and such local purchases in 1998 were valued at US\$ 1 121 038. The programme also provides technical advisory support at country and Regional Office levels.

Emergency preparedness and humanitarian action

The regional programme on emergency preparedness and humanitarian action continued to provide technical support to countries of the Region in their efforts to develop disaster management programmes. There has been progressive political commitment from national authorities in the Region in recent years towards having pre-established systems to prevent and



Health policy and management

FIGURE 2.1 Procurement of supplies and equipment by source of funding, 1994-98

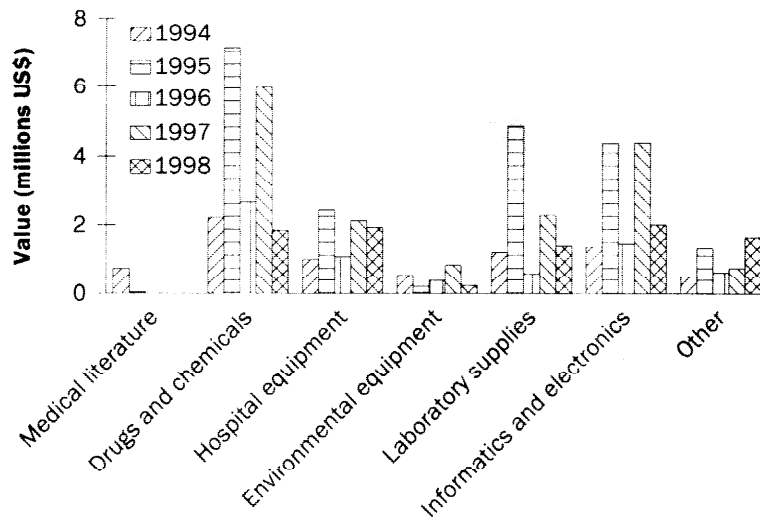


FIGURE 2.2 Procurement of supplies and equipment by category of supply, 1994-98

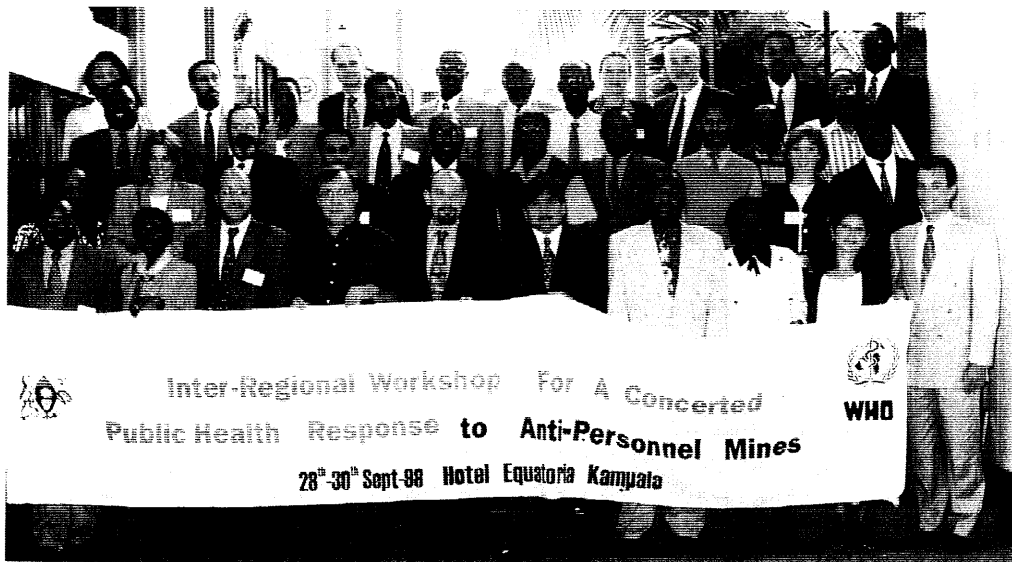
minimize emergencies and to establish preparedness measures in order to respond to disasters in a timely and effective manner. More countries are considering human resources development in the area of emergency and humanitarian action as one of their priorities. Focal points for the programme have been designated in 15 countries. During 1998, six training sessions and national workshops on different aspects of emergency and humanitarian action were conducted in the Islamic Republic of Iran, Iraq, Palestine and Sudan for a total of 185 participants. In addition 16 nationals, mostly emergency and humanitarian action focal points of ministries of health and managers of emergency programmes from Afghanistan, Bahrain, Cyprus, Egypt, Islamic Republic of Iran, Iraq, Oman, Qatar, Sudan, Syrian Arab Republic and Tunisia, were trained through the International Diploma Course on Emergency Preparedness and Health Risk Reduction.

The Regional Office organized an intercountry workshop on emergency preparedness and response in Hammamat, Tunisia, in November 1998. It brought together 12 experts, mostly emergency and humanitarian action focal points of ministries of health, from 11 countries of the Region. The workshop was also attended by experts from the WIIO Mediterranean Centre

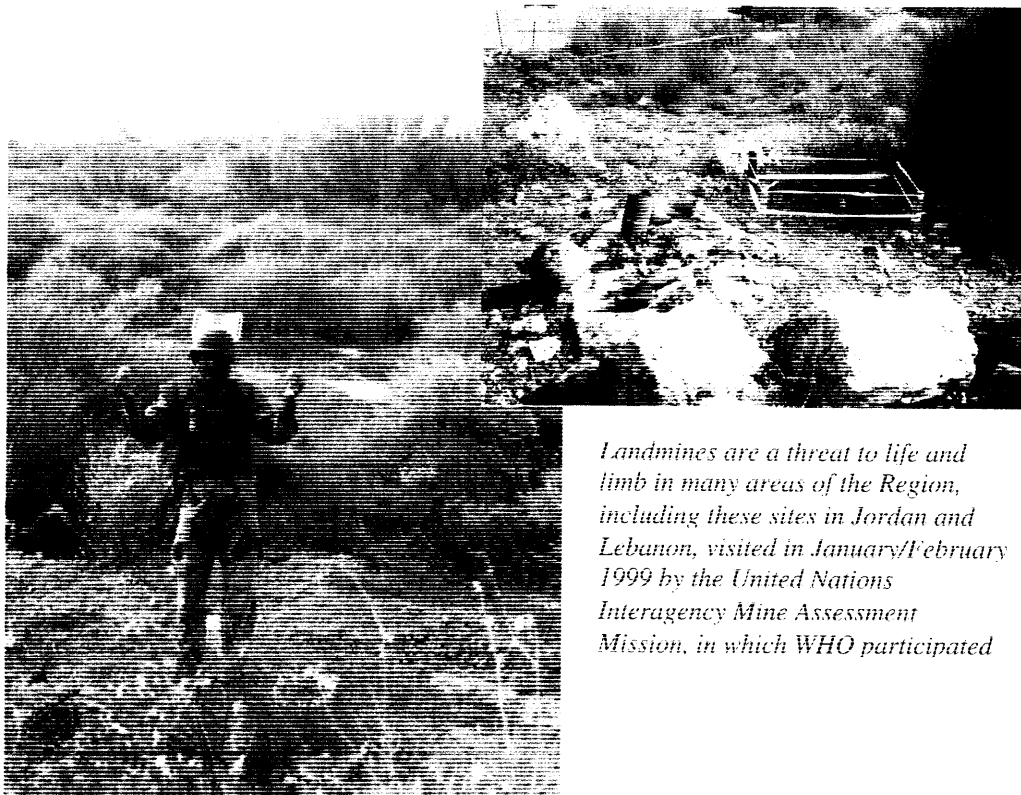


The Central Rehabilitation Centre (above) of the Ministry of Health, Republic of Yemen, provides physical rehabilitation services to trauma victims. Many of its employees (below) are themselves the victims of landmines.





Representatives from Djibouti, Somalia and Sudan were among the participants in the Interregional Workshop for a Concerted Public Health Response to Anti-Personnel Mines, Kampala, Uganda, September 1998



Landmines are a threat to life and limb in many areas of the Region, including these sites in Jordan and Lebanon, visited in January/February 1999 by the United Nations Interagency Mine Assessment Mission, in which WHO participated

for Vulnerability Reduction, WHO headquarters, the Emergency Health Training Programme for Africa, WHO Somalia, WHO Sudan, and the University of Coventry, United Kingdom. The meeting reviewed progress in the Region, exchanged experiences, identified constraints and recommended action for the further improvement of programme performance in emergency and humanitarian action in the Region. The workshop also standardized the country profiles' format and recommended the essential components of the regional plan of action for emergency and humanitarian action for the coming three biennia. The process of developing emergency country profiles is progressing with profiles for 15 countries in the Region having now been prepared.

Collaboration and cooperation was strengthened with a number of different institutions and centres, including the Emergency Health Training Programme for Africa, the WHO Mediterranean Centre for Vulnerability Reduction, the Crisis Research Unit of Ain Shams University, the Disaster Management Programme of Coventry University and the Libyan Medical Congress. An internship programme with Coventry University was started and the newly established library of the Crisis Research Unit of Ain Shams University, Cairo, was supported through provision of reference materials and publications. Regional Office staff also participated in the annual conference of that unit in 1998. WHO Representatives from Djibouti and Somalia participated in a planning workshop on the Emergency Health Training Programme for Africa which was held in Harare in July 1998. The workshop was aimed at developing a common understanding on emergency health management and at prioritizing activities.

In the area of assistance to victims of land mines, the Regional Office designated a focal point in order to strengthen its collaboration and cooperation with WHO headquarters, other agencies and, most important, with countries. The focal point is in the process of collecting information from different sources on the magnitude and scope of the problem of land mines in the Region and their impact on health and overall socioeconomic development. The Regional Office focal point on assistance to land mine victims participated in the United Nations Interagency Mine Assessment Mission to the Republic of Yemen during September 1998. The mission defined the scope and nature of the land mine/unexploded ordinance problem in the Republic of Yemen, identified constraints and opportunities relating to the development of mine action initiatives, and made

recommendations for a comprehensive response, including institutional arrangements for the coordination and implementation of mine action activities. The same type of mission was also carried out in Lebanon and Jordan. The WHO Representatives for Djibouti and Somalia and concerned national authorities of Djibouti, Somalia and Sudan, participated in the Interregional Workshop for a Concerted Public Health Response to Land Mines, in September 1998. The workshop was aimed at formulating clear strategies and developing country plans of action addressing the key point that underlies the principles of WHO action: partnership, sustainability and equity. Plans of action for the three countries concerned were prepared. In addition, the WHO Representatives of Djibouti and Somalia participated in the WHO Consultative Meeting on Assistance to Mine Victims, in Addis Ababa, Ethiopia, in June 1998, organized by WHO headquarters.

The Regional Office provided support to the Ministry of Health of Egypt in developing and printing a publication entitled *Health emergency systems* in Arabic.

In Iraq, where WHO has been mandated to implement the health component of Security Council Resolution 986 authorizing Iraq to sell oil against food and medicines, the programme started in December 1996 has now been extended four times. The last extension was made under Security Council Resolution 1210, which continues the programme until June 1999.

WHO's involvement in Operation Lifeline Sudan was strengthened during 1998. A sub-office for southern Sudan was established and a coordinator was recruited. The WHO sub-office prepared a plan of action in order to improve the health situation in this area. In addition, the WHO coordinator together with other relevant agencies participated in an assessment mission in order to investigate an unknown illness in some parts of southern Sudan. The Regional Office also participated in assessment of the nutritional situation in the Bahr El-Ghazal area of south Sudan.

The Regional Office actively participated in the preparation of contingency planning for emergency in the Middle East. Three international experts were recruited who assisted the national authorities in Jordan and the Syrian Arab Republic to develop contingency plans of preparedness for and response to biological, chemical or nuclear accidents. Contingency plans for possible influx of refugees were also prepared for Iraq, Jordan and Syrian Arab Republic.

2.4 Biomedical and health information and trends

Health situation and trend assessment

The regional health situation and trend assessment programme aims to support action to improve the evidence base in health management and epidemiological surveillance through strengthening health statistical information systems and monitoring and evaluation of health-for-all strategy implementation at regional and country level.

Health statistical information

Strengthening national capacity-building in health statistical information disciplines, namely health statistical methods, use of informatics tools and health statistical information development methodology, continues to be the focus of the current programme, in addition to enhancement of the regional health situation and trend assessment database.

During 1998, 36 national training activities were carried out in 10 countries and 11 fellowships were awarded to candidates from six countries of the Region (Afghanistan, Libyan Arab Jamahiriya, Morocco, Oman, Palestine and Saudi Arabia).

To assist in the review and enhancement of national health statistical information systems 15 consultations were undertaken in Egypt, Iraq, Jordan, Lebanon, Morocco, Qatar, Saudi Arabia and Syrian Arab Republic. In addition, WHO provided countries with essential informatics equipment and software as well as extensive documentation (including three-volume sets of the tenth revision of the International Statistical Classification of Diseases and Related Health Problems [ICD-10], and related computer-based training and translator software, for developing mortality and morbidity statistics by cause).

An intercountry meeting on identification and development of essential indicators, held in Teheran, Islamic Republic of Iran in July 1998, was attended by participants from 20 countries of the Region. Following this meeting, a methodology for identification and development of essential health indicators was introduced in Saudi Arabia through a national workshop.

At the regional level, the guidelines on how to develop or revise a national health statistical information system were finalized and will be issued in 1999. The enhanced regional health database was finalized. The pamphlet *Demographic and health indicators for countries of the Eastern Mediterranean*

is now established as an annually updated document disseminated throughout the Region.

The regional health situation and trend assessment programme continued to collaborate with other international agencies including AGFUND, UNFPA, UNICEF, the United Nations Statistical Office and ESCWA in two projects of the League of Arab States: PAPCHILD and PAPFAM. The Pan Arab Project for Child Development (PAPCHILD) will be completed in mid-1999 with the finalization of the Moroccan PAPCHILD Survey, carried out as a pilot survey for the new Pan Arab Project for Family Health (PAPFAM). The Regional Office, assisted in the preparation of the principal report of the Moroccan PAPCHILD Survey and in the preparation of the national conference on the findings of the survey. The preparation of PAPFAM was approved by the last Higher Steering Committee meeting of PAPCHILD, held in Cairo, Egypt, in December 1998. This project will focus mainly on conducting reproductive health surveys in all Arab countries except the countries of the Gulf Cooperation Council which have already been covered by a similar project.

Monitoring and evaluation of health-for-all strategies

The regional programme activity on monitoring and evaluation of health-for-all strategy focused on the preparation of volume 6 (Eastern Mediterranean Region) of the ninth report on the world health situation. The programme participated also in an informal consultation relating to the preparatory process for the fourth monitoring of health for all.

The Regional Office was represented at the workshop on burden of diseases and cost-effectiveness analysis organized by WHO and Harvard University in Stowe, Vermont, in December 1998. The workshop was aimed at developing WHO capacity-building in burden of diseases assessment and cost-effectiveness analysis, and the Regional Office is preparing a regional medium term 1999-2003 programme on the subject. Its general objectives will be to develop regional capacity in the use of burden of disease assessment in decision-making for health at WHO and country levels.

Health and biomedical information support

Eastern Mediterranean health journal

In 1995 it was decided to launch the *Eastern Mediterranean health journal* (EMHJ) as the official health journal of the Regional Office for the Eastern

Mediterranean. Its objective was to be a forum for the presentation of new policies and initiatives in health services, and for the exchange of ideas, concepts, epidemiological data, research findings and other information, with special reference to the Eastern Mediterranean Region. Since its inception, the EMHJ has followed strict procedures ensuring meticulous technical, statistical and language reviewing aiming to achieve the highest possible standard of excellence in form and substance. Up to the end of 1998, the EMHJ had published four volumes including 12 issues.

The EMHJ has increasingly attracted the attention of the scientific community within and outside the Region. This was reflected in increased contributions, from 128 manuscripts in 1995 to 293 in 1998, in peer reviewers, from 43 in 1995 to 273 in 1998, and in positive appraisals and feedback from readers.

The journal is now recognized as valid forum for scientific publication and academic evaluation of staff in an increasing number of medical schools in the Region, and as of volume 5 (1999), will be indexed in *Index Medicus* and MEDLINE, which is available in the USA and throughout the world. In the light of this evident progress, the frequency of the EMHJ will be increased to bimonthly from quarterly in 1999.

Publications and documents

The work of the Publications and Documents unit, which is responsible for issue of documents and publications in English, concentrated in 1998 on timely production of the *Eastern Mediterranean health journal* while continuing to provide routine briefing and debriefing of short-term consultants with respect to their assignment reports and the executive action documents they prepare as part of their assignments and editorial services for issue of documents, reports of intercountry meetings, presentations and addresses by the Regional Director, and the documentation for the Regional Committee, including the Annual Report of the Regional Director; 139 executive action documents were edited prior to submission to the governments concerned.

A set of three books on nursing education in the Eastern Mediterranean Region: *Guidelines on future directions*, *Prototype baccalaureate nursing curriculum*, and *Prototype technical nursing curriculum*, were among the significant publications in English in 1998. A number of high quality documents were also issued, including *Mental health promotion for*

schoolchildren, a training manual on surveillance of communicable diseases, reports on fortification of flour with iron in countries of the Region and the Consultation on Private Medical Education, and promotional material on the basic development needs initiative.

Publications of the Regional Office are now routinely made available on its website. Also available on the website are the full text of the Annual Reports of the Regional Director 1994-97, the resolutions and decisions of the Regional Committee for the Eastern Mediterranean, Regional Office newsletters including *EMR AIDSnews*, publications announcements and a price list. An online ordering scheme has been established.

The following items of health and biomedical information were issued in various languages in 1998 (see Annex 4): 24 new publications, 159 documents (including 61 intercountry meeting reports) and reprints, 11 periodicals, 5 kits, and 17 posters and other items of health-related literature.

WHO Arabic publications programme

The WHO Arabic Publications programme handled and/or issued a considerable number of publications, documents and journals during 1998. Translation, revision and proofreading comprise the major part of the work of the programme. Among the documents and publications of significance produced in 1998 were the Arabic version of the *Plan of action for health and environment in the Eastern Mediterranean Region*, *TB/HIV: a clinical manual*, *Guide to good prescribing: a practical manual*, *Prevention of disabilities in patients with leprosy: a practical guide* and *Malaria: a manual for community health workers*.

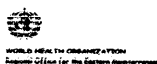
Language services

The Language Services unit continued to shoulder efficiently the work of translating, revising and editing correspondence, reports and documents in Arabic and French. All the documentation of the Forty-fifth session of the Regional Committee was processed on time, including the Annual Report of the Regional Director and the voluminous programme budget document, as well as the technical discussions and technical papers, which were done in Arabic and translated into French. The unit also prepared in Arabic the report of the Forty-fifth Session of the Regional Committee and translated it into English. In addition, in 1999 the unit translated into Arabic the manual for persons in charge of the Blue Trunk Library as well as nine training

Recent documents and publications

WHO Technical Publications Series 26

Nursing Education in the Eastern Mediterranean Region
Prototype Technical Nursing Curriculum



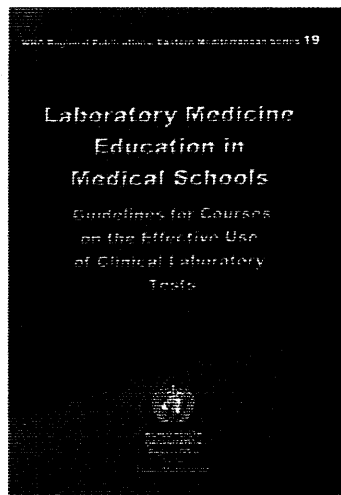
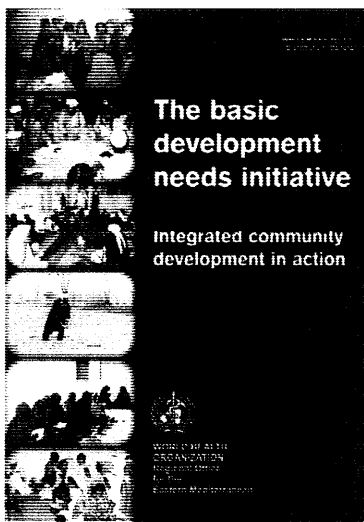
WHO Technical Publications Series 26

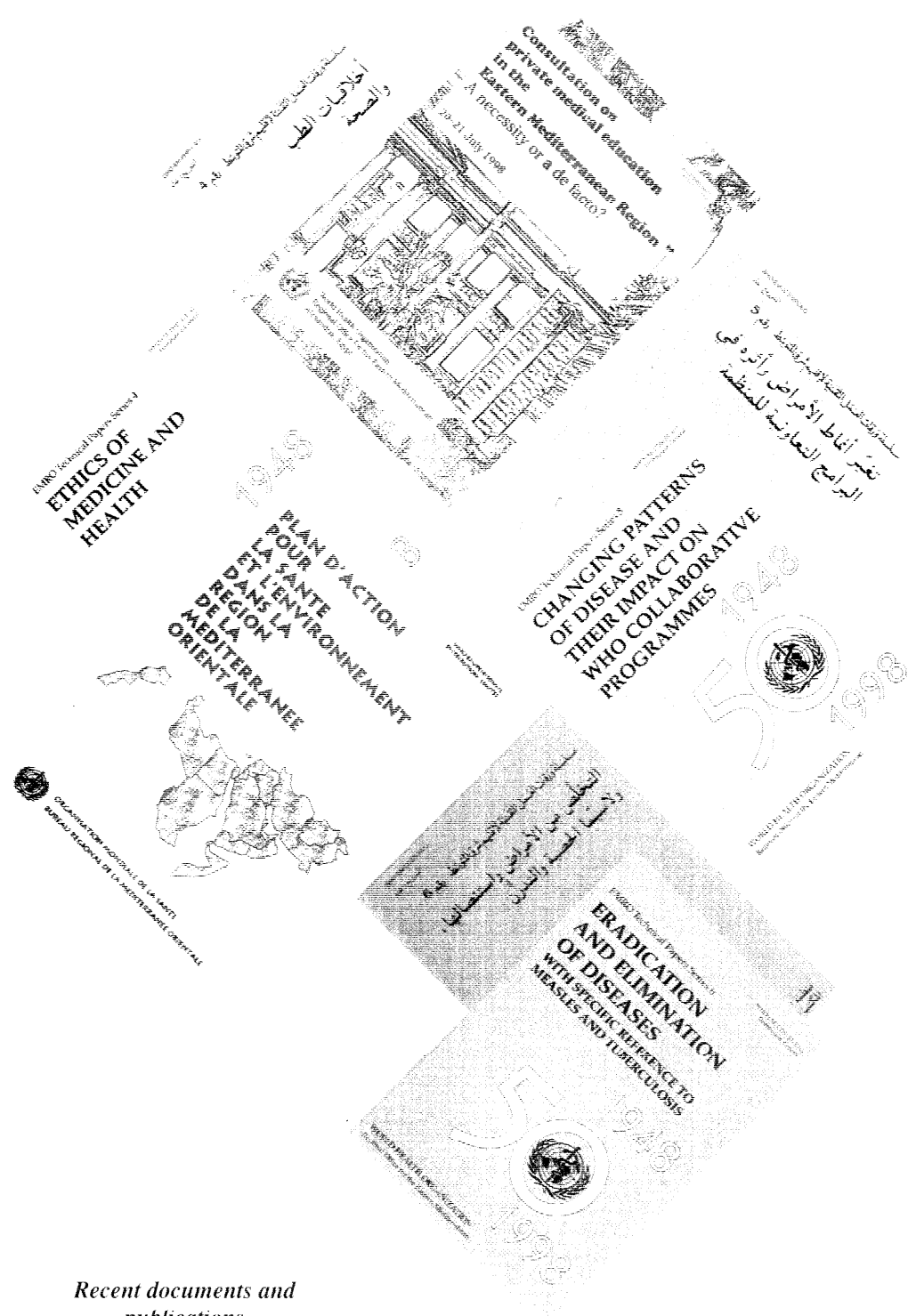
Nursing Education in the Eastern Mediterranean Region
Prototype Baccalaureate Nursing Curriculum

WHO Technical Publications Series 26

Nursing Education in the Eastern Mediterranean Region
Guidelines on Future Directions

WHO HEALTH ORGANIZATION
Regional Office for the Eastern Mediterranean





Recent documents and publications

modules for the Blue Trunk Library project, issued by WHO headquarters.

Production control

The Production Control unit increased its collaboration with WHO headquarters, especially in the production of documents in the area of disease control. Documents on meningococcal disease, tuberculosis, filariasis and leishmaniasis were translated into Arabic at the request of, and funded by, headquarters. Distribution was partly through headquarters and partly through the Regional Office—an example of “one WHO”.

The unit continued to keep abreast of advancing technology in design and desktop publishing to produce publications and documents in printed format and electronically. The demands of the four major health events of the year were met in terms of posters and information products, while for the fiftieth anniversary of WHO another three bilingual titles in the Technical Papers Series were prepared and issued in time for the Regional Committee. The first booklet in a 50th anniversary commemorative information series entitled *What you should know about...* was issued on tuberculosis in English and Arabic. Other titles are in progress.

The unit continued its support to the countries of the Region and good use was made of the publishing resources in Afghanistan, Islamic Republic of Iran, Jordan, Lebanon, Pakistan and Somalia.

In 1998, 56 contractual services agreements were raised (22 for translation, 16 for editing, 8 for proofreading in English and Arabic, 6 for various library requirements and 4 for various other activities).

Terminology

The Terminology unit was established in the Regional Office in 1998 under the supervision of the Deputy Regional Director. Among its various activities the unit collaborated with the Health Information Support unit to build up the WHO terminology information system and to standardize and harmonize health-related terminology by making the computerized version of the *Unified medical dictionary* accessible through the local area network and intranet of the Regional Office, the Internet and on CD-ROM for individual users. The creation of local databases of terminology was supported in the Academy of Arabic Language in Cairo, Egypt, and the Academy of Arabic Language in Damascus, Syrian Arab Republic, with a view to establishing a network of the Union of Academies of Arabic Language and to making these

databases and networks accessible to medical schools and health institutes in the Region. The unit cooperated with the Arab Centre of Medical Literature, Kuwait, with regard to a detailed plan to produce a complete curriculum in Arabic for medical schools. Collaboration also took place with the Union of Arabic Colleges of Pharmacy in the initiation of the Unified Pharmaceutical Dictionary, and in following up the final stages of the work of the Union of Associations of Arab Dentists on the draft of the Unified Dental Dictionary. Support was also provided to the WHO Arabic Publications programme in translation, editing and revision of documents, periodicals and publications.

Health information support

The four components of the Health Information Support (HIS) unit (Health Literature Services, Information System Management (section 2.1), Distribution and Sales and the AIDS Information Exchange Centre) have one goal: improved information access at the Regional Office and in countries of the Region. The following contributions were made towards this goal.

□ *Health literature services*

The Regional Office intranet became fully operational and was made accessible to field offices and through remote access. It involves all units at the Regional Office, is updated daily and provides much of the standard information that Regional Office staff might need in their daily work and decision-making. Management and policy documents, administrative information, financial data, library services, health statistics and a full-text retrieval system for intercountry meeting reports and the programme budget are all provided on the intranet. The Regional Office website on the Internet was enriched with many new features and contents including online statistical information, full text of technical documents and publications, directory information and library databases.

The first intercountry meeting of the Eastern Mediterranean Library Network (EMLIBNET) focal point libraries was held in 1998—recognition that health information support is an integral part of the national health care system and that health science libraries, information and documentation centres and networks can play a major role in promoting health and advancing medical knowledge. The meeting was attended by representatives from 16 countries of the Region, WHO headquarters and the Regional Office for South-East Asia. A plan for development of EMLIBNET was recommended

based on collaboration, resource sharing and appropriate use of information technology. The EMLIBNET focal points continue to be active participants in the network, especially in their interaction with the Regional Office. Efforts have been made to develop mechanisms for focal point libraries to collaborate on a bilateral basis and among themselves.

Document delivery services continued to be provided by the unit, mainly photocopying, database searches, CD-ROM databases, books and journal subscriptions. The Regional Office collection, local libraries in Egypt, the British Library Document Supply Centre and the US National Library of Medicine continued to be used. Provision of health and biomedical databases on CD-ROM expanded in terms of the number of sites and of countries. A total of 63 (62 in 1997) subscriptions to *MEDLINE*, 17 subscriptions to *ExtraMED* (15 in 1997) and 95 (37 in 1997) subscriptions to other databases were supported, making a total of 175 (123 in 1997) subscriptions for 19 (18 in 1997) countries. The library made available 24 (17 in 1997) CD-ROM databases for use by Regional Office staff, of which some are accessible over the local area network.

The unit continued to support acquisition of health literature for the Regional Office, WHO Representatives' Offices and country projects. The unit processed over 360 purchase orders during 1998 for book acquisition, journals and CD-ROM subscriptions, the value of which was over US\$ 1 111 000. The unit continued to support national training courses, and fellowships were awarded to medical librarians in Afghanistan, Libyan Arab Jamahiriya, Palestine, Syrian Arab Republic and Republic of Yemen. Missions to assist countries of the Region in their information management activities were undertaken to Afghanistan, Cyprus, Egypt, Islamic Republic of Iran, Iraq, Pakistan, Saudi Arabia, Somalia and Republic of Yemen.

Publishing of the *Index Medicus for the WHO Eastern Mediterranean Region* took a new direction in 1998 as a quarterly current contents bulletin was initiated and three issues were published and distributed to 350 addresses in the Region. The cumulations of the bulletin are used to update the database on the Internet for worldwide access. Work continued on the development of the *Unified medical dictionary*. Copies of the Windows-based beta version of the dictionary were distributed to selected individuals and institutions with the aim of testing, evaluation and feedback.

The unit collaborated with WHO headquarters to streamline provision of health literature to countries of the Region. One of the most significant

efforts in 1998 was the introduction of the Blue Trunk Library of basic documents in the Region. An agreement was made with headquarters to manufacture the trunks locally and to provide the training by the Regional Office staff. A total of 200 trunks were manufactured and the libraries made ready for distribution in Egypt. The WHOIS database was installed in several WHO Representatives' Offices in the Region and staff from the unit undertook missions to WHO Representative Offices in Pakistan and Saudi Arabia to organize the library and install the documentation module.

□ *Distribution and sales*

During 1998 the Distribution and Sales unit offered comprehensive availability of all new publications and documents to every country of the Region. A total of 15 400 copies of journals, periodicals and priced new publications were distributed free of charge throughout the Region, fewer than half the 1997 figure. Announcements of new publications and a list of the Regional Office publications were published on the Internet. A form to receive orders for books and journals through the web was developed and requests were made through it. A sales figure of about US\$ 459 772 was achieved in 1998, an increase of 285% on 1997 sales (US\$ 161 000). Despite the fact that there was a decrease in regional titles sales, owing to the fact that fewer titles were published in 1998 than in 1997, there was an overall increase as a result of sales of the Blue Trunk Library. Table 2.1 provides a breakdown of sales figures for headquarters publications, regional publications and arabicized publications.

□ *AIDS Information Exchange Centre*

The AIDS Information Exchange Centre works hand-in-hand with the Sexually Transmitted Diseases including AIDS (ASD) unit and the United Nations AIDS Programme to disseminate information on sexually transmitted diseases in general and AIDS in particular. During 1998, the Centre distributed 22 308 (16 789 in 1997) copies of publications of which 7760 (6020 in 1997) to institutions, 2228 (compared to 1114 in 1997) to individuals and 12 620 (9635 in 1997) to WHO staff and WHO Representatives' Offices for use in all countries of the Region. In collaboration with ASD, the Centre publishes *EMR AIDSnews*, of which 6785 (3810 in 1997) copies were distributed. An electronic version of the newsletter has also been published on the Internet.

TABLE 2.1 Summary of sales, 1998

Item	No. of copies sold			Value (US\$)			Total all sources
	HQ titles	EMRO titles	Arabized texts	HQ direct sales income		Funds in trust	
				HQ titles	EMRO titles		
Allotment	1 409	252	680	131 552	5 528	1 947	139 027
Cash	25	4 248	115	4 234	10 699	5 812	20 745
Blue Trunk Library 150 sets (113 titles each)	16 950					300 000	300 000
Total	18 384	4 500	795	135 786	16 227	307 759	459 772

Epidemiological surveillance

The first phase of the Regional Office drive to strengthen surveillance activities at regional and national levels was successfully completed. Surveillance is now the centre of unfaltering attention and its importance is duly recognized by all concerned programmes in the health field. The input of the Regional Office during this phase of the drive to strengthen surveillance was multifaceted and comprehensive, an input that was recognized by the countries at an intercountry meeting on surveillance and epidemic preparedness and response, in Muscat in December 1998.

The regional training manual on surveillance of communicable diseases, after several revisions and pilot testing, was printed and widely distributed in the Region. The manual comprises a three-day course of basic surveillance training and a three-day course of specific programme requirements training. It follows the integrated approach recommended by the Regional Task Force on Surveillance and is easily adaptable to national needs. The module will be translated into local languages and will form the core of a regional surveillance kit.

Assessment of national disease surveillance systems by joint teams of WHO and national experts continued this year in several countries. The assessment usually concluded with a consensus workshop in which all parties involved had the chance to discuss the outcome of the assessment mission and its recommendations. The foundations of a sustainable monitoring system were developed and the evaluation process was further standardized and systematized to take the shape of an in-depth review.

National human resources development was facilitated by the training

of master trainers on surveillance, the availability of an adaptable training module and technical or financial support from the Regional Office. These developmental activities were successful in drawing the attention of decision-makers and other relevant parties to the importance of surveillance and the need to strengthen and upgrade it.

An intercountry meeting of the national responsible officers on surveillance was held in December 1998 in Muscat, Oman, to follow up the implementation of regional and national plans on surveillance. The meeting noted, with satisfaction, the progress so far achieved, endorsed once more the surveillance manual and developed a number of recommendations for the second phase of the regional drive. These recommendations will be instrumental in developing the regional plan for the second phase of the drive. It will help greatly in identifying the priority issues and in setting targets and indicators for the coming phase.

Health systems and services development

3.1 Organization and management of health systems based on primary health care

Primary health care support

The objective of the primary health care support programme in the Eastern Mediterranean Region is to provide technical assistance to the Member States for the organization of an equitable and sustainable health system based on the principles of primary health care. The strategies being pursued to achieve this objective include full and universal accessibility to primary health care services, integrated community development, intersectoral action, decentralization, building partnerships and coordination of all health services or systems, governmental and nongovernmental. The Primary Health Care Support unit is proactive in preparing national authorities and local communities for the challenges of the 21st century by building up their capacity to promote and improve health on the basis of equity and need. This process aims at empowering people to take responsibility for health,

thus reinforcing self-reliance and self-management. The major areas of support include acceleration of the primary health care approach; strengthening of the basic development needs initiative and promotion of quality assurance and improvement techniques.

Acceleration of primary health care

During 1998, significant activities were undertaken in the countries of the Region to promote and accelerate the organization, implementation, monitoring and evaluation of primary health care services. All countries expressed a strong and renewed commitment to the fundamental values of primary health care and its central importance in sustainable development. Special emphasis was placed on the organization of the district health system with full involvement of communities at all stages of development. The Regional Office encouraged countries to seek alternate sources of funding in addition to government allocations in order to improve primary health care systems and to maintain health gains.

The authorities in Egypt implemented a substantial number of activities to consolidate and expand the district health system approach. Ten districts have been selected to undertake detailed situation analysis and action plans were prepared in collaboration with the local authorities. The process was strongly supported by other United Nations and bilateral agencies. In war-torn Afghanistan, extensive efforts were made to introduce and expand primary health care services on a large scale. Community mobilization was initiated in collaboration with local tribal and religious leaders. Numerous training programmes were arranged for health workers at different levels. In Oman, detailed evaluation of the *wilayat* system based on primary health care was performed in the 12 *wilayats*. The evaluation provided very useful information for improving the delivery of services and enhancing the role of the private sector and nongovernmental organizations in primary health care.

The Government of Pakistan initiated the integration of primary health care services under the district health system. The initiative has been introduced in four districts to develop model areas for an integrated primary health care delivery system. The protocols developed by the Regional Office on quick appraisal techniques were modified and adapted to local requirements. Efforts to further expand the community-based Prime Minister's Programme for Family Planning and Primary Health Care continued

to receive strong support from WHO. The evaluation of these activities has demonstrated impressive improvement in relevant health indicators.

In Lebanon, WHO supported the assessment of primary health care services in the underdeveloped areas. This led to the formulation of plans for the strengthening and expansion of primary health care services relevant to community needs. The plans were successful in attracting the financial and technical support of many bilateral and multilateral funding agencies. Close collaboration was established with the ongoing community development programmes of ESCWA. In Somalia the development of a health policy was supported for northern Somalia, while concerted efforts were made to develop district-based primary health care services with the active participation of local communities in other areas of Somalia.

The Government of Sudan consolidated and expanded the health area system approach to improve the planning and monitoring of primary health care services. New initiatives were undertaken to strengthen the managerial capacity of the district management staff. The Ministry of Health of Saudi Arabia, in collaboration with WHO, developed a plan for the introduction of the mini-clinic initiative through the primary health care network in order to improve screening and early prevention of important noncommunicable diseases. Special emphasis was placed on improved detection and treatment of diabetes and hypertension.

The Islamic Republic of Iran initiated a process of quality management in order to improve the standard of services at district and community levels. Existing primary health care services in urban areas were evaluated and expanded to cover additional areas. In partnership with the Government of the Syrian Arab Republic, WHO assessed the role and function of the primary health care system at different levels. Recommendations were made with regard to tackling deficiencies, and measures were suggested for improving the skills of primary health care staff. Another evaluation is planned at the end of 1999. Support was also given for formulating a policy proposal on health sector reform based on primary health care. It is expected that the proposal will be supported by the European Union.

The Republic of Yemen developed a master plan of action for the revitalization of primary health care at the national and governorate levels. A national workshop was organized to review the existing situation, to identify priority problems, and to prepare a detailed schedule of activities. For the first time, primary health care was recognized as central to the

overall development process and strong political commitment was expressed for the revitalization of primary health care. In Iraq, strategies and training programmes were formulated for enhancing the participation of the community in support of primary health care services.

The Regional Office participated in a conference to celebrate the 20th anniversary of primary health care, in Almaty, Kazakhstan. The successful experiences of primary health care and the integrated approach adopted by many countries of the Region were shared with other participants. The conference recommended that this approach be adopted by other countries and agencies in order to achieve better intersectoral coordination and community involvement, self-reliance and sustainable development. The regional task force on health-for-all policy and strategy for the 21st century concluded that primary health care is still the most viable strategy for achieving health-for-all. However, global developments in the social and economic sectors have to be taken into account and primary health care systems adapted to meet the challenges of the coming century.

The Primary Health Care Support unit prepared a detailed analysis of primary health care in Member States and suggested mechanisms for undertaking in-depth reviews. It was felt that a comprehensive assessment of primary health care development since the Declaration of Alma-Ata is required in order to formulate operational strategies and targets for the future. It is planned to conduct reviews in a few selected countries by the end of 1999. Subsequently, this process will be extended and maintained on a regular basis for all the countries of the Region in order to promote better planning and implementation of primary health care. An intercountry consultation on accelerating health for all in the 21st century was held in March 1999. The consultation reviewed the present situation and discussed the process, methodology and tools for the in-depth primary health care reviews.

Basic development needs initiative

Although the health care delivery system plays an important role in achieving equity, there is a greater impact from initiatives taken in areas which are outside the formal health sector and which concern other determinants of health. For this reason, the Regional Office for the Eastern Mediterranean continued its strong support and advocacy for the basic development needs (BDN) initiative among the countries of the Region in order to attain

improvement in the quality of life. This initiative is based on the principles of integrated total development through active community involvement and intersectoral collaboration.

This initiative has been widely accepted in the Region and at present 13 countries are at different stages of implementation. The benefits of the approach with regard to improved quality of life and better health status have been documented in a number of different reports of national governments.

In Afghanistan, success has been achieved in formalizing links between the BDN district teams and the basic health units located in each of the BDN catchment areas. These links were instrumental in providing training for traditional birth attendants and for the village health volunteers. Trained birth attendants have proved to be very effective in providing antenatal, natal and post-natal care. The immunization coverage of infants and women of childbearing age was also improved significantly. Pakistan has translated its commitment to basic development needs into action at national level by adopting it as the national strategy for poverty alleviation and allocating US\$ 400 million to it over a 5-year period. During the reporting period, remarkable improvement in health and social indicators was recorded in the model areas and the number of model areas was expanded to cover all the provinces of the country. In Somalia, BDN has been identified as the only reliable programme that could be sustained in a war-torn society. The rate of primary education is considerably higher in BDN villages. Similarly, immunization coverage and malaria control activities are relatively better in BDN villages. Also, the health information system is functioning in a more sustainable and systematic way. Currently many BDN projects are under implementation in Sudan, covering health, education, agriculture, livestock and other income-generating schemes. The communities manage these projects through the village development committees and with the active support of the technical support teams. One remarkable feature of the BDN process has been the return of the population to areas they had previously left because of the poor productivity of the land.

In Djibouti, WHO supported the strengthening of partnerships with UNICEF, the European Union, the World Bank and the African Development Bank. The attraction of BDN for new partners comes from its innovative strategies, in particular the methodology for community organization including the generation of community baseline data and their evaluation.

In Jordan, the BDN achievements indicate improvement in overall quality of life as evidenced in improved housing, availability of sanitary toilets and better health status. The success of the programme has attracted a number of international nongovernmental organizations and other bilateral agencies for expansion to new villages. An initiative that is quite similar to BDN and is being implemented in the Syrian Arab Republic is the 'Healthy Villages Programme'. It is a comprehensive development approach with health as the prime target and equity and universality as guiding principles.

In the Republic of Yemen five more villages started BDN implementation in 1998. It has been observed that social development projects have helped improve health, literacy and education, while income-generating projects have improved employment, production and level of income for families. The BDN baseline survey was conducted in Morocco to identify the socioeconomic specifics of the community. In light of the baseline survey results, two new projects have been initiated in Fès. Four cooperatives were created to manage projects related to water supplies and sanitation, excavation work and building of unpaved roads, maintenance of schools, primary education and adult literacy and training of traditional midwives.

A local nongovernmental organization was identified in Egypt to implement the programme and a technical support group was assigned to it. Salient achievements include building a social and spiritual centre accommodating a mosque, a health centre, a dental clinic, a social welfare unit, a vocational training workshop, a women's club and a class for literacy teaching that accommodates 60 women. The total cost of this building was shared by WHO, the social welfare fund and community members through the nongovernmental organization.

During 1998, field observation missions by external experts were organized by WHO to obtain an overview of the BDN programme in three different countries of the Region. The countries were Somalia, Pakistan and Sudan. The missions noted that the BDN projects in these countries had initiated many successful activities, which were much appreciated by the community and others. Community organization, solidarity and self-reliance were evident features of these initiatives. The level of intersectoral collaboration practised in the BDN teams was another positive achievement for the programme. Apart from the micro-credit projects, the BDN programmes organize other community social and health development activities. Examples of such activities include the training of new community

health workers in BDN villages leading to extension of coverage of basic and promotive health services such as immunization, family planning and health education services. These programmes also embarked on a range of development activities for women, including the involvement of women in development committees and the initiation of literacy, embroidery and handicraft training activities. The three missions made recommendations for the improvement of the BDN programme including the need to adopt standardized and systematic approaches to its work. The critical importance of ownership by the government at different levels, transparency of procedures and accountability of all involved for the success and sustainability of the BDN programme was also emphasized.

In order to review the experiences gained in ten years of implementation and to discuss issues related to the future directions of the programme, an intercountry consultation was held at the Regional Office in Alexandria in June 1998. Participants included national focal points from some countries, representatives of UNDP, UNICEF and ESCWA, short-term consultants, WHO representatives, and WHO staff members from headquarters and the Regional Office. The overall aim of the meeting was to review the collective experience of BDN in countries of the Region and to outline a systematic course for planning, operating and delivering BDN activities. Important recommendations were made for streamlining BDN planning, implementation and evaluation processes; strengthening advocacy and partnership efforts; and enhancing capacity-building and training activities. The conclusions of the consultation will greatly assist the efforts at the regional and country levels to consolidate this highly promising approach towards integrated development.

Also in 1998 the Regional Office issued a BDN promotional brochure with the aim of achieving better advocacy and facilitating communication campaigns. The brochure is targeted at decision-makers, potential donors, nongovernmental organizations and other agencies and is being translated into Arabic and other languages.

There was a general consensus and need felt among the countries of the Region to have access to a simplified set of the essential steps required for BDN planning and implementation. In response to this need, and to assist the national authorities and other stakeholders, the Regional Office developed a simple set of guidelines for the planning and implementation of the BDN initiatives. The guidelines describe the necessary set of activities

and milestones with respect to preparation of the proposal for BDN planning, implementation and promotion in various phases of its development at different levels of government and community. The framework for undertaking these activities in a systematic manner was also outlined.

The Fifteenth Meeting of the Regional Director with the WHO Representatives and the Regional Office staff recommended that community-based development initiatives, such as the healthy villages initiative, should be integrated or harmonized with the BDN programmes at the Regional Office and the country level. Accordingly, the Regional Director constituted a task force to formulate strategies for the operationalization of this recommendation. The task force is expected to finalize its work soon, and this will lead to joint efforts on the part of different technical units in the Regional Office.

Support to secondary and tertiary care

The regional programme on support of secondary and tertiary care provided technical support to countries in several areas including: hospital management, establishment of efficient referral systems, development of medical emergency services, and maintenance and repair of medical equipment.

During 1998, technical consultancies were provided to the Libyan Arab Jamahiriya to review the referral system and advise on appropriate guidelines for the development of an efficient referral system. Consultants visited Iraq and the Republic of Yemen to review the medical emergency services and advise on national plans for the development of medical emergency services.

The area of maintenance and repair of medical equipment was strongly supported in several countries including Kuwait, Morocco and the Syrian Arab Republic. Consultants conducted training courses and worked with nationals in the development of national plans for management of medical equipment.

The regional programme has been very active in training in various areas through national and international training courses; 49 fellowships were awarded to candidates from seven countries in various technical areas including public health, quality assurance of health services, medical emergency services, maintenance and repair of medical equipment, hospital management, nursing administration, medical records, nuclear medicine and management of autistic children.

3.2 Human resources for health

Human resources, policy formulation, planning and management

The Regional Office has as one of its priorities in the area of human resources development the continuous improvement of the performance and productivity of the health workforce. Special attention is given to continuing education for health personnel as it is considered one of the best management tools for improving workforce performance. A high level of performance and efficiency from health personnel—physicians and allied health personnel—are essential to quality health services and in order to respond to the growing health needs of the populations in countries. Improved performance will also ensure that the quality of health care services rendered are cost-effective and of high standard.

A technical paper on continuing education as an integral part of health care development systems was discussed at the 22nd meeting of the Regional Consultative Committee. The Committee strongly endorsed the concept, recommended the implementation of resolution WHA27.31 on continuing education for physicians and other categories of health personnel and emphasized that continuing education programmes should be institutionalized as an integral part of the national health system.

A symposium on the improvement of continuing education for health personnel in the Region was held in August 1998 in Teheran, Islamic Republic of Iran, with experts from 11 Member States. They discussed progress made in the development of national systems for continuing education for health personnel, reviewed constraints encountered and discussed ways and means of strengthening future activities. It was stressed that although there are units in some ministries of health for human resources for health and/or continuing education, and although progress has been made in several countries (Bahrain, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Morocco, Oman, Sudan and Republic of Yemen), challenges in this area are great and efforts are needed to address them.

Among such challenges is the need to establish linkage between continuing education and recertification of health care professionals. The example of complete legal linkage between continuing education and recertification and re-accreditation in the Islamic Republic of Iran was noted; other countries are seeking suitable mechanisms for achieving this goal.

In Egypt activities have been intensified and a special programme for

continuing education was finalized and implemented. A unit for continuing education was established in the Federal Ministry of Health in Sudan. Long-term consultants are still providing technical support to human resources for health, continuing education and national training activities. Several workshops on continuing education were conducted in Iraq, Oman and the Republic of Yemen. Three fellows from the Republic of Yemen will visit the Islamic Republic of Iran to review their system, methods, laws and regulations.

An international consultation on the process of policy formulation and implementation with special focus on human resources for health was organized by WHO headquarters. The Regional Office was involved actively in this important consultation. The context within which human resources for health policy is being developed and implemented in the Region was introduced and discussed. It was emphasized that the four main pillars for sound implementation of human resources for health policies are: process of policy formulation, political will and commitment, people's participation, and partnership between the main stakeholders in policy formulation and planning.

Based on experience in some countries of the Region, guidelines were prepared on conducting national workshops on partnership between health services and human resources for health. Technical assistance will be provided to countries to implement these guidelines.

Considering the main practical aspects of human resources for health policy, namely partnership between all stakeholders in policy formulation and the important role and impact of departments of community medicine in strengthening partnership, the report of the meeting on strengthening of national capabilities in community medicine and establishing a network for community medicine specialists, held in November 1997, was distributed among the medical faculties. Following this meeting, a proposal for a pilot project on the integration of the teaching of community medicine into the general medical curriculum was prepared. The Regional Office intends to support one or more medical schools in the Region who have expressed a desire and willingness to explore the possibilities for implementing this approach.

In an effort to promote the development of postgraduate medical education and assist countries in developing the required cadre of specialized physicians, the Regional Office collaborates with several countries. The

community medicine courses being conducted in Jordan and the Syrian Arab Republic continued to receive WHO support. The postgraduate clinical diplomas in child health, public health, obstetrics and gynaecology and anaesthesia, as well as MSc programmes in microbiology, biochemistry and histopathology are supported in the Republic of Yemen. In Sudan WHO, in collaboration with the Sudan Medical Specialization Board, is implementing a diploma course in public health, diploma courses in basic and applied medical sciences and clinical training in hospitals and allied health centres. In Egypt, the Faculty of Medicine of Suez Canal University, with WHO support, conducted a short course on family medicine.

Because of the importance of evaluation of these programmes, external examiners have visited Sudan and the Republic of Yemen and assisted the nationals in conducting the examinations. Plans are under way for the ministries of health and responsible educational institutions to undertake an in-depth review of these programmes to assess current and future needs and develop strategies and plans to address future needs.

Based on the needs and request of the countries technical support was also provided to countries in various areas related to human resources development. A group of experts visited Jordan and prepared a comprehensive report on human resources for health. It is expected that the report will be the basis of the future activities for preparing the national plan for human resources for health. Consultants provided technical support to the Islamic Republic of Iran, Jordan, Oman and the Republic of Yemen in areas related to situation analysis of human resources for health, preparation of national plans for human resources for health and continuing education for health personnel. Training opportunities were also provided to 56 health professionals through short-term and long-term fellowships.

The guidelines on national training activities were presented at the fifteenth meeting of the Regional Director with WHO Representatives. It was recommended that the guidelines should be adapted to the local needs of countries and be used to improve cost-effectiveness of national training activities. The Regional Office was recommended, in its collaborative programme with countries, to link national training activities with national continuing education programmes, strengthen these programmes and divert some resources towards this purpose.

The draft evaluation instrument for those medical schools which have adopted community-oriented medical education curricula, to determine their

contribution to health promotion and the solution of community health problems, was field-tested in Sudan. The result of the evaluation showed that although great efforts have been made to apply community-oriented medical education to training physicians as care providers, decision-makers, communicators, community leaders and managers, the health care delivery system needs to change if it is to ensure appropriate usage of health professionals and allow them to utilize the knowledge and skills they have acquired during their training.

A consultation on human resources for health in the 21st century with special emphasis on educational institutions was held in February 1999. The consultation reviewed the present situation of human resources for health and proposed new directions, policies and strategies for human resources for health in the 21st century with emphasis on the present and future situation of educational institutions.

Leadership development programme

The Regional Office, in collaboration with national authorities, has organized the leadership development programme since the early 1990s. The programme was started following the recommendations of the Thirty-eighth World Health Assembly, the major objective being to train and develop mid-career, potential leaders of the national health systems in the Eastern Mediterranean Region. Up to 1998, five courses had been conducted benefiting a total of 64 participants from 15 countries of this region and 2 countries (Mauritania and Algiers) from the African region. The courses have been offered in Arabic, English and French. The sixth course began in September 1998 at the High Institute of Public Health, Alexandria, Egypt, with fellows from Egypt, Libyan Arab Jamahiriya, Oman and Saudi Arabia.

At the Forty-fifth Session of the Regional Committee for the Eastern Mediterranean it was suggested that new strategies and funding mechanisms might be formulated for the future direction of the programme. Therefore, the Regional Office has initiated a formal and comprehensive evaluation of the courses organized so far. The evaluation will assist in analysing the impact of the programme based on the experience gained during the previous courses, identifying measures to improve contents and organization, and suggesting alternate mechanisms of funding.

Development of medical sciences education

The programme on educational development of human resources supported activities which would enhance achievement of its major shared goals with countries. These goals include: review and reform of curricula to ensure relevance to community needs and the adoption of effective and up-to-date training methodology; developing and facilitating educational skills and capacities to manage the educational process; and facilitating access to and local production of relevant and essential educational materials.

Activities related to the first goal included fielding of consultants to four countries (Iraq, Oman, Saudi Arabia and Republic of Yemen) for curriculum review and development. The programme also continued to promote adoption of the community-oriented medical education (COME) approach through consultancies and national training activities in eight countries.

With regard to the second goal, collaborative activities took the form of fellowships and support to national training activities. The fellowship component included 36 short-term fellowships and four degree course fellowships while six countries used 25 short training fellowships in regional centres to further develop the educational skills of national staff. Five countries used 11 short fellowships or study tours to countries outside the Region. The subjects of these fellowships were mainly curriculum development, training methodologies, teaching-learning material production and library subjects. Two countries were awarded four fellowships for degree courses of one year or more in education-related fields.

During 1998 staff development activities in the form of national training activities were supported through the WHO collaborative programme in eight countries. Most of these national training activities were organized by educational development centres which are in long-term collaborative relationship with the Regional Office.

Activities targeted at achieving the third objective were implemented in collaboration with nine countries (Egypt, Islamic Republic of Iran, Jordan, Iraq, Morocco, Sudan, Syrian Arab Republic, Tunisia and Republic of Yemen). The range of supplies and equipment which were provided included audiovisual aids, computers, document production equipment, books, periodicals, slides and multimedia or electronic technology training material. A consultant visited Saudi Arabia to advise on plans for the development of an educational centre in one of its medical schools.

Development of nursing and paramedical resources

Nursing and midwifery

Development of nursing and midwifery continues to be a challenge and a priority for almost all ministries of health in countries of the Region. Numerous strategies have been adopted and a wide range of activities are undertaken to meet the demands of the health care system both from qualitative and quantitative aspects. In 1998 these activities included developing strategic plans, strengthening nurses' involvement in policy-making, improving basic nursing education, expanding continuing education activities, building-up the managerial capacity of nurse leaders to strengthen nursing services delivery, and providing a regulatory framework for both nursing education and nursing practice.

The regional strategy for nursing and midwifery development in the Eastern Mediterranean Region, which was published in 1997, was widely distributed to nursing leaders, policy-makers in ministries of health, educational institutes, members of the Regional Advisory Panel on Nursing and Midwifery, and WHO collaborating centres, both in the Region and globally. In addition, short-term consultants and members of the Regional Advisory Panel on Nursing and Midwifery provided technical assistance to Bahrain, Islamic Republic of Iran, Sudan and Republic of Yemen to develop and/or to revise their strategic plans for nursing development in conformity with World Health Assembly resolution WHA45.5 on strengthening nursing and midwifery in support of strategies for health for all, and Regional Committee for the Eastern Mediterranean resolution EM/RC41/R10 on the need for national planning for nursing and midwifery. While several countries have taken initiatives to develop their strategic plan, the plan needs to be incorporated into the national plan, and both material and human resources need to be made available for implementation of the plan.

1998 saw publication of *Nursing education in the Eastern Mediterranean Region*, a kit comprising three books. The first, *Guidelines on future directions* spells out the regional standards for technical and professional nursing education, as well as regional priority areas for nursing specialization. The other two books, *Prototype technical nursing curriculum* and *Prototype Baccalaureate nursing curriculum* provide core curricula for technical nursing education and university nursing education, respectively. These core curricula are intended to provide the minimal educational requirements for

nursing education in countries of the Region. A few countries have, with technical support, initiated a process of using these guidelines to strengthen and update the preparation of nurses. Among these countries are Bahrain, Egypt, Libyan Arab Jamahiriya, Palestine, Syrian Arab Republic and United Arab Emirates.

Many countries are working to establish programmes for quality improvement. Fellowships were awarded and national training activities conducted to introduce the concept and build up national capabilities. The focus of these efforts is mainly towards hospital nursing care. Unfortunately very little attention has been given to the quality of nursing services in community health care. Continuing education to improve the performance of nursing personnel is undertaken by almost all countries, but the activities are usually carried out in unplanned fashion and are not normally linked to the learning needs of the various categories of nurses filling the different positions in the health system.

A few countries are initiating activities to develop regulations related to nursing services and nursing education. In Egypt, a multidisciplinary committee has been formulated through a ministerial decree to prepare a nursing law. Technical support was provided to Bahrain, Egypt, Islamic Republic of Iran, Sudan and United Arab Emirates. More efforts are needed in this area to ensure that practising nurses are accountable for their responsibilities and that the population being served is protected from any malpractice.

Collaboration with other United Nations agencies and with regional organizations to strengthen nursing and midwifery in countries was fostered during the past year. Technical support was provided to the League of Arab States to prepare a document and draft resolution on nursing for the Council of Arab Ministries of Health. Furthermore, support was given to the third Gulf Cooperation Council nursing seminar on human resources development, which was held in Bahrain in October 1998. Joint efforts with UNFPA to increase nursing and midwifery involvement in the reproductive health and safe motherhood initiatives also took place.

A progress report on development of nursing and midwifery was submitted to the Forty-fifth Session of the Regional Committee for the Eastern Mediterranean Region. The Regional Committee adopted resolution EM/RC45/R.12 on improving the quality of nursing and midwifery in the Eastern Mediterranean Region in which it adopted the regional strategy on nursing

and midwifery and urged countries to continue their efforts to develop national action plans for the implementation of this strategy, develop national standards for basic and graduate nursing education, use the guidelines on future directions for nursing education in developing curricula, and encourage and support the development of programmes for nursing research to ensure that the practice of nursing is founded on scientific findings.

Paramedical resources development

Collaborative activities in this area continued to focus on strengthening basic education for various categories of paramedical personnel. Technical assistance was provided to Djibouti to graduate laboratory technicians and to the Republic of Yemen to improve the training of laboratory technicians and to certify them as technologists. Furthermore, national training was conducted to improve knowledge and teaching skills of educators of various categories of paramedicals in Pakistan. Continuing education activities, e.g. fellowships, national workshops and participation in regional courses were supported. However, the opportunities provided are very limited in relation to the great demands of those categories of health workers. This situation is intensified by the limited resources allocated for this purpose in the joint collaborative programme between WHO and countries. The second meeting for focal points of paramedical resources is scheduled to take place during 1999 and will address the establishment of a core curriculum for laboratory technicians and environmental health care workers.

General fellowships

The fellowship programme continued to provide support to human resources development in the countries of the Region. In 1998, a total of 829 official requests for fellowships were registered out of which 612 fellowships were awarded during 1998 and 172 are being processed for awards in 1999. Forty-five requests were not processed for various reasons including lack of funds, withdrawal and sickness. Table 3.1 shows the total number of fellowships awarded during the past five years by country of origin.

As in previous years, the highest number of fellows from the Region were placed within the Region itself (the main receiving countries were Bahrain, Egypt, Jordan, Saudi Arabia, Sudan, Syrian Arab Republic and Tunisia) followed by placements in the European Region (Figure 3.1). Seventy-

TABLE 3.1 Total number of fellowships awarded, 1994–98

Country	1994	1995	1996	1997	1998
Afghanistan	8	30	36	14	19
Bahrain	4	27	9	14	4
Cyprus	17	12	9	22	7
Djibouti	8	12	5	10	3
Egypt	62	95	118	76	81
Iran, Islamic Republic of	72	89	56	50	27
Iraq	18	29	11	36	24
Jordan	12	34	23	30	30
Kuwait	4	2	3	12	15
Lebanon	7	7	5	8	4
Libyan Arab Jamahiriya	6	9	4	8	29
Morocco	23	57	20	37	26
Oman	4	11	2	5	8
Palestine	-	29	14	13	43
Pakistan	37	18	7	10	12
Qatar	0	3	6	4	2
Saudi Arabia	7	23	23	13	19
Somalia	0	2	2	11	11
Sudan	15	34	42	49	56
Syrian Arab Republic	53	117	55	109	89
Tunisia	41	54	56	46	44
United Arab Emirates	2	5	0	5	8
Yemen, Republic of	21	35	40	53	49
Awards to fellows from the African Region				3	2
Total	421	734	546	638	612

TABLE 3.2 Duration of fellowships, 1994–98 (%)

Year	< 2 months	2–6 months	6–12 months	> 12 months
1994	67.7	12.1	16.2	4.0
1995	72.5	9.7	15.1	2.7
1996	66.5	13.9	15.6	4.0
1997	68.0	10.2	17.9	3.9
1998	70.1	8.5	18.1	3.3

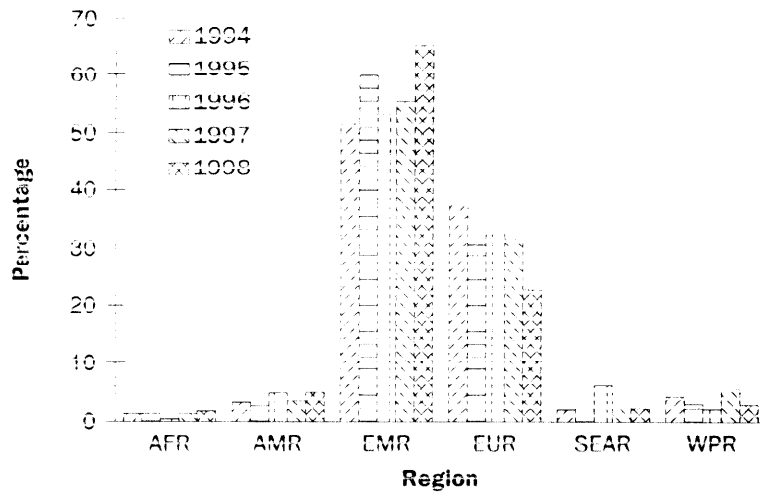


FIGURE 3.1 Distribution of fellowships according to region of study, 1994-98

Health systems and services development

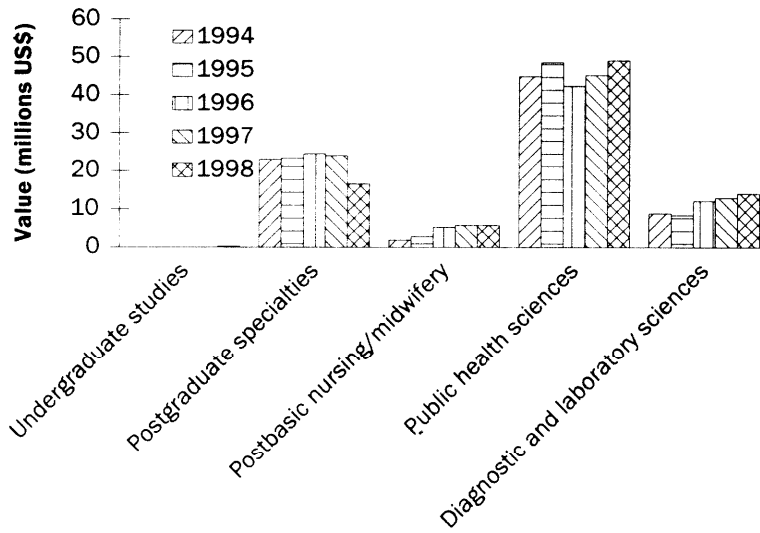


FIGURE 3.2 Distribution of fellowships by subject of study, 1994-98

TABLE 3.3 Source of funds for fellowships, 1994–98 (%)

Year	Regular budget	UNDP	UNFPA	Funds in trust	Other sources
1994	83.1	4.8	7.6	1.0	3.5
1995	82.5	2.7	11.7	0.5	2.7
1996	88.1	1.8	4.4	2.7	2.8
1997	91.8	3.3	3.0	0.6	1.2
1998	89.0	1.6	6.2	1.0	2.1

one fellow studied in their country of origin. The ratio of female fellows in 1998 increased to 32.0% from 30.3% in 1997. Physicians represented 49.0%, nursing and paramedical personnel 3.6%, sanitary engineers 1.1% and others 46.2% of all fellowships awarded in the Region.

As shown in Table 3.2 the trend of favouring short-term fellowships is relatively stable. In 1998 429 fellows undertook courses of less than 2 months' duration. Courses of 6–12 months were the next most popular. The average length of a fellowship was 3.5 months.

The highest number of fellowships were awarded in the field of public health sciences (49%), followed by postgraduate specialties such as family medicine, maternal and child health, dentistry and pharmacy. The number of fellowships in the field of post basic nursing and midwifery was 36 or 5.8%, which is the same ratio as in 1997. Training of both nursing/midwifery and paramedical personnel and of specialists in the environmental sciences needs to be further enhanced.

Most fellowships (89.0%) were funded from the WHO regular budget as shown in Table 3.3.

The thirteenth meeting of national fellowships officers was held in Nicosia, Cyprus, in November 1998. Fifteen participants from countries of the Region and representatives from WHO headquarters and the WHO Regional Offices for the Americas, South East Asia and the Eastern Mediterranean attended. The participants identified the training priorities for the Region and recommendations were adopted with a view to improving the effectiveness of fellowships. Among these recommendations were development and use of appropriate criteria for selection of candidates and wide advertising of fellowships; institution of an orientation programme to prepare candidates for their studies abroad; equal opportunity for qualified candidates of both

sexes and for all categories of health personnel; development of a proper evaluation system taking into consideration both the qualitative and quantitative aspects of fellowships and using clear indicators, and establishment by the Regional Office of a database of training institutions and programmes in the priority areas identified to be made available to countries.

In their termination of study reports the large majority of fellows expressed their satisfaction with the results of their fellowship training. More than 90% of all fellowships awarded in 1998 were classified as "successful" or "highly successful". Feedback from the training institutions on the performance of fellows was for the most part highly positive.

At present WHO headquarters and all Regional Offices are working on the elaboration of a new computer program for fellowships which will not only facilitate the work of all involved but will also enable extraction of exact data for proper quantitative and qualitative evaluation. It is expected that the program will be operational towards the end of 1999.

The database on training courses continued to be further enlarged and over 1000 records are now available. The Regional Office has built close links and cooperation with numerous training institutions within the Region and abroad through correspondence as well as personal contacts.

3.3 Essential drugs

The regional programme on essential drugs focused on developing and strengthening the implementation of national drug policies and ensuring the availability and rational use of drugs, as well as promoting production of essential drugs and vaccines to assure self-sufficiency in this important area.

Ensuring availability and rational use of drugs

National drug policy

National drug policies are a cornerstone for the development of the pharmaceutical sector in general and the planning and implementation of national essential drugs programmes in particular. Table 3.4 shows that currently only a minority of countries have up-to-date national policies and corresponding implementation plans. In 1999 the Regional Office will organize a regional consultation with the aim of developing a common approach to planning, implementing and evaluating of national drug policies.

TABLE 3.4 Progress in developing national drug policies, essential drug lists, formularies and standard treatment guidelines

Country	NDP date	NDP status	EDL date	STG date	NF date
Afghanistan		3	1988		1989
Bahrain		3	1997		1994
Cyprus		3	1990		
Djibouti		3	1997		
Egypt		3	1997		1993
Iran, Islamic Republic of	1991	1	1997		
Iraq		3	1990	1990	
Jordan	1998	1	1996		
Kuwait		3	1996	1993	
Lebanon		3			
Libyan Arab Jamahiriya		3	1994		
Morocco		3	1991		1991
Oman	1997	2	1995		
Pakistan	1997	2	1996		
Qatar		3	?		
Saudi Arabia		3	1989		
Somalia	1990	2	?	1998	
Sudan	1995	1	1995	1992	1991
Syrian Arab Republic	1995	2	1996		1996
Tunisia		3	1995		
United Arab Emirates		3	?		
Yemen, Republic of	1998	1	1996	1996	1990

NDP = national drug policy
 EDL = essential drug list
 STG = standard treatment guidelines
 NF = national formulary

Note. NDP status: 1 = official NDP document approved within the last 10 years;
 2 = draft NDP documents or official NDP approved more than 10 years ago;
 3 = unknown or no NDP document.

Source: *Progress of WHO countries in developing national drug policies and in revising essential drugs lists*. Geneva, World Health Organization, 1998 (WHO/DAP/98.7).

The NDP status of Jordan and the Republic of Yemen and preparation of STG in Somalia has changed since publication (September 1998) and has been updated accordingly.

WHO provided technical and financial support for the development, evaluation and review of national drug policies of several countries in the Region. The Republic of Yemen reviewed and updated its existing policy. The policy for Egypt is being developed through a consensus-building process. The national drug policy for Jordan was finalized with technical support from WHO and the World Bank and was translated into a masterplan for implementation, an important follow-up activity in the continuum of policy development, adoption, implementation, review and reformulation.

Access

Availability of and equity of access to essential drugs remain problems in many countries. While for some countries in the Region the overall availability is sufficient, essential drugs are not always equally accessible for all parts of the population. There are severe shortages of essential drugs in other countries, especially Afghanistan, Iraq, Somalia, Sudan and Republic of Yemen (see Table 3.5). WHO was able to provide limited emergency supplies of essential, often life-saving, drugs to affected countries. The Regional Office continued to take part in the implementation of the memorandum of understanding between the United Nations and the Government of Iraq with respect to the equitable distribution of essential drugs and other medical supplies to various health facilities. Support was provided to Egypt, Islamic Republic of Iran, Palestine and Syrian Arab Republic in improving the national drug supply and/or distribution systems.

Rational use of drugs

Irrational prescribing, dispensing and self-medication of drugs is a major problem, from both a public health and an economic point of view. This situation merits considerably more attention at institutional, national and regional level than it receives at present.

The various approaches in the Region to promoting the rational use of drugs included the publication and updating of national drug formularies and standard treatment guidelines, national and regional workshops, distribution of reference and training materials, operational research and the provision of fellowships.

The Arabic translation of the WHO manual *Guide to good prescribing* became available in 1998 and was distributed widely as a tool for problem-based teaching of pharmacology and therapeutics in medical schools. The

TABLE 3.5 Percentage of population with regular access to essential drugs

Country	< 50%	50%-80%	80%-95%	> 95%
Afghanistan	x			
Bahrain				x
Cyprus				x
Djibouti		x		
Egypt			x	
Iran, Islamic Republic of			x	
Iraq		x		
Jordan			x	
Kuwait				x
Lebanon			x	
Libyan Arab Jamahiriya				x
Morocco		x		
Oman				x
Pakistan		x		
Qatar				x
Saudi Arabia				x
Somalia	x			
Sudan	x			
Syrian Arab Republic			x	
Tunisia			x	
United Arab Emirates				x
Yemen, Republic of	x			

Source: Progress of WHO countries in developing national drug policies and in revising essential drugs lists. Geneva, World Health Organization, 1998 (WHO/DAP/98.7).

Republic of Yemen used the Arabic version to develop an adapted training course for paramedical staff, and Iraq printed large quantities locally for distribution to health facilities.

Information on and promotion of drugs greatly influence drug prescribing and dispensing. The availability of unbiased drug information is still limited but an increasing number of countries now have drug information bulletins and newsletters. The *EMR drugs digest*, which was suspended for some time, resumed publication.

Promotion of regional self-reliance in essential drugs and vaccines

Self-reliance in essential drugs and vaccines is a priority objective for the Region. Production capacity has increased spectacularly, and some countries now produce over 85% of their requirements. However, up to 90% of raw materials are still imported from outside the Region. As a reflection of the priority given to this subject by countries, the Forty-fifth Session of the Regional Committee discussed regional self-sufficiency. In preparation for the Regional Committee, a consultation on regional self-sufficiency in producing essential drugs and raw materials as a component of a national drug policy, was held in Alexandria in April 1998. This consultation and Regional Committee resolution EM/RC45/R.5 on regional self-reliance in the production of essential drugs and vaccines, both identified increased quality assurance, through the strengthening of national regulatory authorities, as possibly the most important contributing factor in the regional effort to further increase production of, and thus self-reliance in drugs and vaccines. Strict licensing and control mechanisms including good manufacturing practices (GMP) increase the viability of local industry in both the local and export markets.

1998 saw continued momentum in the promotion of production of high quality vaccines in Egypt, Islamic Republic of Iran, Pakistan and Tunisia through technical support, fellowships and supplies. The first consultation on vaccine supply and quality and local production in the countries of the Region took place in Amman, Jordan, at the end of September 1998. The principal objective related to the strengthening of national regulatory authorities, and the recommendations of the consultation focused on this. An in-depth analysis of the current situation in Pakistan was conducted in collaboration with WHO headquarters. Based on this, a detailed plan of action was prepared for which additional technical support will be provided.

3.4 Quality of care and health technology**Ensuring quality, safety and efficacy of drugs and biologicals**

Strong and professional national regulatory authorities are the backbone of a country's system to ensure the quality, safety and efficacy of all drugs and biologicals in the market. WHO therefore continued to provide support to countries in strengthening their drug quality assurance systems. Technical support was provided in the fields of drug quality control (Syrian Arab Republic), vaccine quality control (Morocco), and pharmacovigilance (Sudan).

Training fellowships were awarded to nationals from Cyprus, Egypt, Iraq, Libyan Arab Jamahiriya, Morocco, Tunisia and Republic of Yemen in various quality assurance-related topics, including vaccine quality control, drug quality control, bioavailability and bioequivalence testing, drug stability testing, instrumentation analysis, biotechnology and inspection, as well as in the development of a computerized drug registration system.

Quality control laboratories use the most refined chemicals and advanced equipment. Afghanistan, Cyprus, Jordan, Morocco, Pakistan, Qatar, Sudan, Syrian Arab Republic and Republic of Yemen were all assisted in the sourcing of materials for their national laboratories.

The regional capability to monitor adverse drug reactions of products in the market is being strengthened. Morocco and Tunisia have established systems and other countries, including Cyprus, Islamic Republic of Iran, Oman and Sudan, are at various stages of setting up their national programmes. A regional pharmacovigilance/adverse drug reactions monitoring training workshop was held in Rabat, Morocco, in October 1998, in collaboration with the WHO Collaborating Centre on Adverse Drug Reactions, Uppsala, Sweden. Participants from 12 countries were briefed on the current approaches to pharmacovigilance. All country teams prepared and presented an action plan for follow-up activities.

A regional training workshop on GMP inspection was held in collaboration with the National Organization for Drug Control and Research in Egypt in February 1999. This workshop provided an introduction to GMP and GMP inspection. The workshop was also used to discuss preliminary plans to further build up and harmonize GMP inspection in the Region.

Promotion of appropriate traditional medicine

Promotion of appropriate traditional medicine in order to increase access to health services is a regional priority. The regional traditional medicines programme encourages countries to formulate national policies, including adoption of national lists of medicinal plants, operational research into traditional practices, evaluation of national flora and scientific evaluation of their safety and efficacy. In its programmes of collaboration with countries WHO places special emphasis on establishing systems to help ensure the quality, safety, and efficacy of medical plants.

Most countries in the Region currently do not have regulations and quality assurance systems for traditional medicines. The next meeting of the Eastern

Mediterranean Drug Regulatory Authorities Conference will pay particular attention to regulation of traditional medicine in general and the development of national quality assurance systems for medicinal plant products in particular.

The second edition of the WHO standard monographs for selected medicinal plants, which was prepared with technical input from Egypt, Jordan, Morocco, Oman, Pakistan, Sudan, Syrian Arab Republic and United Arab Emirates, has now been finalized. Following a final review meeting, the monographs will be issued and distributed to all countries to assist in the development of traditional medicine programmes.

Sudan produced a national list of medicinal plants, Egypt is undertaking operational research on selected medicinal plants and the Syrian Arab Republic is in the process of developing a comprehensive national policy and implementation plan. Pakistan is preparing a series of national training activities on policy development, quality control, rational use and curriculum development.

Development of health care quality assurance systems

Quality assurance and improvement (QA/I) in primary health care continues to occupy an important position in the agenda for most countries in the Region. Almost all countries developed a comprehensive QA/I plan in primary health care during this biennium. Several countries (Jordan, Pakistan, Saudi Arabia, Sudan and Syrian Arab Republic) conducted a comprehensive primary health care quality assessment, either nationally or in pilot areas. Almost all countries started the training and development of informed local professionals in QA/I techniques. Several workshops, seminars, courses and conferences were conducted in the Region at the national and district levels. Saudi Arabia established a national diploma course on quality management for local health care professionals. Egypt recognized a national professional organization for quality assurance and a society for quality in health care. Cyprus is concentrating on medical auditing and has developed software for this purpose. Bahrain has developed an effective system of supervision as a tool for measuring performance.

The national authorities in Pakistan prepared a national manual on QA/I for primary health care services at the district level. In Jordan, steps were taken to establish the quality assurance directorate with the participation of the private sector, aimed at improving all aspects of the health care delivery

system. A national plan for QA/I in primary health care and strategies for its implementation were developed in the United Arab Emirates. Similar efforts were made in Kuwait to ensure the observance of minimum standards at different levels of care. Professionals from Egypt, Islamic Republic of Iran, Jordan, Kuwait, Saudi Arabia and United Arab Emirates participated in study tours or attended fellowships in QA/I.

In order to augment its efforts in fostering training and education in QA/I, the Regional Office is developing a regional manual on QA/I in primary health care. The manual, which includes contributions from national authorities, will be published in English during 1999. It is planned that the manual will be distributed widely and translated into other languages of the Region.

During the joint WHO/International Society for Quality in Health Care review meeting on the implementation of quality assurance in developing countries held in Budapest, Hungary, an informal session was organized for the participants from the countries of the Eastern Mediterranean Region. They formulated strategies and operational recommendations for the advancement of quality assurance in the Region. The guidelines for short-term consultants working with members in the Region were also finalized.

As demand for accountability by consumers and interest in comparing the performance of organizations between one another increase, so the Regional Office has embarked on the development of systems for accreditation, auditing or certification for the primary health care system. A regional intercountry consultation on accreditation is being organized to discuss issues related to the concept of accreditation, feasibility, methodology and implementation.

Health laboratory technology support

The Regional Office continued to support countries in establishing and upgrading their national networks of health laboratory services and their national quality assurance programmes, so that they are well integrated with proper referral systems. Emphasis was placed on the role of the peripheral level in support of primary health care. Regional Office support aimed at the implementation of the regional plans of action for health laboratory improvement and establishment of quality assurance programmes, which were revised and amended in May 1996. The plans of action were further revised and amended in November 1998. The Regional

Office continued to encourage provision of services that meet standards of quality, with rational and optimal utilization of available resources, without making financial constraints an excuse to compromise quality of service.

A regional meeting of directors of health laboratory services was held in Rabat, Morocco, in November 1998. An overall evaluation of the achievements with regard to the regional plans of action was carried out and showed that significant progress had been achieved by most countries. Although the overall rating of achievement is satisfactory, countries are at different stages of implementation of activities of the regional plans of action because of problems facing the speedy development of health laboratory services in some countries. Particular difficulties are encountered in countries that are affected by either prolonged United Nations sanctions or civil war. Other countries of the Region continued to face one or more of the following problems: insufficient operating budget, entailing sudden disruption of laboratory activities; shortage of qualified staff, especially at the intermediate and peripheral levels; low wages for laboratory staff, lack of attractive career prospects and emigration of qualified staff; lack of a planned continuing education programme, especially at the rural health facility level; lack of capability to adequately maintain equipment and shortage of spare parts and components, especially at the peripheral level; shortage of publications and other information materials; inappropriate test requisition by physicians; lack of utilization review and cost-benefit analysis of laboratory services; shortage in supply and production of reagents, and unavailability of proper national mechanisms for equipment and reagent evaluation; and nonimplementation of quality systems at the level of individual laboratories.

Quality assurance continues to be a top priority for the Region. A remarkable national effort has been and is being made to establish and upgrade quality assurance programmes in 16 countries of the Region. The Regional Office continues to emphasize that a higher quality of service can only be provided when the entire operation, including organization, management, processing and reporting, is addressed within the context of a quality system; and that the most efficient system is that which is created by the staff concerned, in which all individuals are conscious of their responsibilities.

In collaboration with the German Institute for Standardization and Documentation in Medical Laboratories (INSTAND), the second annual international course on quality assurance in laboratory medicine with

participation from countries of the Region took place in Düsseldorf, Germany, in March 1998. Also in collaboration with INSTAND, the Regional Office conducted a workshop on quality assurance in laboratory medicine in Muscat, Oman, in December 1998. An overall evaluation of the achievements of the regional plans of action on quality assurance was carried out and the current plan of action was amended. The participants also agreed to the activities planned for quality assurance by the directors of health laboratory services in their November meeting in Morocco. It was decided to speed up the establishing and upgrading of quality assurance programmes in microbiology.

In the face of the emerging priority of resistance of microbial agents, the Regional Office continued to provide support to focal laboratories designated in 18 countries as the regional network on resistance to antimicrobial agents. In close collaboration with WHO headquarters, three training courses were conducted on antimicrobial susceptibility testing and resistance monitoring.

Countries continued to make use of the various manuals published by the Regional Office in establishing and upgrading their quality systems. Many of these manuals have been and are being translated into national languages. *Laboratory medicine education in medical schools: guidelines for courses on the effective use of clinical laboratory tests* and *Ethical practice in laboratory medicine and forensic pathology* were published early in 1999. To further contribute to enhancing the developmental process covering different areas of health laboratory services, further publications expected in 1999 will cover the selection of basic equipment for laboratories with limited resources, and quality systems for anatomical and forensic pathology laboratories. The second edition of *Basics of quality assurance for intermediate and peripheral laboratories* is also scheduled for publication.

Health imaging technology support

Collaboration with the International Atomic Energy Agency continued in support to nine countries in provision of film-badge services and thermoluminescent dosimetry. Assessment of the status of imaging services in countries of the Region, based on responses to a questionnaire, showed that imaging services are among the least developed of the branches in health care systems in the Region. The Regional Office continues to encourage the development of national capabilities in the area of radiation protection. The National Centre for Nuclear Safety and Radiation Control,

Cairo, Egypt, which has established a radiation protection infrastructure, and has been designated as the national competent authority, continues to provide national dosimetry services to monitor radiation workers.

To support the developmental process in health imaging technology in the Region, a manual on quality systems for medical imaging will be published during 1999.

Ensuring safe blood and blood products

The development of blood transfusion services in the countries of the Region is continuing according to regional and country-specific plans of action. During 1998, progress kept up its momentum in most of the countries and significant progress has been achieved by many of them. National activities in some countries included workshops on appropriate use of blood, blood components and blood derivatives. In some countries no significant progress could be made due to prolonged United Nations sanctions or civil war.

In the few countries where there is still a percentage of paid donors, considerable efforts are being made to phase out paid blood donation. According to the 1997 plan of action formulated by the regional directors of blood transfusion services, paid blood donation should be phased out in those countries where it still exists by 2000. "Replacement donation" is widely practised in most countries of the Region and most countries are exploiting the family replacement donor modality to a greater or lesser degree. The regional policy aims to establish organization of a long-term national programme for a community-based blood-donor system on a purely voluntary, nonremunerated basis and to enforce blood transfusion regulations by law. To establish a community-based donor system, there is need for well trained leadership; most countries lack well trained professional organizers.

The absence of organized community-based blood donor systems continues to be a problem that needs intensified efforts at national level in order to overcome it. Other problem areas continue to include: fragmentation of transfusion services and absence of independent national blood transfusion services; lack of national plans aiming at attaining national self-sufficiency in blood and blood products; limited financial resources; shortage of medical and technical staff; lack of adequate staff training and continuing education; delays in implementation of quality assurance; lack of adequate equipment and equipment maintenance; and unsustainable reagent stock.

To support the developmental process in blood transfusion services a publication on plasma fractionation programmes for developing economies is currently in production.

4

Promotion and protection of health

4.1 Reproductive, family and community health and population issues

Promotion of reproductive health and family planning

Motherhood has been regarded as the greatest symbol of sacrifice and dedication and it is self-evident that it should be safe. Safe motherhood activities continued to be a priority issue in the Eastern Mediterranean Region in 1998, as globally. In recognition of its importance, Safe Motherhood was designated as the theme for World Health Day 1998. In order to assess the reproductive health situation in countries and further strengthen their programmes and activities, the Regional Office held an intercountry meeting on follow-up achievements of the safe motherhood initiative in the Eastern Mediterranean Region in Sana'a, Republic of Yemen, in May 1998. In addition to 45 participants from 17 Eastern Mediterranean countries, the meeting was also attended by experts in safe motherhood and representatives from UNICEF, UNFPA and CDC, Atlanta.

The meeting identified a number of issues requiring immediate attention and called on countries to give them priority. These included determination of the causes and the magnitude of maternal morbidity and mortality, the need for a critical review of the existing state of antenatal care, the urgency of establishing essential obstetric care, the promotion of adolescent health and the development of fertility control in countries. The meeting also recommended the establishment of a regional task force for safe motherhood, the creation of a technical network between countries to facilitate the transfer of technical know-how, finance and trained human resources and the measurement and monitoring of the prevailing status of maternal and perinatal mortality in Eastern Mediterranean countries. The meeting concluded with enunciation of the Sana'a Declaration which reflected the above recommendations. The Regional Office has initiated a survey on maternal health in countries in preparation for a follow-up workshop planned to be conducted in 1999.

As most maternal and neonatal deaths occur during delivery or soon after birth, strengthening of the perinatal health care system in the Region received special attention. In collaboration with the Ministry of Health of the Republic of Yemen and CDC, Atlanta, the Regional Office organized a national workshop on perinatal health surveillance in May 1998 to improve the technical and managerial skills of national staff at central and provincial levels. In addition, technical expertise was provided to develop standard guidelines on emergency obstetric care services in the country.

In Afghanistan, a document on newborn resuscitation was translated into Dari and two staff were recruited to assist in the implementation of safe motherhood programmes. In Sudan a national workshop was conducted to review the existing curriculum on reproductive health. Local training for different categories of national staff was supported in various aspects of reproductive health in Djibouti, Iraq, Saudi Arabia, Tunisia, United Arab Emirates and Republic of Yemen.

As in previous years, the WHO headquarters Special Programme on Research, Development and Research Training in Human Reproduction extended its technical and financial support through the Regional Office to collaborating centres in reproductive health research in Egypt, Islamic Republic of Iran, Pakistan, Sudan and Tunisia.

The PAPCHILD maternal and child health surveys were completed and a revised model, focusing mainly on reproductive health, was designed and

implemented in Morocco as an experimental pilot project for the new Pan Arab Project for Family Health (PAPFAM).

In recognition of the importance of reproductive health including family planning for health as a priority area of joint recognition, close collaboration was maintained between the Regional Office and the UNFPA country support team for Arab States and Europe to provide technical support to countries in strengthening national reproductive health programmes.

The Regional Office maintained its technical support to several reproductive health projects with funding assistance from UNFPA in Iraq, Lebanon, Palestine, Somalia, Syrian Arab Republic and Republic of Yemen. Technical support included the organization of workshops in the Syrian Arab Republic on operational research in reproductive health and family planning counselling for physicians, nurse-midwives and health visitors. In Somalia, a medical project coordinator and five national staff were recruited to strengthen the reproductive health services. In addition, the British Broadcasting Corporation was contacted to broadcast a number of reproductive health messages in conformity with the cultural and religious norms prevailing in Somalia. Advocacy, training and community-awareness activities were also implemented in Iraq and Lebanon.

Protection and promotion of child health

The Regional Office continued its advocacy for a holistic approach to child health and the improvement of children's quality of life in the Region. Technical support was extended through consultations, international and local training of health staff and distribution of relevant technical documents to Bahrain, Egypt, Palestine and Syrian Arab Republic. Support to the development of screening and counselling services for inborn errors of metabolism and hereditary disorders were continued in the United Arab Emirates.

Armed conflict and civil strife continued in some countries, disrupting families and affecting the health of children. The governments of these countries received support from the Regional Office to monitor the health status of children in disadvantaged situations, and wherever feasible, to intervene with remedial measures for improving the quality of life of children living in difficult conditions.

Protection and promotion of adolescent health

Adolescence is a dynamic period in human development, when the future health character and cultural profile of an individual are formed; biological and sexual maturation and psychosocial development take place; the intellectual abilities are stimulated while cognitive and affective faculties are nurtured. Throughout these formative years, adolescents are subjected to many influences, including those of parents, teachers, peers, health care providers and, especially, religious and cultural norms.

In recognition of this complex issue and in response to resolution EM/RC43/R.11 adopted by the Forty-third Session of the Regional Committee for the Eastern Mediterranean, a set of regional guidelines for the health education of adolescents was prepared by the Regional Office in early 1998. The material produced addressed adolescent boys, adolescent girls, parents, teachers, health workers and the media. In collaboration with the Islamic Organization for Medical Sciences and the Islamic Scientific, Educational and Cultural Organization (ISESCO), senior experts in health technology and religious sciences from the Region met in a consultation which took place in Istanbul, Turkey, in September 1998 to develop guidelines on adolescent health education within the framework of cultural and religious norms prevalent in the Region. The guidelines incorporate references from religious sources and technical aspects of health education and have been subsequently translated into Arabic.

The Regional Office maintained its collaborative activities with the Arab Regional Office for the World Organization for the Scout Movement. Special attention was accorded to the implementation of a UNFPA-funded project aimed at developing adolescent health education skills among scout leaders in countries of the Region. Scout leaders from Bahrain, Egypt, Palestine, Jordan, Tunisia, Sudan and United Arab Emirates participated in training workshops conducted with the technical support of the Regional Office.

Technical support to various areas of adolescent health has been expanded in the Region. In collaboration with the Islamic Republic of Iran, the document *The health education of adolescents* was translated into Farsi and the Republic of Yemen adapted it for local dissemination. A survey on adolescent health was planned in Saudi Arabia in order to strengthen its national strategies on protection and promotion of adolescent health. The Syrian Arab Republic was assisted in the formulation of a national survey on adolescent health and the social situation which is planned to be implemented in 1999.

Protection and promotion of women's health

Women make up more than half the population of the Region. The role they play in housekeeping, childbearing, child rearing and caring for all family members is unrecorded and unpaid. The biological role of women, in reproduction and preparation for reproduction through the stages of adolescence, followed by almost three decades of reproductive years and the cessation of the reproductive function through menopause, needs specialized attention at every stage. Nevertheless, there is still inadequate public awareness of the need for commitment to ensure that women have an adequate level of health care in order to contribute effectively to the development process.

The Regional Office continued to advocate for women's health and development and to collaborate with countries in addressing areas requiring strengthening. Technical support to the countries was intensified in order to develop appropriate national strategies and programmes aimed at promoting women's health and ensuring women's optimum involvement in national programme development and implementation.

It is gratifying to note the interest and support to women's programme development and organization, from the highest level of leadership, in many countries in the Region. Egypt strengthened its programmes through the basic development needs approach in order to increase involvement of women in community development. Saudi Arabia and the United Arab Emirates received technical assistance from the Regional Office in the preparation of a database for women's health and in conducting necessary training to operate the information systems developed.

Protection and promotion of health of the elderly

Recognizing that investment in health as populations age is investment for development, the United Nations designated 1999 as the International Year of Older Persons. The theme of World Health Day 1999 was "Active ageing makes the difference", which recognizes that older people must go on playing a part in society. Active ageing involves every dimension of our lives: physical, mental, social and spiritual. Extensive preparations were initiated by the Regional Office in order to celebrate this important event, including advocating for the special health needs of the elderly and intensifying collaborative activities on healthy ageing with countries, United Nations sister agencies, and international and national organizations.

The main aim of the regional programme is to promote the fact that the elderly have much to offer the world in terms of skills and talents developed over a lifetime. The Regional Office expanded its technical support to further strengthen national strategies and programmes on ageing and health in Eastern Mediterranean countries. Several activities were undertaken in countries in collaboration with the Regional Office. An assessment of the situation of the elderly was completed by national experts in Jordan. Training at international and national levels were conducted for health staff from Egypt, Lebanon, Syrian Arab Republic and United Arab Emirates. The national committee on health and social well-being of the elderly in the Syrian Arab Republic held a national seminar in preparation for World Health Day 1999.

Protection and promotion of occupational health

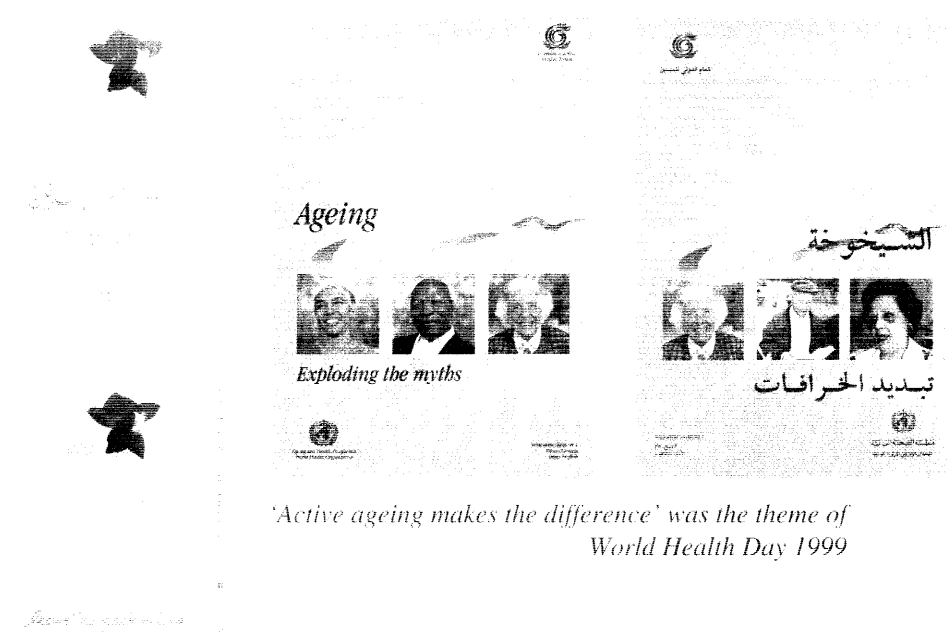
The integration of occupational health as an essential element of the primary health care system is receiving increased attention in Eastern Mediterranean countries. In response to this need, a set of regional guidelines for the training of community health workers in occupational health was developed by the Regional Office in collaboration with distinguished regional and international experts. The training guidelines were assembled in a manual composed of modules that cover a wide range of occupational health and work safety training issues.

During 1998, considerable progress was made towards strengthening national programmes on protection and promotion of occupational health in several countries of the Region. The Regional Office supported training of different categories of national staff from Bahrain, Egypt, Jordan, Palestine, Saudi Arabia, Sudan, Syrian Arab Republic, Tunisia and Republic of Yemen. Technical support through consultancy services was provided in order to standardize work safety regulations in Cyprus, develop standards for biological monitoring and work fitness in Kuwait and in the formulation of national guidelines and a plan of action for occupational health for the Republic of Yemen. Supplies and equipment were purchased to support occupational health and work safety in Egypt, Jordan, Saudi Arabia and Sudan.

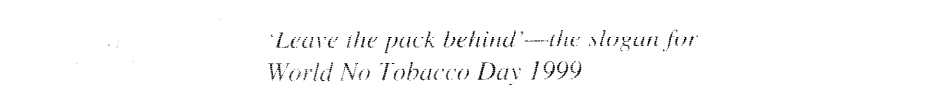
The regional collaborating centres on occupational health and work safety have been instrumental in supporting and strengthening efforts made by the Regional Office to build up national capacities in occupational health. The Regional Office maintained its collaboration with academic institutions



1999 Tobacco Free World Awards were made to individuals and societies throughout the Region, including Dr N.F. Wassel, Mufti of Egypt, who received the award from the Regional Director



'Active ageing makes the difference' was the theme of World Health Day 1999



'Leave the pack behind'—the slogan for World No Tobacco Day 1999



Schools have a vital role to play in health education—the action-oriented school health curriculum has been adopted in many countries of the Region and will soon be applied in this Basic Minimum Needs Health-Oriented School in Pakistan

WHO, UNICEF, the Micronutrient Initiative and the International Life Sciences Institute held a joint workshop on fortification of flour with iron and other micronutrients, Beirut, Lebanon, July 1998.



and international and local organizations concerned with occupational health and work safety. In this regard, technical support was provided to the Arab Institute for Occupational Health and Safety (an affiliate of the Arab Labour Organization and the League of Arab States) to conduct two meetings, one on surveillance of occupational diseases and injuries and the other on prevention of industrial accidents.

Protection and promotion of school health

The Regional Office continued to support revitalization and promotion of national school health programmes in recognition of their importance to healthy growth and development towards adolescence and adulthood, and of the complementarity of education and health. In addition, the Regional Office maintained its technical and financial support in order to further strengthen school health services in the Region. Fellowships were granted for training of national staff from Sudan and Syrian Arab Republic in countries of the Region. National seminars, workshops and training courses were organized in Islamic Republic of Iran, Iraq, Jordan, Sudan and Tunisia. Financial support for the production of school health education materials was provided to the Islamic Republic of Iran and Morocco.

4.2 Healthy behaviour and mental health

Mental health promotion

Throughout the year, the Regional Office collaborated with countries in the areas of training, evaluation and research and, in some instances, through the provision of drugs or equipment for research and training purposes.

The implementation of two demonstration projects in Alexandria, Egypt, and near Sana'a, Republic of Yemen, to integrate mental health into primary health care continued in collaboration with the WHO Nations for Mental Health programme. In Alexandria a total of seven training courses for general practitioners was held. Each training course started with attitude and knowledge tests. More than 130 physicians have so far been trained and courses for primary health care nurses have started. In addition, referral forms to facilitate work and communication between the different levels of the health system have been provided. The physicians trained have already started to integrate mental health into their activities. Efforts are under way to begin activities in the project in the Republic of Yemen. A consultant

visited the country and the areas for the implementation were agreed upon. A part of the training for the physicians and the equipping of one outpatient department and a small ward in a general hospital, which are necessary for the implementation of the project, have been completed.

The implementation of national mental health programmes with the strategy of integration of mental health into primary health care continued in many countries of the Region. In Bahrain and the Islamic Republic of Iran, the integrated system of mental health services in primary health care is functioning well. In Iraq, Jordan, Oman, Saudi Arabia, Sudan and the Syrian Arab Republic, training of general practitioners/primary health care physicians in mental health is continuing.

In Cyprus, a WHO-supported research project dealing with the development of integrated services is ongoing. In Morocco, activities related to building an integrated approach to mental health are ongoing in the form of model areas for training and decentralization. In the Islamic Republic of Iran, a number of regional and provincial workshops were held in collaboration with WHO to evaluate progress. A nationwide multisectoral workshop is planned for 1999 with the aim of review and renovation of the mental health programme, and Tunisia is working to fully integrate mental health into primary health care.

In line with the Regional Office plan with respect to the establishment of WHO collaborating centres in mental health, the Teheran Psychiatric Institute was inaugurated as a WHO collaborating centre. With the designation of this institute, there are now four such centres, with the designation of a fifth in process.

As a follow-up to the Joint Statement on Mental Health signed by the Ministers of Health during the Forty-third Session of the Regional Committee in 1997, the Regional Office provided countries with a programme of suggested mental health activities which they could further develop in their national mental health programmes. Responses are being received and it is planned that future collaboration with the countries will be built around the activities they have themselves identified.

Mental health programmes were evaluated and plans of action for future collaboration were drawn up in Cyprus, Islamic Republic of Iran, Iraq, Morocco, Saudi Arabia, Tunisia and Republic of Yemen. In Iraq, the negative effect of sanctions on ordinary people and different aspects of their general and mental health, particularly of those in need of continuous medication, were observed and reported.

In the area of mental health promotion, activities related to school mental health continued in many countries of the Region. In Egypt, the school mental health programme in Alexandria continued with very good coverage. This programme provided an opportunity for training of fellows from Palestine and Republic of Yemen. WHO participated in a workshop organized by this programme during an international congress on child psychiatry in Stockholm, Sweden. A multisectoral workshop on school mental health was held in the Islamic Republic of Iran, in collaboration with the Regional Office. School mental health programmes continued in Pakistan, while the mental health programme was given a budgetary line in the federal budget and is being implemented on a nationwide scale. A detailed monograph on all mental health programmes in the Region was completed and will be published in collaboration with the Nations for Mental Health programme.

Prevention and control of substance abuse

Substance abuse continues to be a major health and socioeconomic problem in the Region. No reliable estimates of the number of addicts exist, but it can be said with certainty that millions of people are afflicted by substance abuse in one way or another. War and internal or external conflict contribute to the increased prevalence of this menace. The countries most affected by narcotic drugs are Afghanistan, Islamic Republic of Iran and Pakistan. Continued uncertainty and unresolved conflict in Afghanistan have contributed much to the uninterrupted supply of narcotics.

In addition to continuation of collaboration with countries in the area of training and technical support, the Regional Office participated in a meeting on substance abuse organized by the Islamic Organization for Medical Sciences in Istanbul, Turkey, in September 1998, and in the Congress of the International Council for Alcohol and Drug Abuse held in Malta.

World No-Tobacco Day (31 May) was celebrated widely throughout the Region. All countries produced health education materials focusing on the hazards of passive smoking. Nongovernmental organizations in 20 countries in the Region participated actively in the tobacco or health programmes, producing health education materials and conducting workshops and lectures.

Tobacco-or-Health medals were awarded to the National Health and Social Education Committee, Libyan Arab Jamahiriya; the Central Association Against Tuberculosis, Egypt; the Healthy Villages Programme,

Syrian Arab Republic; the Supreme Council for Youth and Sports, Bahrain; and to HE Dr Ismail A. Sallam, Minister of Health and Population, Egypt. All of them have initiated successful and innovative campaigns to introduce smoking cessation and anti-smoking programmes.

The first interregional meeting on the Tobacco Free Initiative was held in Alexandria, Egypt, in December 1998; the aims of the meeting were to review the global situation of tobacco use to develop a global strategy for tobacco control.

Health education (including school health curriculum)

The Regional Office provided technical support to all countries to help them to improve their health education, Tobacco-or-Health and school health curriculum activities. Planning, implementation and evaluation of the health education programmes and development of updated national policies and strategies on health education were carried out in 10 countries. Twenty-four national training workshops for health educators, primary schools teachers, family physicians, scout leaders, media personnel and social workers were held with WHO collaboration in Bahrain, Djibouti, Egypt, Islamic Republic of Iran, Iraq, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Pakistan, Palestine, Saudi Arabia, Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates and Republic of Yemen. As a result of the workshops countries have developed their health education programmes, initiated health education research and produced health education materials. WHO fellowships in areas of health education and school health curriculum were awarded to fellows from Bahrain, Islamic Republic of Iran, Jordan, Kuwait, Morocco, Pakistan, Syrian Arab Republic and Tunisia.

The Regional Office maintained its collaboration with ISESCO and with the Scout Movement for the Arab Region in the conduct of training workshops for school teachers and scout leaders. Collaboration with the Scout Movement included also the preparation of three films on the hazards of tobacco. In cooperation with the BBC and with WHO technical support, a series of 264 programmes on health topics for broadcasting direct to Afghanistan in local languages was prepared. A new contract was issued for the BBC to develop a series of 200 programmes on health education.

In order to evaluate the impact of health education programmes on knowledge, attitudes, practices and behaviour, KAPB surveys were conducted in Bahrain, Islamic Republic of Iran, Jordan, Pakistan, Sudan and United

Arab Emirates. Primary results reflect very positive impacts. WHO technical and financial support was extended to the health education programme in Afghanistan. Implementation of the action-oriented school health curriculum in the 17 countries that have adopted it is being closely monitored. The Regional Office supported Pakistan in translating the teacher's resource book and the teacher's guide into Urdu and the Islamic Republic of Iran translated them into Farsi. National training workshops in this area were supported in a number of countries and a number of fellowships were awarded.

A regional consultation on the development of health educational materials on communicable diseases, held in December 1998 in Pakistan, resulted in the preparation of a guide which will be distributed to all health education focal points in the Region.

Health information of the public

1998 marked the 50th anniversary of the World Health Organization and a substantial portion of the activities undertaken by the Public Information Unit during the year was directed towards that event. This included production of material marking the 50th anniversary, participation in the exhibition held by WHO headquarters on the occasion and contribution to the anniversary documentation on 50 years of WHO.

A main interest for the unit was to follow up on the implementation of the plan of action on tobacco control in Member States, who have been urged to form high-level, multisectoral councils to oversee the work towards reducing the tobacco problem. This is one of the main targets of the plan of action endorsed by the Regional Committee in 1996. A regional meeting on the implementation of the plan of action on tobacco control was held in July 1999.

The unit has endeavoured to attain a wider dissemination of health information aimed at increasing public awareness of health issues. Two media delegations, from Morocco and Syrian Arab Republic, were received in the Regional Office and presentations on WHO's work, notably in public information, were made to each of them. Students from 10 schools visited the Regional Office and were lectured on health education, environmental health, infectious diseases and healthy lifestyles.

The Public Information unit maintained its regular output; 29 press releases were issued both in Arabic and English covering the main health

events held in the Region. Press kits were issued on safe motherhood, the theme of World Health Day, and youth and tobacco, the theme of World No-Tobacco Day. Two video films were also produced on the two themes as well as three video messages from the Regional Director covering these themes and that of World AIDS Day. In addition, the project of joint production of video films targeted at youth was completed in collaboration with the Scout Movement, resulting in three films for its programme "Youth to Youth", on substance abuse, sexually transmitted diseases and accident prevention. The first of these has been sent to Member States for wider use. In all these video productions, footage from countries of the Region was used. The health education departments in several countries, particularly Bahrain, Morocco, Oman, Tunisia and United Arab Emirates, were very helpful in this regard and deserve thanks. In addition, footage from Egypt and Pakistan was extensively used.

The art competition remains a principal and successful practice in the marking of World Health Day. More than 2500 entries were received from schoolchildren aged 8 to 18 years on the theme of safe motherhood. Winners from 14 countries were handed their prizes, many in ceremonies especially held for the occasion and attended by senior national officials.

Cooperation with educational institutes, such as the High Institute for Health in Alexandria and Assiut University, Egypt, and with nongovernmental organizations notably the Scout Movement, and with anti-smoking and environmental protection organizations, were maintained especially in the field of tobacco control and promoting health awareness.

Promotion of healthy lifestyles

Healthy lifestyle promotion is a field of collaborative work which is covered by the activities of more than one programme, including health education, noncommunicable diseases, nutrition and food safety, mental health and the healthy lifestyle programme itself.

In order to improve awareness about lifestyle problems and pave the way towards a systematic approach to public health management of them, situation analyses were initiated in two countries. In Cyprus, where there is adequate awareness about lifestyle problems but few initiatives or activities to address them, a consultant assisted in the analysis of national capacity with the view to developing a national plan for healthy lifestyle promotion activities. A proposal was made which will strengthen the capacity of the

Ministry of Health along relevant lines. The Syrian Arab Republic made use of WHO support to recruit national experts to analyse the national situation and develop a manual on healthy lifestyles.

The Regional Office continued to support activities which promote the causes of healthy lifestyles, including sports days, tournaments, Olympic days and youth activities in Pakistan and Sudan and an initiative in Oman to involve community support groups in the promotion of healthy lifestyles. During 1998, the Regional Office decided to make healthy lifestyle themes and issues a priority in provision of research grants.

Safety promotion

Development of an adequate information system on accidents and safety hazards is the focus theme for collaborative activities in safety promotion in the Region during this biennium. In 1998, activities were supported in this direction in three countries: Egypt, Lebanon and Syrian Arab Republic. A consultant visited the Syrian Arab Republic to conduct a situation analysis which assessed the national capacity for collecting and reporting information on accidents throughout the different levels of the health care system. Based on the analysis, recommendations were made that should facilitate the development of a simple unified system for reporting accident information from all emergency units, which will be fed into a national accidents monitoring system. Similar activities were conducted in Egypt and Lebanon early in 1999.

Oral health promotion

The collaborative programme in oral health continued to focus on promoting national capacities to develop oral health preventive programmes, particularly those targeting children. This direction is in accordance with the regional strategy to prioritize programmes for both pre-school children and schoolchildren as the principal activity to combat rising regional trends in oral health morbidity. The collaborative programme also maintained its commitment to promoting the adoption of the atraumatic restorative treatment technique, which does not require electrically driven equipment, so as to widen the coverage with restorative oral health treatment. Consultants visited Lebanon and Pakistan to train national master trainers in the skills of atraumatic restorative treatment.

Other consultants visited the Libyan Arab Jamahiriya, United Arab

Emirates and Republic of Yemen to appraise the oral health situation and assist in the preparation of national oral health plans. A consultant to Saudi Arabia developed and helped to administer a survey to assess the impact of school oral health programmes on knowledge, attitudes and behaviour of recipient children. The findings and recommendations are expected to improve programme performance in this important aspect of service delivery, while the survey tool will be incorporated within the evaluation and monitoring tools of the national oral health programme.

An intercountry workshop on planning community-based preventive oral health programmes for children was held in Beirut in November 1998. The workshop was attended by representatives from 11 countries together with a number of international and regional oral health experts. The workshop was successful in analysing the status of these programmes and consequently developed planning and management guidelines together with a set of recommendations to improve the implementation of preventive oral health programmes for children in the Region.

The Regional Demonstration, Training and Research Centre for Oral Health, a WHO collaborating centre in Damascus, Syrian Arab Republic, continued to play its constructive regional role in supporting oral health activities in the Region. It organized a number of training courses in planning and management of oral health preventive programmes for participants from Eastern Mediterranean countries. The centre received support from the Regional Office to develop an Arabic language booklet, *Guidelines in preventive dentistry for oral health workers*, together with other relevant educational material, which will add to the health education and learning materials offered by the Centre to countries.

Disability prevention and rehabilitation

The collaborative programme for disability prevention and rehabilitation supported training, consultancies and fellowships and in some instances supply of necessary equipment for the smooth running of existing rehabilitation centres and orthotics and prosthetics workshops. Collaborative programmes exist in Egypt, Islamic Republic of Iran, Jordan, Libyan Arab Jamahiriya, Morocco, Palestine, Syrian Arab Republic and Republic of Yemen. Plans were made with the programme on rehabilitation in WHO headquarters to collaborate in holding a training workshop in June 1999 for all fellowship recipients of the Region. This will be an important step towards bringing

uniformity to the fellowship programmes and will make their evaluation much easier.

4.3 Nutrition, food security and safety

Promotion of healthy nutrition

As the year 2000 approaches, the Regional Office continues to actively collaborate with countries to achieve the goals and targets set with respect to nutrition by the World Summit for Children in 1990 and reaffirmed by the International Conference on Nutrition in 1992 and the World Health Assembly in 1993. Progress towards these targets which are now those of the Ninth General Programme of Work is described below.

Target: Elimination of iodine deficiency disorders

By late 1998, a questionnaire survey revealed that 17 countries had recognized iodine deficiency disorders (IDD) as a public health problem. Of these, 13 countries (76%) have initiated control programmes, especially universal iodization of edible salt (USI). So far, six countries have achieved USI and two countries (Islamic Republic of Iran and Tunisia) have demonstrated that IDD is under control (see Table 4.1). A joint WHO/UNICEF/Micronutrient Initiative workshop on monitoring and evaluation of micronutrient deficiency control programmes is scheduled for late 1999.

Target: Elimination of vitamin A deficiency

Subclinical vitamin A deficiency in young children and pregnant women is a problem in a substantial number of countries in the Region; only a few countries have seen the known clinical manifestation of the deficiency. Affected countries continue to address this problem through efforts at improving the dietary intake of vitamin A and its precursors and distribution of high dose vitamin A supplements as part of the national immunization days, while some have taken the initiative of including supplementation in the EPI programme. Oman has established a national programme of vitamin A deficiency control, which includes distribution of vitamin A capsules to young children and to women who have just delivered, and is studying the feasibility of fortifying oil with vitamin A. Other countries such as Jordan and the Syrian Arab Republic have embarked on surveys to assess the level of vitamin A deficiency.

Target: One-third reduction in the prevalence rate for iron deficiency anaemia in women (aged 15-49 years)

The problem of iron deficiency anaemia continues to receive attention in the Region. Oman and Saudi Arabia are now fortifying flour with iron and other micronutrients, while Bahrain conducted a needs assessment survey which was followed by the political decision to start fortification too. The Regional Office, together with the Micronutrient Initiative and UNICEF, conducted a series of fact-finding missions, and organized a joint workshop,

TABLE 4.1 Progress in control of IDD in the Eastern Mediterranean Region

Country	IDD problem	Salt iodization/year	Households consuming adequately iodized salt (%)	Legislation/year
Afghanistan	Yes	No		
Bahrain	Survey planned	No		No
Cyprus	No	Yes, imported		No
Djibouti	No	No		Yes/1997
Egypt	Yes	Yes/1996	Unknown	Yes
Iran, Islamic Republic of	Yes	Yes/1990	96 ^a	Yes/1994
Iraq	Yes	Yes/1990	90 ^a	Yes/1996
Jordan	Yes	Yes/1996	75	Yes/1995
Kuwait	Survey planned	Yes/1971		Yes/1997
Lebanon	Yes	Yes/1995	92 ^a	Yes/1971
Libyan Arab Jamahiriya	Yes	Yes/1980	90 ^a	Yes
Morocco	Yes	Yes/1995-96	Unknown	Yes/1995
Oman	Yes	Yes/1995	65	Yes/1995
Pakistan	Yes	Yes	19	Yes
Palestine	Yes	in process		
Qatar	Unknown			
Saudi Arabia	Yes	Yes/1980	Unknown	Yes/modified 1996
Somalia	Yes			
Sudan	Yes	Yes/1994	Unknown	Yes/1994
Syrian Arab Republic	Yes	Yes/1993	40	Yes/1993
Tunisia	Yes	Yes/1984	98 ^a	Yes/1995
United Arab Emirates	Yes	In process		
Yemen, Republic of	Yes	Yes	90 ^a	Yes/1996

^a Universal salt iodization achieved

Promotion and protection of health

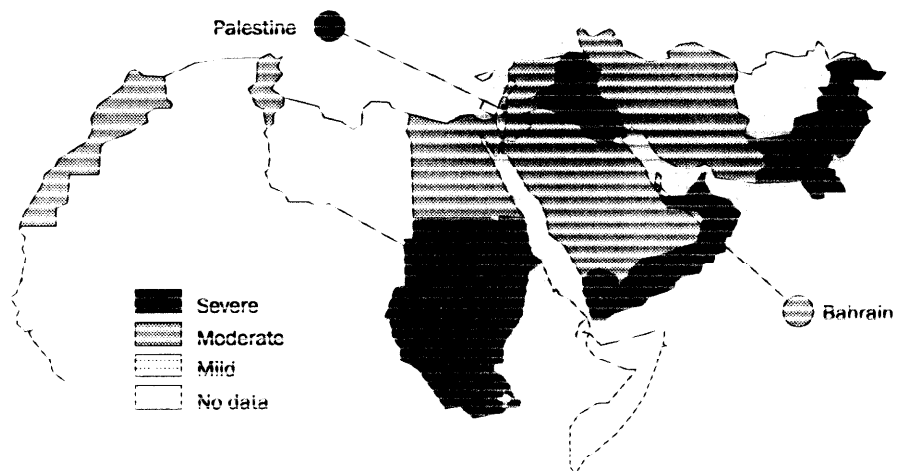
together with the International Life Sciences Institute, on fortification of flour for control of micronutrient deficiencies in the Eastern Mediterranean, Middle East and North Africa in Beirut in July 1998. At this workshop, progress was reviewed and **obstacles identified**. Countries developed strategies and action plans for **accelerating flour fortification in the Region**. The Micronutrient Initiative has established a 1 million-dollar fund to support flour fortification programmes in countries of the Region. This fund, which is administered by the Regional Office and involves close cooperation between the Micronutrient Initiative, UNICEF and WHO, is aimed at working together with countries to address obstacles identified and assist them to initiate a national flour fortification programme, based on the plans of action developed at the workshop in Beirut. The maps presented in Figure 4.1 show the severity of the problem in countries of the Region.

Target: Access by all people to information and opportunities to promote health-enhancing dietary habits and decrease health-damaging dietary behaviour

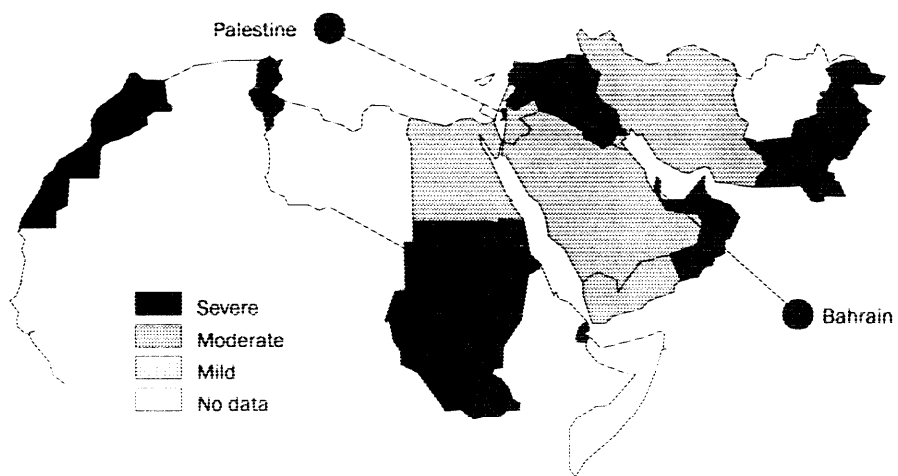
Healthy diets and lifestyles, including appropriate infant and young child feeding remain indispensable to addressing both the problem of undernutrition and the increasing problem of obesity and diet-related chronic disease. During 1998, Egypt, Lebanon, Pakistan, Saudi Arabia and United Arab Emirates continued to collaborate with the Regional Office to improve their capacity for nutrition communication in order to promote healthy diets. Oman, Kuwait and United Arab Emirates are strengthening their dietary services and aim to develop food-based dietary guidelines. A workshop on obesity control will be held in Bahrain, which will be a first step in developing a regional strategy for obesity prevention, responding to the particular climatic, cultural and socioeconomic conditions of the Region.

Target: 50% reduction in the prevalence rate for severe and moderate malnutrition in children under 5 years of age

Data currently available do not allow for a trend analysis within countries of the Region since most countries have not conducted regular national nutritional surveys. Severe, acute protein-energy malnutrition is a problem mostly in those countries in the Region facing civil strife or other man-made disasters. Growth retardation is, however, still a problem in the majority of countries, and is largely linked to unsatisfactory infant and young child



Preschool children



Pregnant/lactating women

FIGURE 4.1 Prevalence of anaemia in countries of the WHO Eastern Mediterranean Region

feeding practices. During 1998, in collaboration with WHO, many countries continued their efforts to reduce malnutrition in children. Palestine is actively promoting breast-feeding, while Djibouti aims to improve complementary feeding through the development of fortified locally produced complementary foods. Iraq, Jordan, Sudan and Republic of Yemen are all carrying out activities to reduce protein-energy malnutrition, through training on the management of protein-energy malnutrition and through growth monitoring and nutrition education.

With respect to elimination of famine and improving food security in emergencies, which are targets of the International Conference on Nutrition, the Regional Office continues to support the efforts of WHO, UNICEF and other agencies and nongovernmental organizations to address the nutritional problems which continue to plague countries affected by war and civil strife. A WHO/UNICEF mission was fielded to assess the situation in the Bahr el Ghazal region of southern Sudan. The mission highlighted the seriousness of the nutritional emergency and made pertinent recommendations. The Regional Office has developed simplified field-oriented guidelines for the prevention and treatment of malnutrition in countries facing emergencies, based on guidelines developed by the Regional Office for South-East Asia and the London School of Hygiene and Tropical Medicine and further adapted for field use.

In addition to specifically addressing the goals and targets set by relevant international conferences and the Ninth General Programme Work, more than half the countries in the Region were, in 1998, actively developing appropriate nutrition surveillance systems with WHO technical support. In some countries, notably Bahrain, Cyprus, Libyan Arab Jamahiriya, Oman and Qatar, the system includes a comprehensive national survey of nutritional status.

The Government of the Netherlands has funded an Associate Professional Officer, who has, since early 1998, worked on the development of a computerized Nutrition Information System for the Regional Office which will be operating soon. This system has been a collaborative effort between the Nutrition, Food Security and Safety, Health Information Support and Vaccine-Preventable Diseases and Immunization units. It includes reports and graphs as well as selected country maps which will be soon posted for access through the Internet. The database provides indicators on child growth and malnutrition, micronutrient deficiencies, obesity and diet-related

noncommunicable diseases, and breast-feeding and complementary feeding practices.

In its effort to support national action, WHO is training nationals, field staff and nongovernmental organizations in nutritional assessment and management of nutritional programmes. Fellows from 12 countries (Afghanistan, Bahrain, Djibouti, Egypt, Kuwait, Libyan Arab Jamahiriya, Oman, Pakistan, Palestine, Saudi Arabia, Sudan and Republic of Yemen) were trained in the fifth regional training course, which is supported by the Government of the Netherlands, bringing the total number of those trained to 61. An extensive evaluation of the present role and responsibilities of those trained in the course is under way. Egypt, and Palestine were invited in 1998 to develop national training programmes, through collaboration between the core group of nationals who graduated from the course, the Nutrition Institute in Cairo, Egypt, and the Regional Office.

Promotion of food safety

Countries in the Region have committed themselves to including in their national plans of action for food safety, the recommendations of the United Nations Conference on Environment and Development (Agenda 21) and the International Conference on Nutrition to reduce food-borne morbidity and mortality.

A coherent national food control system which outlines clearly the responsibilities of the different sectors and actors is a prerequisite for an effective food safety programme. Elements that are particularly important in this are: effective and up-to-date legislation, including regulations and standards; an effective, proactive food inspection strategy, based on the hazard analysis critical control point (HACCP) approach; and effective and efficient food control laboratories.

The work of the Codex Alimentarius Commission in setting standards for foods, manufacturing, hygiene and HACCP is becoming more important now that the Codex standards have become the "gold standard" under the World Trade Agreement. Participation of all countries in ensuring that their particular concerns are reflected in all Codex standards has therefore become essential and the Regional Office has strongly advocated this with countries in several forums.

WHO collaboration was initiated with more than half of the countries in the Region in their efforts to improve the capacity of their food control

laboratories, particularly through training of laboratory staff and through quality control reviews. Egypt issued a decree to promote the use of the HACCP-system in all its food-processing industries. Egypt, Lebanon, Libyan Arab Jamahiriya and Morocco have developed or reviewed national standards in the light of the work of Codex Alimentarius. Palestine, together with the Regional Office, embarked on the development of a national food control strategy, outlining the role of the different sectors in such a strategy, and on the development of national food legislation, including regulations and standards. Palestine has expressed keenness to become a member of the Codex Alimentarius Commission. Jordan conducted training for its food handlers, while Tunisia is developing a national communication strategy for food safety. The Ministry of Tourism, together with the Ministry of Public Health organized a major regional conference on food safety and tourism.

The HACCP-strategy has now been generally accepted as the most useful preventive strategy for ensuring food safety in the food processing and catering industry and even at the small-scale level, such as in street food vending. In many countries however, the food inspection bodies and the food safety control authorities do not have the skills to effectively assess the validity of HACCP plans and to audit HACCP-based food manufacturing operations. The Regional Office therefore organized an intercountry workshop on the use of HACCP in national food control programmes in Tunis, Tunisia, in April 1998, where the participants worked through an actual food manufacturing process, and developed all the steps of a HACCP plan. The Regional Office also assisted countries in training national staff on HACCP, both through national training activities and through fellowships.

The importance of food safety for the countries of the Region is well illustrated by the decision of the Regional Committee that a technical paper on food safety should be presented to the Committee in 1999.

4.4 Environmental health

Management of water supply and sanitation

Many countries continued to keep up the momentum in providing their populations with increased water supply and sanitation coverage. In the meantime, the severity of the water scarcity in many countries of the Region has started to assume a much more ominous aspect. Nine countries in the Region consume more than 100% of their renewable fresh water resources.

The North Africa and the Middle East regions have 5% of the population of the world and less than 1% of its fresh water resources. One of the most severe cases of water scarcity is in Gaza, Palestine, where each person has access to less than 75 litres of water per day, compared with 4000 litres per person in the USA.

Sanitation coverage in the rural areas continues to be an obstacle to health development. The Regional Office has paid increasing attention to promoting and mobilizing sanitation projects in the countries that have low sanitation coverage. There is a need for countries where the rural sanitation coverage is low to mobilize resources and initiate sanitation projects.

The monitoring and information system in the water supply and sanitation sector suffers in many countries from lack of coordination and systematic data dissemination between the different agencies involved. Preparation of the report on the status of water supply and sanitation at the end of the 20th century, to be issued by WHO in collaboration with UNICEF and the United Kingdom Department for International Development, provides a good opportunity to improve the data reporting and information.

In view of the regional water scarcity, the Regional Office and the WHO Regional Centre for Environmental Health Activities (CEHA), Jordan, have paid special attention to water conservation and wastewater reuse. As part of the activities of the Inter-Agency Task Force (IATF) on Land and Water Resources, special focus is placed on wastewater reuse. As a follow-up to the recommendations of the IATF regional consultation on the use of low quality water for sustainable agriculture, held in December 1997, the Food and Agriculture Organization of the United Nations (FAO) prepared a draft manual for wastewater users on farms. The Regional Office and CEHA technically reviewed this manual and are providing a chapter on the health aspects. Also, the Regional Office and CEHA are collaborating with FAO on the preparation of an assessment report for the status of wastewater reuse and establishment of a wastewater network in the Region.

In addition CEHA expanded its drive to promote water conservation and reuse of wastewater. It initiated the development of the water conservation source book, which comprises 10 modules offering practical guidance to water utility managers on designing and managing water conservation programmes. Extrabudgetary funds were secured from the Arab Fund for Social and Economic Development for the implementation of a three-year regional project to promote wastewater management and reuse of treated

effluent. The project will assist in the development of national guidelines for safe wastewater reuse.

At country level, in spite of serious difficulties due to civil strife, the water supply and sanitation programme in Afghanistan continued its effort to provide more people with water supply and sanitation facilities. The work on rehabilitation and expansion of water supply systems in many cities and towns, specifically Faizabad, Jalalabad, Mehta-Ram, Kandahar and Nimruz, is progressing well. WHO-assisted water supply and sanitation activities continue to enjoy large-scale support from the World Food Programme, UNDP, UNHCR, UNOCHA, UNICEF, the Qatar Charitable Society and the Kuwait Red Crescent Society.

In the field of sanitation, CEHA embarked on an initiative to increase the coverage with sanitation services in rural and periurban populations and to promote cost-effective, efficient and environmentally sound sanitation. The first component of CEHA's sanitation initiative provides technical support for the assessment of the critical and strategic needs of the sanitation sector in nine countries. The second component promotes the application of low-cost and efficient sewerage systems. A regional workshop was convened in June 1998 to launch the initiative and to promote better understanding of the challenges facing the sanitation services providers. Technical support was provided to the Islamic Republic of Iran and Republic of Yemen. In the Islamic Republic of Iran a plan of action was developed for building a demonstration project in a village near Teheran. The technical support to the Republic of Yemen included assistance to the national task force on rural sanitation strategy in developing the strategy framework. A demonstration project on low-cost sewerage systems for small communities is being developed in the Syrian Arab Republic.

Special attention was given to solid hazardous wastes, including medical and healthcare wastes management, and collaboration continued with many countries, including Islamic Republic of Iran, Kuwait, Libyan Arab Jamahiriya, Pakistan, Saudi Arabia and Republic of Yemen.

During 1998 WHO assisted the Islamic Republic of Iran and Morocco in highlighting the priorities for water supply and sanitation and collaborated with a number of countries through the provision of technical support in developing plans of action for water supply and sanitation and solid and hazardous wastes issues.

Fellowships were awarded to national staff in five countries and funds

and technical support was provided by WHO for national seminars and training activities in 12 countries. Lastly, supplies and equipment were purchased for monitoring and other purposes for nine countries.

Promotion of healthy cities, villages and communities

The healthy cities and healthy villages programmes and projects continue to attract sustained interest and popularity among the national and city authorities in the Region. It has become evident that the healthy cities concept and approaches provide effective and viable means to address the complex health and environmental problems that the cities in the Region are experiencing. Currently a large number of cities are part of the regional healthy cities network. However, some of the many healthy cities projects do not have clear objectives and specific activities. The major problem stems from the fact that the national and city authorities in some countries expect to have external support to mobilize their projects. It is important for cities to recognize that the healthy cities projects should be largely self-reliant. However, there is a need in all cities to mobilize internal and external resources to initiate the catalytic actions which help in bringing the city officials and citizens into the mainstream of healthy city activities.

The Preventive Health Directorate of the Ministry of Health of Saudi Arabia, in collaboration with the authorities in Al Qassim Province and the city of Al Bukariya, prepared a project to launch the healthy city programme in the country. At a milestone symposium inaugurated by HRH Prince Faisal bin Bander bin Abdulaziz, Governor of Al Qassim, the healthy city project in Al Bukariya was launched. The initiative received an enthusiastic response and support from all sectors of the community and the national and municipal authorities in the country. The event, which was extensively covered in the national media, provided a good basis for extension of the programme to other cities in Saudi Arabia and to countries of the GCC. Following this, a proposal for a healthy cities project was prepared and submitted to AGFUND for support.

The Regional Office financed the participation of national healthy cities coordinators from Cyprus, Egypt, Jordan, Morocco and Oman in the International Healthy Cities Conference, held in Athens, Greece, in June 1998. At this conference, regional projects and approaches for healthy cities and healthy villages provoked considerable interest among the participants from other parts of the world.

The Regional Office continued to extend technical support to the healthy cities projects, which are expanding particularly in Egypt and the Islamic Republic of Iran. In Egypt, the healthy city and women's development project in Alexandria continues to make a major headway in attracting interest from other communities inside Egypt, other countries, donors and Plan International at the global level. The project was chosen from among five international projects for presentation to a meeting of the Board of Directors of Plan International in England in March 1999 where it was well received. The WHO/UNDP/LIFE healthy city projects are progressing well in Fayoum, Egypt, and Quetta, Pakistan.

The healthy village concept and approaches have attracted major interest both inside and particularly outside the Region. A successful regional technical consultation on healthy villages was held in June 1998 in the Islamic Republic of Iran. This consultation elaborated on different components of the healthy village projects and framed the outline for technical guidelines to be prepared in collaboration with WHO headquarters. UNICEF also participated in the consultation. Healthy villages programmes and projects are ongoing in Afghanistan, Egypt, Islamic Republic of Iran, Oman and Syrian Arab Republic. The projects are particularly active in Islamic Republic of Iran and Syrian Arab Republic, while the projects in Djibouti, Jordan, Morocco, Pakistan and Republic of Yemen need strengthening and greater political and administrative support. In Cyprus as part of CEHA activities a consultant organized a healthy village national workshop.

To assist in the expansion of the healthy cities and healthy villages programmes and to respond to increasing demand, WHO has prepared a number of project proposals for donors funding. In this regard, greater efforts are needed on the part of cities and national authorities in seeking support from international donors as well as in mobilizing the internal resources.

Environmental health risk assessment and management

Technical cooperation with countries continued in environmental health risk assessment and management which covers numerous technical areas (strategies, plans of action for health and environment, environmental health considerations for development, environmental health impact and risk assessment, environmental pollution and control, water quality, water resources protection, air quality monitoring and modelling, indoor air quality,

environmental law, eco-epidemiology and eco-toxicology, noise pollution, environmental health hazards and radiation protection, coastal and marine pollution, and quality control/protection of the recreational environment).

Within the framework of the environmental health programme developed for the Region and the relevant national programmes, the orientation and focus of the collaborative programme with countries in matters of environmental health risk assessment and management are presented in Table 4.2. The priority areas presented in this table are those determined jointly with each country during the joint programme review missions held in 1997 or those covered by extrabudgetary projects.

In the Beirut Declaration on Action for a Healthy Environment, adopted in 1995 at the Second Regional Conference on Health, Environment and Development, countries of the Region pledged to prepare their plans of action for health and environment not later than 1999. This pledge was renewed at the Ministerial Conference on Health, Environment and Development held in Damascus, Syrian Arab Republic, in December 1997. As shown in Table 4.3, the preparation of these plans is well under way, usually through an intersectoral approach for their development and the discussion of outcome in national fora by a wide range of parties concerned. Table 4.3 presents the regional situation in that regard as well as the varied nature of the support provided by the Regional Office to many countries to push forward this initiative. It is hoped that plans of action will be developed during the present or forthcoming biennium 2000-2001 for all those countries which have not yet prepared these plans.

National drinking-water quality standards, based on WHO guidelines for drinking-water quality, have been adopted in at least 13 countries in the Region and every country has some kind of microbiological and chemical surveillance and control of water quality. It must however be mentioned that, although several countries have significantly improved their drinking-water quality surveillance and control systems, significant work remains to be done for further improvements to occur, especially in the application and enforcement of standards for the improvement of drinking-water quality.

Another aspect needing attention is data handling and reporting systems, which are inadequate in many of the countries. Activities implemented in relation to this aspect range from development of manuals and standard analytical methods for better implementation of national standards (e.g. in Egypt and Saudi Arabia), to holding a regional seminar on preparation of

TABLE 4.2 Principal environmental health risk assessment and management activities in the Eastern Mediterranean Region, 1998–99

Country	Main focus in programme activities
Bahrain	Assessment of environmental aspects of radiation protection
Djibouti	Review of environmental health situation in country, training of environmental health personnel
Egypt	Control of exposure to lead, finalization of ongoing process of preparing national guidelines for environmental health impact assessment of development projects, support to air and water quality control activities, training of environmental health personnel
Iraq	National plan of action for health and environment, control of exposure to lead, health impact of outdoor pollution, radiation protection, support to environment health laboratories
Jordan	Control of exposure to lead, national guidelines for environmental health impact assessment of development projects
Kuwait	Health component in national plan of action for environment, drinking water quality, air pollution, marine pollution, strengthening of national capabilities in matters of radiation protection
Lebanon	Health component in national environmental plan of action, national standards on drinking water quality, support to water quality control activities
Libyan Arab Jamahiriya	Evaluation of environmental health hazards, industrial pollution
Morocco	Health component in national plan of action for environment, national standards on coastal water quality, industrial pollution
Oman	National plan of action for health and environment, review of national standards for drinking-water quality
Pakistan	Establishment of an environmental health unit in the Federal Ministry of Health, control of exposure to lead, national guidelines for environmental health risk assessment, support to water and air quality control activities
Palestine	Review of national environmental protection strategy
Saudi Arabia	Management of hospital wastes, drinking-water quality
Syrian Arab Republic	Identification of sources of environmental health hazards, training of environmental health personnel
Tunisia	Assessment of health risks of natural radioactivity related to mining, national guidelines for environmental health impact assessment of development projects, standard procedure for information of the public about the quality of coastal bathing water
Yemen, Republic of	Support to air and water quality control activities, control of industrial pollution, through training of environmental health personnel

Promotion and protection of health

TABLE 4.3 Status of national strategies and plans of action for health and environment in the Eastern Mediterranean Region, December 1998

Country	Existence of SDP or EAP	NSHE or NPAHE	National committee or team	WHO support
Afghanistan	No	Yes, 1st Draft	No	WHO field staff
Bahrain	Yes	Yes, final	Committee	Comments on document of strategy made in view of preparing NPAHE
Cyprus	Yes	Yes, final	Team	National multisectoral team
Djibouti	Yes	No	Committee	
Egypt	Yes	Yes, final	Team	National multisectoral team; NIMC held in 1997
Iran, Islamic Republic of	Yes	Yes, final	Team	WHO-UNDP Capacity 21 case study; national multisectoral team; NIMC held at the end of 1997
Iraq	Yes	Yes, 1st draft	Committee	National multisectoral team
Jordan	Yes	Yes, final	Committee	WHO/UNDP Capacity 21 case study; national multisectoral team; NIMC held in 1995
Kuwait	Yes	Yes, technical content of	Committee	Consultant to review integration of health NPAHE outlined consideration in EAP
Lebanon	Yes	Under consideration	Committee	Evaluation and organizing mission in 1995; consultant mission to review integration of health consideration in EAP planned
Libyan Arab Jamahiriya	Yes	In preparation	Committee	Planned to support finalization of the NSHE
Morocco	Yes	Yes, final technical note on health and environment	Committee	WHO-UNDP Capacity 21 case study; organizing mission in 1996; national experts to propose the technical note for its integration EAP; NIMC held in 1997

Promotion and protection of health

TABLE 4.3 (continued)

Country	Existence of SDP or EAP	NSHE or	National NPAHE or team	WHO committee support
Oman	Yes	Yes, 2nd draft	Committee	Evaluation mission in 1995; NIMC held in 1997; consultancy mission planned to finalize draft of NPAHE
Pakistan	Yes	Yes, final	Team	National multisectoral team and WHO field staff; NIMC held in 1995
Palestine	-	No		Preparatory work
Qatar	Yes	-	Committee	
Saudi Arabia	Yes	Yes 1st draft	Committee	
Somalia	No	No	No	
Sudan	Yes	Yes, final	Team	Organizing mission in 1995; national multisectoral team; NIMC held in 1997
Syrian Arab Republic	Yes	Yes, final	Team	Review mission in 1995; national multisectoral team
Tunisia	Yes	Yes, final	Committee	National multisectoral team; NIMC held in 1997
United Arab Emirates	Yes	-	Committee	
Republic of Yemen	Yes	Yes, 2nd draft	Committee	WHO field staff

EAP = Environmental Action Plan
 NIMC = National interministerial conference/workshop
 NPAHE = National plan of action for health and environment
 NSHE = National strategy for health and environment
 SDP = Sustainable development plan
 - = Information not available

drinking-water standards in Rabat, Morocco, in October 1998 to examine progress made in preparing and applying national drinking-water quality standards, in order to generate improvement in drinking-water quality and reduction in health hazards associated with drinking-water for the public. This seminar also presented a good opportunity to present to regional experts the process of the ongoing revision of the WHO guidelines, which in this instance resulted in the addenda to volumes 1 and 2 of these guidelines which were issued during 1998. In order to improve the usefulness of the WHO guidance in this regard, volumes 1 and 3 of the WHO guidelines for drinking-water quality are being translated into Arabic and will be disseminated by the Regional Office and CEHA to Arab countries.

CEHA launched a fresh initiative to strengthen drinking-water quality monitoring, surveillance and control systems. The existing drinking-water quality surveillance and monitoring systems in Sudan and the Syrian Arab Republic were assessed and plans of action were drawn up for assuring safe water supply to the public. Upon implementation of the plan in the Syrian Arab Republic, noticeable improvements were reported in the quality of the water supply. Special attention was given to the needs of Iraq, Palestine and Somalia. Three national training courses were supported in Iraq and Palestine. Technical support and strategic equipment and supplies were provided to Somalia.

A demonstration project to evaluate a desalination module using solar and electrical energies was initiated in the WHO Collaborating Centre on Research and Training in Water Supply, Morocco, in collaboration with CEHA.

Among the GCC countries a number of collaborative activities were undertaken by WHO, usually in collaboration with other organizations, particularly AGFUND, ROPME and UNDP. These included several training workshops. The first was on environmental and health effects of exposure to static and time-varying electromagnetic fields for the Member States of the GCC, held in Dubai, United Arab Emirates, in February 1998 in collaboration with AGFUND and WHO headquarters. In view of the interest expressed by national authorities and the public in this subject, the report of this meeting was circulated to all countries of the Region. The second workshop was on microbiological methods for monitoring coastal recreational waters for the Member States of the GCC and was held in Kuwait in May 1998 in collaboration with the Regional Organization for the Protection of the Marine Environment (ROPME), AGFUND and the

Mediterranean Action Plan (MED-POL). A third workshop was on technical guidelines to assess marine pollution and to control associated risks, held in Teheran, Islamic Republic of Iran, in June 1998. Funds permitting, joint follow-up actions to the latter two activities are envisaged during the period 1999-2000.

Discussions on environmental aspects of radiation protection that have taken place between the Regional Office and the Arab Atomic Energy Agency during the last two years resulted in agreement on a joint project that will focus on the study of radon concentrations around phosphate plants for the fertilizer industry and neighbouring housing areas. A regional training workshop on medical preparedness and medical care in case of radioactive emergency will also be held under this joint project.

Promotion of chemical safety

The use of chemicals in the Region is ever-increasing and the need for promotion of safe use is growing. The regional programme on promotion of chemical safety continued its cooperation with countries of the Region to strengthen their national capacity and capability at country level for safe management of chemicals, with particular emphasis on the development of a national profile on chemical safety (NPCS), which is an initial step needed for the development of a sustainable national chemical safety programme. In this regard, activities are ongoing in Bahrain, Cyprus, Egypt, Islamic Republic of Iran, Kuwait, Lebanon and Pakistan for the preparation of NPCS. During 1999, cooperation with the International Programme on Chemical Safety, United Nations Institute for Training and Research and UNEP will continue to support other countries of the Region in the initiation of the same process.

Within the global framework of the preparation of the NPCS, focus was placed on specific aspects, including establishing/updating of a national register for toxic chemicals and a national inventory of toxic chemicals (Egypt, Iraq, Jordan), labelling of chemicals (Oman), and prevention of chemical accidents (Islamic Republic of Iran). Also, activities related to the strengthening of the national poison centre in Oman and preparation of a chemical handling manual in the Islamic Republic of Iran were implemented. A regional workshop on chemical safety was organized by CEHA in September 1998 in Damascus, Syrian Arab Republic, in order to contribute to development of capacity for effective management of chemical risks.

Databases on internationally validated chemical risk assessment, particularly INTOX and INCHEM CD-ROMs, were provided on a regular basis to a number of countries. Training of environmental health staff took place and technical literature and laboratory supplies were provided, particularly in Iraq, Libyan Arab Jamahiriya, Morocco, Pakistan and Sudan.

Large quantities of unwanted and obsolete pesticides are accumulating in many countries as a result of the replacement of traditional agricultural practices with modern mechanized ones that rely more on massive use of pesticides. This is just one of the reasons why safe use of pesticides is another area of concentration for the programme on promotion of chemical safety. Activities in connection with this aspect were undertaken in the Islamic Republic of Iran, Iraq and Sudan. Also, preparation of guidelines on the safe use of pesticides was supported in Saudi Arabia and Sudan.

A regional initiative, on reduction and elimination of persistent organic pollutants (POPs) was launched. A letter was sent to all countries with a view to preparing an inventory of POPs in the Region. This inventory, when final, will be instrumental in enabling appropriate action to be taken against POPs by the countries of the Region.

Another regional initiative, on strengthening the participation of countries in the Prior Informed Consent (PIC) scheme for the prevention of transboundary movement of hazardous chemicals was also launched. Countries are encouraged to participate fully in this scheme.

Vector control

The regional vector control programme continued to provide effective support for the prevention and control of vector-borne diseases, such as malaria, leishmaniasis and filariasis, which are still major public health problems in the Region. Based on the priority in the countries, the Regional Office continued to offer support through training and capacity-building. Technical advice and support for national meetings were provided in relation to development of national strategies for integrated vector control. In a number of countries, assistance was provided for rodent control through consultants and other technical support. Similarly, expertise and advice were provided for monitoring and surveillance and analytical work in relation to insecticide susceptibility or resistance. In this connection, the Regional Office continued to support countries in scientific and technical aspects of insecticide resistance. The use of impregnated bednets was further enhanced,

and consultant services and training were provided to a number of countries. In this regard, vector control in relation to malaria received a high priority and major support, in particular in Islamic Republic of Iran, Pakistan, Somalia, Sudan and Republic of Yemen.

A regional consultation was held in Islamabad, Pakistan, in November 1998 which resulted in a regional strategy on insecticide-impregnated bednets. A subregional training course, supported by AGFUND, on environmental protection from disease vectors: use of insecticide impregnated bednets and other materials was held in Aleppo, Syrian Arab Republic, in February 1999 for participants from seven countries.

The programme continued to collect and analyse data received from countries on insecticide resistance, especially for malaria vector mosquitos, and feedback on the results was communicated to national programmes to improve resistance management of vectors/pests.

Collaboration with the WHO headquarters Panel of Experts on Environmental Management for Vector Control continued. The technical material produced by the Panel was disseminated.

In the areas of training, capacity-building and technical cooperation, the programme continued to collaborate with a number of universities and institutions within and outside the Region; a fellowship was granted to a fellow from Cyprus, and national training activities were organized in Egypt, Iraq, Sudan and Tunisia.

Support in the form of local costs, and support for production of technical material and documents were provided to countries, as were entomological supplies.

Regional Centre for Environmental Health Activities

The Regional Centre for Environmental Health Activities (CEHA) based in Amman, Jordan, continued to contribute to the strengthening of the institutional capabilities and programmes of the countries of the Region, particularly through contribution to the implementation of specific environmental health programmes, as already referred to the relevant sections of this report, as well as through human resources development, information exchange and management, support for special studies and technical cooperation. In 1998 CEHA started a new approach, namely the implementing of demonstration projects based on integration of these elements. These projects were designed to provide practical solutions to

environmental health problems in the field. Assessment missions aiming at assisting countries in problem identification and solving were fielded to a number of countries. Six special studies dealing with priority areas, such as water harvesting, wastewater treatment and chemical safety, were identified in collaboration with six countries. Implementation of these studies commenced in early 1999.

In view of the continuing decrease in regular budgetary resources, CEHA increased its efforts to raise extrabudgetary funds. More than 20 project proposals were submitted to AGFUND, the Islamic Development Bank, the Arab Fund for Social and Economic Development, and other donor agencies for funding. Through this effort, more than 60% of 1998-1999 activities are being funded from extrabudgetary resources. As well, CEHA continued its fruitful collaboration with other organizations with similar interests in order to minimize duplication of activities and optimize utilization of the available resources.

CEHA continued its efforts to strengthen the safe management of healthcare waste handling in the Region, preparing regional guidelines for the safe management of healthcare waste. Two national seminars on assessment of existing medical waste management practices and development of national plans of action for safe disposal of medical waste were held in the Libyan Arab Jamahiriya and Republic of Yemen; a third is planned for Qatar.

Responding to the regional needs for improving drinking-water quality, increasing access to sanitation, sound management of wastewater, pollution control and water conservation, CEHA allocated over half of its 1998-1999 biennial resources and activities to water supply and sanitation. A regional project on monitoring the water supply and sanitation sector and establishing environmental health information systems was launched at a regional seminar in May 1998. A plan of action was also developed at the seminar for national programme development. The project also provided technical support to five countries for piloting the development of environmental health information systems and developed software to that end. A technical support mission and a national seminar were supported in Saudi Arabia which resulted in a national plan of action and the formation of the institutional set-up for the development of the environmental health information system.

CEHA's role in promoting environmental health during emergencies was

clear during 1998. In collaboration with the Regional Office and other United Nations agencies based in Amman, CEHA assisted the Jordanian Government in preparation of an emergency plan for construction of water supply and sanitation facilities in temporary refugee camps and provided technical support in response to a water pollution crisis. A technical assessment and advisory mission was arranged, and information related to water quality and treatment was provided to the Government. Emergency and urgent missions were also undertaken to assist in solving environmental health problems in Afghanistan, Oman and Somalia.

Food safety is a major environmental health issue and CEHA's contribution in this regard was made in close collaboration with the regional food safety programme. A national training course for sanitarians and public health inspectors on food safety was held in the Libyan Arab Jamahiriya. CEHA also extended its support to a national seminar on establishing a national programme for healthy marketplaces in the Republic of Yemen.

CEHA in collaboration with the Islamic Development Bank, organized a regional seminar on environmental health impact assessment of development projects in Tunisia in September 1998. Guidelines on this subject are being finalized in collaboration with the Liverpool School of Tropical Medicine, United Kingdom. Upon completion, these guidelines will be used by countries to develop their own national guidelines.

Environmental health education received good attention in 1998. A basic environmental health textbook for university students was finalized in English, and in collaboration with WHO headquarters a regional workshop on introducing the environmental health training manual and trainer's guide was organized. CEHA launched healthy school programmes in Egypt, Jordan and Republic of Yemen with a view to raising the health and environmental awareness of school students and encouraging them to act as promoters of health in the community.

In view of the fact that lack of appropriate training and learning materials continued to be a major obstacle to human resources development in the Region, CEHA continued its efforts in compilation, production and dissemination of such materials to its focal points in the Region. In addition to the normal production of documents, CEHA in collaboration with AGFUND launched two regional projects in 1998, on training relating to health and environment with special reference to mothers and children's health, and on review and assessment of available training and awareness packages.

The main output of the two projects will be preparation and dissemination of appropriate teaching/learning materials and education and awareness materials. As a start, five national training activities were held in Egypt, Oman, Saudi Arabia, Syrian Arab Republic and Tunisia.

In collaboration with WHO headquarters and the Regional Office for Europe, CEHA reprinted and disseminated the second edition of the WHO *Guidelines for drinking-water quality* in French and English, as well as a series of environmental health pamphlets that target decision-makers and the public at the local authority level. A training package, consisting of 20 video programmes accompanied by seven booklets on low-cost water supply and sanitation, was produced and disseminated to focal points in the Region. Two other video programmes, on marine pollution and safe use of pesticides, are being finalized.

CEHA, through its Regional Environmental Health Information Network (CEHANET), seeks to achieve two major goals: to maintain and strengthen its information exchange capacity; and to promote information networking at regional and national levels. To achieve the first goal, CEHA's documentation unit was strengthened and equipped with the state-of-the-art hardware and software necessary to provide its services to countries of the Region. The CEHANET services now reach more than 4600 professionals and about 400 institutions in the Region. In 1998, CEHA distributed more than 5500 documents and 4000 copies of its quarterly newsletter and responded to about 450 information inquiries. In order to achieve the second goal, two parallel approaches were followed: strengthening national information exchange and networking capacity; and development of information processing systems and tools. CEHA started establishing three documentation centres in West Bank, Gaza and Lebanon. These centres will be responsible for improving access to WHO information at the national level, as well as for networking among all health and environment-related agencies. An extended training course on CEHANET procedures and other information management tools was held in November/December 1998. Twenty participants from seven countries were trained on standard information processing procedures, information retrieval through Internet and e-mail, and other modern information technologies. A similar training course was implemented in the Republic of Yemen.

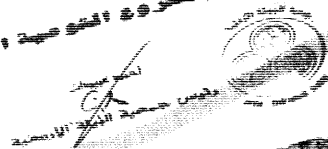


شهادة تقدير

جمهورية الأردن
وزارة البيئة والمياه والزراعة
مكتب
مخبر المياه والتربة

مخبر المياه والتربة
1118 / 1997
1997 / 1998

هذه الشهادة تقديراً للشراكة البناءة في دعم مشروع التوعية 1997-1998



In 1997-1998 CEHA received special awards from the Council of Arab Ministers Responsible for the Environment and jointly from the Jordanian Environmental Society and the Ministry of Water and Irrigation, Jordan, for its work in awareness raising



Healthy cities



Before

A healthy marketplace is crucial for food safety and environmental health. As a result of a healthy marketplace project, the market in Ibb, Republic of Yemen, was cleaned up to the benefit of all.

After



integrated control of disease

5.1 Eradication/elimination of specific communicable diseases

Dracunculiasis eradication

Twelve countries have already been certified by the International Commission for Certification of Dracunculiasis Eradication (ICCDE). In addition, Saudi Arabia submitted all necessary documents to the ICCDE indicating absence of dracunculiasis transmission in its territory and applied for certification of dracunculiasis eradication. A WHO consultant will visit the Libyan Arab Jamahiriya during the first quarter of 1999 in order to assess the situation regarding organization of surveillance on dracunculiasis and to assist the national authorities in preparing a country report for submission to ICCDE. Although Djibouti and Morocco have already submitted to ICCDE the declaration of dracunculiasis-free status it was decided by the ICCDE at its third meeting in 1998 that the dracunculiasis-free status in both countries would be considered at the same time as the application for certification by

neighbouring countries. Two of those countries (Ethiopia and Mauritania) are still endemic for dracunculiasis.

The Republic of Yemen reported no cases of dracunculiasis in 1998. The Regional Office encouraged the national programme to strengthen surveillance in former endemic foci of dracunculiasis and to increase the amount of the reward for reporting of a case. It is hoped that the Republic of Yemen will be certified as free from dracunculiasis transmission by 2000.

Sudan is the only country in the Region in which dracunculiasis is endemic and is the main reservoir worldwide, accounting for more than two-thirds of global cases. The main obstacle in the organization of efficient surveillance and containment of cases has been the civil unrest and high mobility of the population in endemic areas in the south. As a result, some of these cases are inaccessible making implementation of dracunculiasis eradication activities impossible.

The Regional Office continued to support the national dracunculiasis eradication programme in Sudan through provision of supplies and equipment for interruption of dracunculiasis transmission, production of health education materials and training of medical personnel and volunteers. The implementation capacity of the national dracunculiasis eradication programme in the south of the country was strengthened through promotion of an integrated approach to eradication efforts with other programmes, such as poliomyelitis eradication, leprosy elimination and the veterinary services. It is expected that coordinated efforts with international and nongovernmental organizations will improve with the establishment of a WHO liaison office for southern Sudan. The number of registered dracunculiasis cases in the northern states of the country continued to fall and three states were free from dracunculiasis transmission during 1998.

Leprosy elimination

Efforts to achieve the elimination of leprosy as a public health problem from the Region continued. All countries of the Region have now reached the target of elimination at the national level. However, in some countries, leprosy elimination has not been achieved in some districts. The Regional Office encouraged endemic countries to strengthen elimination activities in the remaining pockets of infection in order to reach the target of elimination at district level. The main endemic countries initiated

stratification according to the size and intensity of the problem through introduction of WHO computerized forms on leprosy trends at district level.

WHO continued to support the ~~implementation of the national control strategies through provision of drugs for multidrug therapy of leprosy,~~ training of staff and distribution of technical documents and health education materials, particularly in countries where foci of leprosy are still present. National training courses for primary health care personnel on elimination of leprosy were conducted with WHO assistance in Egypt, Morocco, Sudan and Republic of Yemen. WHO supported the organization of training courses and production of health education materials on disability prevention in the Islamic Republic of Iran and the Republic of Yemen. Seminars for village leaders in order to sensitize them to the problem of control and elimination of leprosy were carried out in endemic areas in Egypt and Sudan. Special surveys among students in leprosy-endemic areas were organized in four governorates in Egypt.

The Regional Office supported translation of several WHO documents into national languages. *A guide to eliminating leprosy as a public health problem* and *Prevention of disabilities in patients with leprosy* were translated into Arabic. Arrangements have been made for translation of these documents into some other national languages in order to facilitate training of primary health care staff in endemic areas.

The WHO Action Programme for the Elimination of Leprosy continued to support the national programmes in Afghanistan, Egypt, Oman, Somalia, Sudan and Republic of Yemen free of charge with sufficient quantities of drugs for multidrug therapy of leprosy patients.

Special Action Projects for Elimination of Leprosy (SAPEL) have been under implementation in several difficult-to-access areas in Sudan and the Republic of Yemen. The detection of a good number of leprosy cases in those areas clearly demonstrated the usefulness of this initiative. A new SAPEL project was approved for implementation in Somalia.

The Regional Office organized a regional consultation on the elimination of leprosy for the national managers from leprosy-endemic countries in November 1998. The participants reviewed the progress in elimination of leprosy at country and regional levels and adopted strategies on implementation of intensified efforts for case detection and treatment of leprosy patients. It was particularly stressed that increased involvement of

the general health services in surveillance and control of leprosy is important in order to reach sustained leprosy elimination.

Poliomyelitis eradication

Rapid progress towards eradication of poliomyelitis in the Region continued. The most important developments that occurred during 1998 were the successful national immunization days conducted in all parts of Somalia and Sudan. Another important development was the significant improvement in surveillance for acute flaccid paralysis (AFP) in the Region, particularly in endemic countries such as Afghanistan, Iraq, Somalia and Sudan.

Incidence of poliomyelitis

The total number of confirmed cases of poliomyelitis reported from countries of the Region during 1998 decreased to less than half of the number reported in 1997 (Table 5.1). The distribution of confirmed poliomyelitis cases between countries of the Region is shown in the table. Of the 551 cases reported in 1998, 339 (62%) were reported from Pakistan, compared with 1147 cases reported in 1997, representing a 70% decline under conditions of improving surveillance in the country. The rapidly improving AFP surveillance in Afghanistan enabled detection and reporting of a large number of both clinically-confirmed and laboratory-confirmed cases of poliomyelitis. Egypt reported 35 laboratory-confirmed cases from 10 of the 27 governorates. After remaining poliomyelitis-free during 1996 and 1997, one laboratory-confirmed case linked to an imported virus was reported from Saudi Arabia.

Routine immunization coverage

During 1998 the reported regional average of coverage with at least three doses of OPV by 1 year of age remained at nearly the same level as that in 1997 (82%). The details by country are described under the programme on vaccine-preventable diseases.

National immunization days and other supplementary campaigns

All countries, except Cyprus and Kuwait, conducted national immunization days (NIDs). The Regional Office provided technical assistance in all aspects of NID planning, implementation and evaluation, particularly to programmes in Afghanistan, Iraq, Pakistan, Somalia, Sudan and Republic of Yemen.

Assistance and coordination by the Regional Office were critical to the success of campaigns conducted in the challenging circumstances faced by these countries, especially Afghanistan, Somalia and Sudan.

Intercountry and interregional coordination continued to strengthen and enhanced the impact of campaigns in neighbouring countries of North Africa,

TABLE 5.1 Reported incidence of poliomyelitis in the Eastern Mediterranean Region, by country, 1988–98

Country	Year										
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998*
Afghanistan	307	55	48	2	NA	NA	NA	NA	NA	19	59
Bahrain	0	0	0	0	0	2	0	0	0	0	0
Cyprus	0	0	0	1	0	0	0	0	0	0	0
Djibouti	3	10	7	0	3	0	0	0	0	0	0
Egypt	550	474	565	625	584	150	120	81	100	14	35
Iran, Islamic Republic of	36	13	15	55	44	107	93	101	12	13	4
Iraq	69	10	56	186	120	75	63	34	24	34	37
Jordan	2	0	0	14	18	0	4	0	0	0	0
Kuwait	0	0	0	0	0	0	0	0	0	0	0
Lebanon	0	NA	2	5	NA	0	2	0	0	0	0
Libyan Arab Jamahiriya	10	4	5	6	0	0	0	0	0	0	0
Morocco	0	2	0	0	0	0	0	0	0	0	0
Oman	118	5	0	4	0	2	0	0	0	0	0
Pakistan	935	811	777	1147	1046	1803	527	508	341	1147	339
Palestine								0	0	0	0
Qatar	0	0	1	0	0	0	0	0	0	0	0
Saudi Arabia	3	3	5	1	2	2	6	3	0	0	1
Somalia	54	155	NA	NA	NA	NA	NA	NA	NA	1	12
Sudan	93	51	4	27	10	252	25	22	51	33	50
Syrian Arab Republic	37	13	12	24	22	0	2	4	0	0	0
Tunisia	2	0	0	3	4	0	0	0	0	0	0
United Arab Emirates	9	0	0	0	2	0	0	0	0	0	0
Yemen, Republic of	114	701	NA	27	45	58	173	45	7	NA	14
UNRWA	0	0	0	2	1	0	0	0	0	0	0
Total	2342	2307	1497	2129	1901	2451	1015	798	535	1261	551

NA Not available

Integrated control of disease

the Gulf Cooperation Council countries and the Middle East. Pakistan coordinated its NIDs with the countries of the South-East Asian Region. A considerable number of coordination activities were targeted at prevention of cross-border transmission and distant importation of wild poliovirus. Coordination of eradication activities between countries of the European and the Eastern Mediterranean regions continued under Operation MECACAR.

Surveillance for acute flaccid paralysis

Almost all countries of the Region have established a system of AFP surveillance. However, the quality of these systems in the Region remains variable. A total of 2208 AFP cases with onset in 1998 were reported. Of the 22 countries that reported AFP cases in 1998, 15 countries, namely Bahrain, Cyprus, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Oman, Palestine, Qatar, Saudi Arabia, Syrian Arab Republic and Tunisia, have achieved or exceeded the minimum required sensitivity for detecting and reporting cases of non-poliomyelitis AFP (1 case per 100 000 children aged less than 15 years). A group of countries is close to achieving this level of sensitivity. The overall regional average rate for non-poliomyelitis AFP was 0.88 per 100 000 children under 15 years of age. Another important criterion for AFP surveillance performance is that at least 80% of all AFP cases should have adequate stool specimens collected (2 stool specimens collected at least 24 hours apart, within 14 days of onset of paralysis and arriving at the laboratory in good condition). In 1998, eight countries met or exceeded this criterion and in three other countries, adequate specimens were collected from more than 70% to less than 80% of cases. Overall in the Region 66% of AFP cases had adequate stool specimens collected, compared with 53% in 1997.

Several review missions were undertaken with the aim of strengthening AFP surveillance systems in countries. Although most countries are making progress in clinical and epidemiological investigation of AFP cases, a lot remains to be done to achieve the quality of surveillance required to target efforts and to certify eradication.

Regional laboratory network

Laboratory-based surveillance for wild poliovirus in the Region, the core component of AFP surveillance, also made substantial progress in 1998.

Only two of the 12 network laboratories could not be accredited during 1998, however training and provision of equipment and supplies has been initiated and it is expected that all network laboratories will be fully accredited during 1999. Of the 2208 AFP cases with onset in 1998, 90% had specimens tested in the laboratory network (specimens submitted to non-accredited laboratories were tested in parallel in accredited laboratories of the network). Of the total stool specimens tested, half were received in the laboratories within 72 hours of collection; more than 90% were received in a good condition; three-quarters had laboratory results reported within 28 days of sample receipt; and 9% had non-poliomyelitis enteroviruses (NPEV) isolated. The laboratory performance indicator target was achieved for the condition of stool samples and nearly so for the NPEV isolation rate. However, improvement is still required in the speed of specimen transport to the laboratory, and the provision of timely laboratory results.

Efforts to strengthen network laboratories continued through training, coordination of activities and provision of supplies and equipment. Wild poliovirus was detected in seven countries: Afghanistan (types 1 and 3), Egypt (type 1), Islamic Republic of Iran (types 1 and 3), Pakistan (types 1 and 3), Saudi Arabia (type 3) and Sudan (types 1 and 3). It should be emphasized that the detection of wild viruses reflects the sensitivity and quality of AFP surveillance and the extent to which adequate samples are referred for analysis to network laboratories. Weak AFP surveillance systems in some countries, such as Djibouti, Somalia, Sudan, United Arab Emirates and Republic of Yemen, may result in underutilization of network laboratories and underestimation of the extent of wild poliovirus transmission.

Viral isolates from the Region have been subjected to genomic sequencing which has generated a substantial amount of very valuable information about transmission lines and has been useful in monitoring progress in poliomyelitis eradication.

Certification of poliomyelitis eradication

According to the recommendations of the Regional Commission for Certification (RCC) of Poliomyelitis Eradication most countries have now established national certification committees. The Regional Office continued to encourage formation of these national certification committees in the countries that do not yet have them and to ensure appropriate membership

of each committee. Detailed plans of action for regional certification and guidelines for certification activities in countries were developed and approved by the Regional Commission. In addition, a manual of operations was prepared which was endorsed by the Regional Commission. The manual is designed to assist the national programmes in providing the standardized documentation needed for certification and to facilitate review and validation by the national committees and preparation of country reports for the Regional Commission. Visits of the Regional Certification Commission members to the countries of the Region to review the status of the certification activities and state of documentation were initiated. It is expected that the Regional Commission will begin reviewing submissions from the national committees in 1999 for certification of poliomyelitis eradication in individual countries.

Coordination

The Regional Office played a key role in coordinating eradication activities between countries through regular exchange of information, planning meetings, and technical and financial support. Coordinated poliomyelitis eradication activities between eight neighbouring countries of the Eastern Mediterranean Region and 12 countries of the European Region continued as part of Operation MECACAR. Specially coordinated immunization and surveillance activities were continued in selected border areas between Islamic Republic of Iran, Iraq, Syrian Arab Republic and Turkey and between Afghanistan, Islamic Republic of Iran and Pakistan. In addition, coordination of activities was initiated with the WHO Regional Office for Africa, particularly targeting countries in the Horn of Africa.

Regional and global partnership

Countries of the Region remained committed to poliomyelitis eradication and continued large-scale eradication activities in close collaboration with the Regional Office. The largest share of the cost of human and financial resources for eradication efforts in the Region was borne by the countries, however, the Regional Office continued to play a central coordination role and provided ongoing technical and operational support to keep the programmes on track.

The Regional Office further strengthened its partnership with international agencies and governments supporting poliomyelitis eradication,

particularly Rotary International, the Centers for Disease Control and Prevention, and the Governments of Canada, Japan and the United Kingdom. The central role of the Regional Office in poliomyelitis eradication in the Region is highlighted by the fact that during 1997 and 1998 nearly US\$ 14 million was granted to the Regional Office as voluntary funds by partner agencies to support poliomyelitis eradication in selected countries and for the coordination of regional activities. In addition, the Regional Office has played a key role in facilitating bilateral support to countries, and in raising funds for purchase of OPV through UNICEF in several countries.

Remaining challenges

Although the progress towards poliomyelitis eradication in the Region was impressive in 1998, significant obstacles remain that must be overcome in order to achieve eradication by 2000. Several countries of the Region are affected by longstanding wars or suffer from political isolation. These countries pose a unique challenge to the eradication effort and require extraordinary human and financial resources and multi-agency coordination for effective implementation of immunization and surveillance activities. Second, routine immunization coverage and AFP surveillance remain inadequate in some countries, particularly among high-risk groups in densely populated areas, or mobile, refugee and displaced populations. Third, political commitment from the highest levels in governments and international agencies has not always been translated into effective action at the implementation level. Finally, the eradication effort has now entered its final and most difficult phase, which will require a concerted effort from all governments, international partners and all United Nations agencies to ensure access to difficult areas and availability of human and financial resources.

Plans for 1999

Wild poliovirus continues to circulate widely in Afghanistan, Pakistan and Sudan, and a similar situation is assumed to exist in Somalia and the Republic of Yemen. In addition, focal virus transmission persists in Egypt, Islamic Republic of Iran and Iraq. Only 1 year and a few months remain to the end of 2000, the deadline for stopping wild poliovirus transmission. Extraordinary efforts are needed to meet the challenge of the final and most difficult phase of eradication in the Region. The following will be the main areas where attention will be focused in 1999.

- Further strengthening of national commitment to eradication in the face of the disappearing disease.
- Acceleration of eradication efforts in endemic and war-affected areas of the Region, including:
 - improving routine immunization to ensure high immunization coverage with three doses of OPV among children under 1 year of age;
 - improving the quality of NIDs and introducing house-to-house immunization in high risk areas;
 - additional massive house-to-house immunization campaigns;
 - vigorous implementation of active AFP surveillance and appropriate laboratory support;
 - in-depth review of eradication programmes to ensure appropriate technical and operational support;
 - provision of adequate human resources to ensure quality of work and supervision.
- Further consolidation of the partnership with international agencies and governments and engaging more active participation from other United Nations agencies.
- Ensuring that sufficient financial and human resources are available to accelerate eradication activities and meet the goal of eradication on time.

Neonatal tetanus elimination

The date set for achieving neonatal tetanus elimination is December 2000. This is a goal that was originally set for 1995 and was deferred. Neonatal tetanus elimination, defined as less than 1 case of neonatal tetanus per every 1000 live births in each administrative district of a country, has so far been achieved in 15 countries of the Region. The elimination goal has not yet been achieved in eight countries: namely, Afghanistan, Djibouti, Egypt, Iraq, Pakistan, Somalia, Sudan and Republic of Yemen. Of these countries, Djibouti, Egypt and Iraq are very close to reaching the goal with few districts having higher rates than the target.

The recommended strategies to achieve the goal of elimination include routine immunization of women of childbearing age (including pregnant women) with tetanus toxoid, high coverage with clean delivery practices and implementation of specific activities in the high-risk areas (the high-risk approach). Surveillance is an additional important strategy, which is

required not only to assess achievement of the goal of elimination but, more important, to identify the high-risk areas.

The total number of reported cases of neonatal tetanus from the Region in 1998 was 2955, which is more or less comparable with that reported in previous years (Table 5.2). It should be noted that neonatal tetanus remains a seriously underreported disease, with varying degrees of underreporting between countries. In some countries, data are not available because the surveillance system is weak or almost nonexistent. Other countries, such as Egypt, have sensitive surveillance systems which detect and report more than 70% of cases. In addition to weakness in the surveillance systems, the disease occurs early in life, and its victims often die before their birth is registered and the death itself often goes unregistered also. Moreover, neonatal tetanus is most prevalent in poor rural areas where health services are inefficient or nonexistent and is perceived in these areas as a disease with an inevitable fatal outcome. People thus often do not seek medical advice and also delay birth registration.

The average regional coverage with at least two doses of tetanus toxoid (TT2+) among pregnant women during 1998 was 53%, which is comparable to that reported in previous years. However, following several years of administration of multiple doses of tetanus toxoid, the total proportion of immune women in the communities is higher than that calculated only from immunizations carried out during 1998. Monitoring protection of children at birth against neonatal tetanus is a more accurate indicator for tetanus immunization status of mother and the immunity status of the neonate. Monitoring of protection at birth is done at the same time as the neonate is brought for OPV1/DPT1, by checking the immunization status of the mother at the time of delivery. This opportunity should also be used to detect and immunize unprotected mothers and is a very useful and simple way of increasing tetanus toxoid coverage. This method is currently implemented in a few countries including Jordan, Syrian Arab Republic and Tunisia and is recommended for implementation in other countries.

High routine immunization coverage and high coverage with clean delivery practices are both long-term strategies that are not compatible with achieving the goal of elimination in some countries within the target dates. However, the high-risk approach strategy, through identification of high-risk areas and conduct of three rounds of immunization with tetanus toxoid for all women of child-bearing age living in these areas is a cost-effective and rapid

intervention. The high-risk approach is not only compatible with achieving the goal of elimination, but also, since immunity following three doses will last for a minimum of 5 years, will give sufficient time for the other two strategies to develop to a level which will sustain elimination.

Most countries which have not yet reached the goal of elimination have started the high-risk approach in order to reach the goal by 2000. Nationwide neonatal tetanus elimination plans of action based on the high-risk approach,

TABLE 5.2 Reported neonatal tetanus cases in the Eastern Mediterranean Region, by country, 1994–98

Country	Year				
	1994	1995	1996	1997	1998
Afghanistan	NA	NA	NA	NA	310
Bahrain	0	0	0	0	0
Cyprus	0	0	0	0	0
Djibouti	NA	0	0	NA	0
Egypt	993	790	643	482	471
Iran, Islamic Republic of	21	13	21	14	14
Iraq	89	67	76	73	38
Jordan	5	2	2	2	1
Kuwait	0	0	1	0	0
Lebanon	3	3	4	1	1
Libyan Arab Jamahiriya	NA	NA	0	0	0
Morocco	9	14	14	4	6
Oman	0	1	0	0	0
Pakistan	1842	1580	2012	2053	1918
Palestine		2	2	1	1
Qatar	0	0	0	0	0
Saudi Arabia	33	25	28	26	10
Somalia	NA	NA	102	NA	99
Sudan	70	21	40	95	53
Syrian Arab Republic	74	106	61	45	32
Tunisia	7	7	2	3	1
United Arab Emirates	0	0	0	0	0
Yemen, Republic of	3	12	NA	NA	NA
UNRWA	3	0	0	0	0
Total	3152	2643	3008	2799	2955

NA Not available

are available for all countries where this applies. As well, district-level microplans with detailed costing have been formulated for Egypt, Pakistan, Sudan and Republic of Yemen. Limited high-risk activities were conducted in Egypt and Sudan in 1998. Some countries have submitted proposals seeking funds from different partners.

Measles elimination

The upward trend in the average regional measles immunization coverage rate reported in 1996 and 1997 was maintained in 1998 (80%). High immunization coverage rates (90% or higher) were reported from 15 countries (see section 5.2).

During 1998, countries reported a total of 88 803 measles cases, which is much higher than that reported in 1997 (Table 5.3). Nevertheless, it should be noted that measles is underreported as it is still accepted as a natural event and the great majority of mild cases do not appear at health facilities. Also, in some countries the cases reported are only those admitted to hospitals and cases seen in basic health facilities (health units and centres) are not reported. In addition, in most countries, no reports are obtained from the private sector which is usually very active in this area.

While 15 countries in the Region are adopting a two-dose schedule, the remaining eight are maintaining the one-dose schedule. It is now evident that high routine measles vaccination coverage with either one or two-dose measles immunization schedules is not enough to eliminate measles. Although less frequent and of lower magnitude than in the pre-vaccination era, outbreaks and epidemics of measles continued to be reported from most countries. This is mainly because the measles vaccine is less than 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. These susceptible children are those who have not received the vaccine or who failed to seroconvert. However, with high coverage rates the accumulation of susceptibles, which depends on the coverage rate and vaccine efficacy, is slow, resulting in a lengthening of the interepidemic period (4-8 years).

Two planning workshops were conducted following the resolution of the Regional Committee at its Forty-fourth Session in October 1997 on measles elimination in the Region by 2010. The first was attended by countries which

have already reached the eradication targets set for poliomyelitis and have started or are eligible to start measles elimination activities. These include Bahrain, Cyprus, Kuwait, Jordan, Qatar, Morocco, Oman, Palestine and the Palestinian population served by UNRWA, Saudi Arabia, Syrian Arab Republic, Tunisia and United Arab Emirates. Kuwait and Oman, which conducted national mass campaigns a few years ago, prepared plans for follow-up activities. Bahrain and Jordan, which conducted the first phase of the

TABLE 5.3 Reported measles cases in the Eastern Mediterranean Region, by country, 1994–98

Country	Year				
	1994	1995	1996	1997	1998
Afghanistan	NA	NA	NA	NA	2 205
Bahrain	0	3	74	4	4
Cyprus	0	0	55	1	1
Djibouti	NA	8	410	NA	198
Egypt	1 444	2 832	4 403	4 606	4 868
Iran, Islamic Republic of	506	263	2 329	3 901	2 731
Iraq	10 657	7 650	256	708	43 735
Jordan	516	318	448	7 026	428
Kuwait	432	12	15	26	90
Lebanon	51	3	2	134	966
Libyan Arab Jamahiriya	NA	NA	NA	26	50
Morocco	3 512	2 380	1 324	2 512	7 208
Oman	163	68	24	12	5
Pakistan	1 421	1 720	1 090	1 848	2 333
Palestine	63	46	33	28	40
Qatar	31	333	38	439	116
Saudi Arabia	1 253	2 574	2 407	3 978	5 519
Somalia	NA	NA	1 830	NA	3 075
Sudan	963	841	2 559	350	550
Syrian Arab Republic	1 334	1 383	2 060	6 850	5 400
Tunisia	597	676	533	371	123
United Arab Emirates	518	671	425	243	296
Yemen, Republic of	35	225	NA	NA	8 785
UNRWA	150	24	47	279	77
Total	23 646	22 030	20 362	33 342	88 803

NA Not available

Integrated control of disease

Eradication of poliomyelitis



National immunization days were conducted throughout the Region in 1998, including for the first time in Somalia and southern Sudan (above). In the Republic of Yemen the NID was launched (below) by the Speaker of Parliament, Mr Abdallah Ibn Hussein Al Ahmar and the Minister of Public Health, HE Dr Abdallah Abdel Waley Nasher.



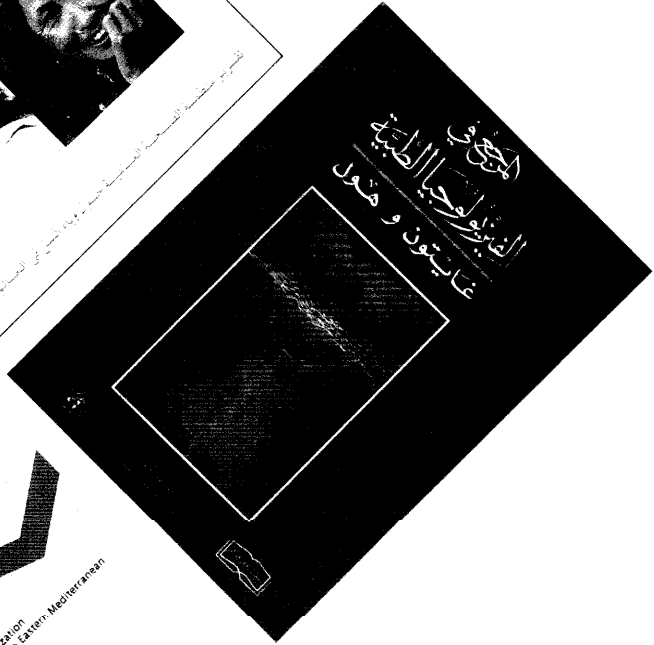
Recent documents on communicable diseases



WHO
Surveillance of
communicable
diseases
A training manual



World Health Organization
Regional Office for the Eastern Mediterranean



campaign targeting school-age children in late 1997 and early 1998, respectively, prepared plans for the second phase targeting preschool children, to be conducted in 1999. Other countries developed plans to conduct such campaigns. Campaigns were implemented in late 1998 in Saudi Arabia, Syrian Arab Republic and Tunisia.

The remaining countries participated in the second workshop and planned for acceleration of measles control with emphasis on raising routine coverage, establishing measles surveillance and conducting immunization activities in identified high-risk areas. Once the poliomyelitis eradication target is achieved in these countries, they will commence full implementation of measles elimination strategies.

In view of the importance of the role of the laboratory in measles surveillance in the elimination phase, a regional laboratory network for measles diagnosis is being established. The second intercountry laboratory training workshop on measles diagnosis was conducted in Tunisia in October 1998 and was attended by representatives from eight countries. The third workshop is planned for 1999 and will cover the remaining countries.

5.2 Control of other communicable diseases

Vaccine-preventable diseases control and immunization

Immunization coverage

The improvement in regional immunization coverage observed since 1996 for all EPI antigens was maintained in 1998. This was mainly the result of the sustained high coverage rates in most countries. Based on the reports received from countries for 1998, the regional average coverage rates were 89% for BCG, 82% for OPV3/DPT3 and 80% for measles for children in their first year of life (Figure 5.1).

The countrywide immunization coverage rates (Table 5.4) show that 16 countries achieved a coverage rate of 90% or more for DPT3/OPV3, and 15 countries reported a measles coverage rate of 90% or more (Bahrain, Cyprus, Egypt, Islamic Republic of Iran, Kuwait, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia, United Arab Emirates and Palestine and the population served by UNRWA). Some improvement was observed in coverage rates for Pakistan and Republic of Yemen.

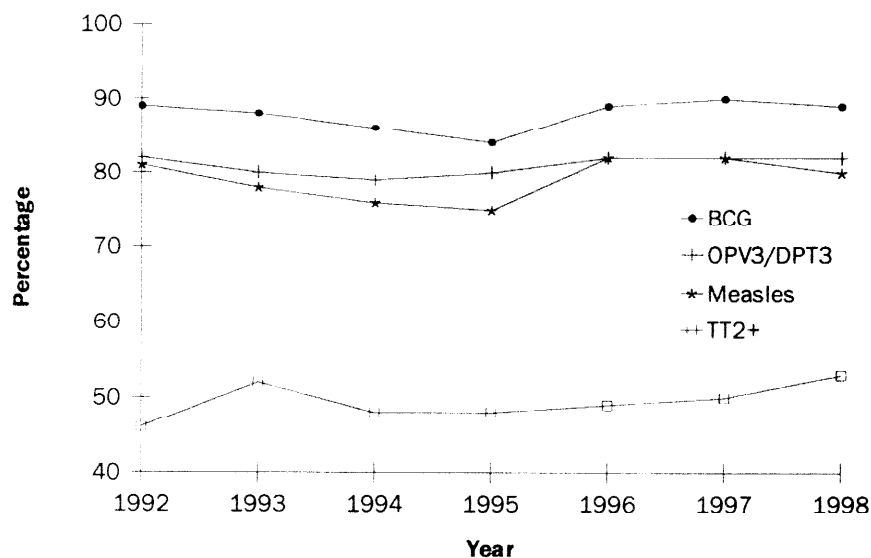


FIGURE 5.1 Reported immunization coverage of children under 1 year of age and pregnant women, Eastern Mediterranean Region, 1992-98

The average regional coverage with two or more doses of tetanus toxoid (TT2+) among pregnant women during 1998 was maintained around 50%. However, the proportion of immune women is higher than that calculated only from annual TT2+ immunization coverage and can be estimated by monitoring the protection of children at birth (see section 5.1).

In addition to routine immunization activities, other supplementary immunization activities were conducted during 1998, including national immunization days and "mopping-up" operations, mainly for poliomyelitis. National immunization days were conducted in all countries, except Cyprus and Kuwait, with very high coverage rates (see section 5.1). The high-risk approach to the elimination of neonatal tetanus, with two rounds of immunization of all women of childbearing age in identified high-risk areas, was implemented in some countries including Egypt and Sudan. However, this covered limited areas and not all identified high-risk areas. During 1998, mass campaigns for measles elimination were conducted in Bahrain, Saudi Arabia, Syrian Arab Republic and Tunisia.

Efforts are under way to expand the use of existing vaccines and incorporate new vaccines into immunization programmes. Hepatitis B

vaccine is now fully integrated into the national immunization programme for children under 1 year of age in 15 countries, which, however, account for only 44% of the total infant population of the Region. Coverage rates of 90% or more were reported from eleven of these countries with an overall

TABLE 5.4 Reported immunization coverage of children in their first year and pregnant women in the Eastern Mediterranean Region, 1998

Country/area	Immunization coverage (%)					Pregnant women TT2+
	Children under 1 year					
	BCG	DPT3	OPV3	Measles	HBV3	
Afghanistan	33	34	35	36	-	19
Bahrain	-	98	98	100	95	80
Cyprus ^a	-	98	98	90	88	-
Djibouti	35	23	23	21	-	16
Egypt	97	96	96	98	96	61
Iran, Islamic Republic of	98	100	100	100	93	75
Iraq	76	86	86	79	3	45
Jordan	-	91	91	86	83	22
Kuwait	-	95	94	99	99	8
Lebanon	-	96	96	91	-	-
Libyan Arab Jamahiriya ^a	100	97	97	93	...	...
Morocco	90	93	93	91	-	33
Oman	96	100	99	98	99	96
Pakistan	97	79	79	76	-	58
Palestine	91	98	98	94	92	26
Qatar	99	94	94	90	92	-
Saudi Arabia	92	94	94	93	95	66
Somalia	57	24	24	47	-	41
Sudan	81	69	72	63	-	55
Syrian Arab Republic	100	97	97	97	91	53
Tunisia	91	96	96	94	93	50
United Arab Emirates	98	94	94	95	96	-
Yemen, Republic of	77	68	68	66	-	26
UNRWA	100	99	99	98	99	97
EMR average	89	82	82	80	79 ^b	53

... Coverage % not calculated due to incomplete reports

- Not included in national EPI

^a Based on previous survey results

^b Calculated for countries having HBV included in national EPI

Integrated control of disease

regional average coverage of 79%. Countries that have not yet included hepatitis vaccine in the EPI schedule were urged to do so as a high priority. Lebanon, Morocco and Pakistan are planning to introduce hepatitis B vaccine into the routine programme.

Conjugate vaccines for *Haemophilus influenzae* b (Hib) have been introduced into routine infant immunization schedules in three countries of the Region (Bahrain, Kuwait and Qatar). Oman, Saudi Arabia and the United Arab Emirates prepared plans for inclusion of the vaccine by 1999–2000. The Syrian Arab Republic is also planning to pilot-test inclusion of the vaccine in routine immunization in a limited geographical area to be expanded later. In 1997 it was recommended that countries implement infant immunization in accordance with their capacities, national priorities and disease burden. Rubella vaccine combined with measles and mumps is now included in the routine immunization of 12 countries in the Region.

In view of the value of vitamin A in the prevention of morbidity in general and of measles mortality, countries were encouraged to deliver vitamin A supplementation through the routine EPI as well as supplementary immunization activities, including national immunization days and anti-measles campaigns. Vitamin A was included in the national immunization days in Afghanistan, Somalia and Republic of Yemen.

Unsafe injection practices pose a major health problem in the Region and in view of the fact that immunization programmes should lead the drive for safe injection practices, this topic was addressed in most EPI intercountry meetings. Assessment of injection practices in immunization sessions was conducted in three countries (Egypt, Sudan and Republic of Yemen). Support is provided to countries to develop plans for safe injection practices.

Disease surveillance

Data on EPI target diseases and their trends of occurrence are crucial to evaluation of the impact of immunization programmes. Achievement of disease eradication, elimination and reduction goals cannot be ensured without relative data of disease incidence.

During 1998, efforts were made to improve EPI disease surveillance and reporting in the Region. Countries were urged to collect and make use of surveillance data, for example to identify areas at high risk for neonatal

tetanus and target resources to these areas. Countries were helped to use surveillance data to monitor trends in measles incidence and decide on target groups for supplementary immunization activities. Because poliomyelitis eradication certification is crucially dependent on disease surveillance, standard performance indicators that measure the effectiveness of surveillance have been introduced.

In addition, several national training workshops on disease surveillance and computerized information systems were organized. The objectives of these training courses were to review the principles of high-quality disease surveillance, teach the use of *Epi-Info* and *Epi-Map* software and introduce and adapt the *Information for action* (IFA) software as a tool for establishing case-based surveillance for EPI target diseases. Workshops were organized in Lebanon, Oman, Palestine, Saudi Arabia, Syrian Arab Republic and United Arab Emirates, with the objective of adapting and installing the IFA/EPI system at central level and training personnel at central and provincial/governorate level. Currently, the IFA/EPI system is installed and used in most countries (Afghanistan, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Morocco, Oman, Pakistan, Palestine, Qatar, Saudi Arabia, Sudan, Syrian Arab Republic and Tunisia). In October 1998 the Regional Office started to issue *Polio fax*, which summarizes all case-based AFP/poliomyelitis surveillance information on a weekly basis. The weekly update is displayed on the Regional Office website. Countries were encouraged to install an e-mail system with an Internet connection in EPI country offices in order to improve the timeliness and completeness of EPI data reporting. Computerization of data management was extended to the poliomyelitis laboratory network. A special database was developed and installed in different laboratories.

While the surveillance system is sufficiently sensitive in some countries, it is still weak in others and the timeliness and completeness of reporting still require improvement. The number of reported cases of EPI target diseases in the past 5 years are shown in Table 5.5. A decline was noted in the occurrence of poliomyelitis compared with 1997, despite the establishment or improvement of surveillance for AFP and poliomyelitis in Afghanistan, Pakistan, Somalia and Republic of Yemen. This is mainly the result of the reduction in cases reported from Pakistan. Little change from 1997 was observed for diphtheria, pertussis and tetanus (total and neonatal) and higher incidence was noted for measles.

TABLE 5.5 Reported annual morbidity due to EPI target diseases in the Eastern Mediterranean Region, 1994–98

Disease	1994	1995	1996	1997	1998
Poliomyelitis	1 015	789	535	1 261	551
Neonatal tetanus	3 152	2 642	3 008	2 799	2 955
Total tetanus	4 141	3 473	4 098	3 992	3 884
Measles	23 954	21 284	20 362	33 342	88 803
Diphtheria	312	289	522	423	399
Pertussis	1 692	3 437	2 937	3 252	4 372

Notwithstanding the fact that vaccination is one of the safest health interventions and that the risks of vaccine-related adverse events are infinitesimal when set against the risk of complications arising from natural disease in unprotected children, such events, if not properly addressed, can seriously undermine public confidence in immunization. The topic of adverse events was addressed several times during EPI intercountry meetings. Oman established a surveillance system in 1996 and reports regularly to the Regional Office. Egypt and the Syrian Arab Republic started an adverse events surveillance system in mid-1998. A series of intercountry workshops on adverse events following immunization were organized aiming at development of national plans of action for establishment/strengthening of adverse events surveillance. The first workshop was held in December 1998 and two more were held in early 1999.

Integrated management of childhood illness

Acute respiratory infections and diarrhoeal diseases

Efforts were continued in the countries to further improve quality of acute respiratory infections (ARI) and diarrhoeal diseases control (CDD) programmes through better coordination and integration of their activities. The new challenge is to combine lessons learnt from these programmes in the Region in the past 15 years into a single management approach for the sick child through the new initiative entitled Integrated Management of Childhood Illness (IMCI). This is a strategy proposed by WHO and UNICEF to improve the quality of child health care and further reduce morbidity,

mortality and disability among young children from the most common life-threatening conditions, focusing on diarrhoea and pneumonia, measles and malaria (where applicable) as well as management of severe malnutrition and nutrition counselling.

In 1998, as a move towards IMCI in the Region, special emphasis was given by the national CDD and ARI programmes to a combined implementation of activities, such as organizing combined CDD/ARI training courses and training units, surveys and programme reviews. Within the same context of moving towards IMCI, national CDD and ARI control programmes in Egypt, Islamic Republic of Iran, Iraq and Sudan started giving priority support to those activities which are of direct relevance to IMCI, such as CDD medical education activities and training in breast-feeding counselling.

Progress in introduction of integrated management of childhood illness (IMCI) strategy

During the past 2 years the three countries in which IMCI was initiated (Egypt, Morocco and Sudan) started the process of, first combining CDD and ARI activities, then of gradual and phased introduction and implementation of the IMCI strategy in their national health systems. In 1998, two other countries in the Region (Islamic Republic of Iran and Pakistan) started preparatory work for introduction of IMCI in their health systems. By the end of the year, considerable progress had been achieved in these five countries with regard to adaptation of the WHO generic IMCI training materials and preparation of the selected districts for initial IMCI implementation. Initial IMCI training courses were conducted in Morocco and Egypt.

In April 1998, some important agreements were made between the WHO Regional Office for the Eastern Mediterranean and the UNICEF Regional Office for the Middle East and North Africa concerning joint support for IMCI in those countries that have already introduced the strategy and to prepare the ground for introduction of IMCI in other countries in the region. In addition, specific agreements were made by the WHO Regional Office with national and international partners to start introduction of IMCI in 1999 in two other countries (Iraq and Republic of Yemen).

In order to examine the initial experience of introduction and implementation of the IMCI strategy and to summarize lessons learned in selected countries of the Region as well as globally, the first regional IMCI

consultation was held in Rabat, Morocco, in October 1998. It was attended by over 60 participants from the World Bank, USAID, Basic Support for Institutionalizing Child Survival (BASICS), the European Union, Save the Children Fund UK, the Humanitarian Commission (Sudan), UNICEF and WHO together with public health programme managers, paediatricians and other health specialists and authorities from 12 countries. The main conclusion of the meeting was that the implementation of the IMCI strategy is feasible, has compelling advantages over disease-specific approaches and will eventually result in cost savings. Among the major constraints identified were the complexity of the process of adaptation of the WHO generic IMCI training materials, insufficiency of required human and financial resources, and the length of time needed to reach full national coverage. It was emphasized that to ensure sustainability of the effort it is particularly important to establish close links between IMCI implementation and ongoing health sector reforms. At the end of the meeting participants endorsed the Rabat Call for Action which advocates additional support together with enhanced cooperation of partners and mobilization of resources for an accelerated and comprehensive implementation of IMCI in the countries of the Region.

Strengthening national capacity

High priority was given to building regional and national capacity for supporting CDD/ARI and IMCI planning and implementation in the Region. Updated ARI and CDD plans of action were prepared in Egypt, Pakistan, Sudan and Republic of Yemen with WHO participation, using the results of programme reviews and surveys. In Egypt and Sudan, the combined ARI/CDD programme management training courses were conducted, and in Jordan, Oman, Palestine, Saudi Arabia and Syrian Arab Republic separate courses were conducted for mid-level managers. The newly acquired knowledge and skills were used in preparation of the updated plans of action for governorates and districts. In the Republic of Yemen, efforts to rehabilitate and strengthen national CDD and ARI programmes were further intensified during 1998. To update planning and evaluation skills, a combined CDD/ARI planning workshop was conducted with WHO assistance in July 1998 for national managers from the central and governorate levels.

A number of key national health managers from different countries (Egypt, Islamic Republic of Iran, Iraq, Morocco, Pakistan, Syrian Arab Republic,

Tunisia and Republic of Yemen) were trained on the 11-day IMCI case management and on the 5-day facilitator training courses. Most of the training courses were held in Morocco and Sudan but countries outside the Region have also been used to build up national and regional IMCI capacity. In addition, in Sudan two innovative workshops of three days each on practical steps of the IMCI adaptation process were organized with WHO support for 13 participants from countries of the Region (Egypt, Islamic Republic of Iran, Iraq, Pakistan, Syrian Arab Republic and Republic of Yemen). In addition, four experts (one staff member from the Regional Office and three IMCI experts from Islamic Republic of Iran, Pakistan and Sudan), were trained as regional consultants at an IMCI adaptation workshop at WHO headquarters in Geneva. These capacity-building activities proved to be very beneficial for IMCI planning and adaptation conducted in the countries of the Region.

Improving ARI/CDD/IMCI case management training

Training of medical and paramedical staff on ARI and CDD standard case management continued to be given high priority in countries of the Region. In 1998, 17 countries (Djibouti, Egypt, Jordan, Islamic Republic of Iran, Iraq, Lebanon, Libyan Arab Jamahiriya, Morocco, Oman, Pakistan, Palestine, Saudi Arabia, Somalia, Sudan, Syrian Arab Republic, Tunisia, Republic of Yemen) reported training of over 18 000 health staff in ARI and CDD case management. Most of these courses were conducted separately, and usually in the well established ARI training units and diarrhoea training units. In some countries (Egypt, Pakistan and Sudan) progress was achieved in organizing combined CDD/ARI case management courses and conducting them in the combined training units. The quality of clinical CDD and ARI training, as measured through reported compliance with WHO training quality criteria, showed further improvement in 1998 and has reached high levels in most countries.

CDD medical education (CDD MedEd) activities, aiming to improve undergraduate training through upgrading of curricula and training units were continued and expanded in several countries in the Region. In Egypt, the CDD MedEd experience of the past 8 years was discussed and summarized at the follow-up and evaluation workshop conducted with WHO assistance. In the Islamic Republic of Iran, several CDD MedEd workshops were conducted in 1998 by national staff using WHO material. In both Egypt

and the Islamic Republic of Iran all participating medical schools showed good progress of incorporating CDD standard case management in their paediatric curricula and in making plans to use the CDD MedEd experience in the forthcoming development of the IMCI pre-service training. In Iraq and Sudan, initial CDD MedEd workshops were conducted for selected medical schools and plans were made to conduct similar workshops in 1999 for the remaining medical schools.

The 40-hour breast-feeding counselling training course was successfully conducted in several countries in the Region (Egypt, Islamic Republic of Iran, Iraq, Saudi Arabia) by national staff using WHO training material in English and Arabic. These training activities are viewed as an essential part of preparing the way for IMCI introduction in the countries.

Innovative IMCI training courses in facilitation skills and in case management were organized and conducted with WHO support in Morocco and Sudan for over 200 national and external participants. Evaluation of these IMCI training courses, which were organized for the first time in the Region, showed encouraging results. In Sudan, performance of trainees was found to be satisfactory with an average 82% of tasks performed correctly during the course. In Morocco, all the standard criteria for IMCI quality training recommended by WHO were found to have been met by the course facilitators and participants.

Monitoring and evaluation

In 1998, CDD and ARI monitoring and evaluation activities were conducted in most countries by national staff. In Egypt, a CDD/ARI/breast-feeding household survey, in Iraq an ARI health facility surveys, and in the Republic of Yemen, a combined CDD and ARI programme review were conducted with WHO support. The results of these evaluation activities were discussed at the national feedback meetings with participation of WHO consultants and staff, and were used to further improve ARI and CDD training and communication activities and as a baseline for the forthcoming introduction of IMCI. Innovative IMCI monitoring indicators and approaches were discussed during the IMCI national workshops in Egypt, Morocco and Sudan, conducted with WHO technical assistance, and plans were made for their further development and implementation in 1999 in preparation for evaluation of the IMCI initial experience in these countries which will be used as a basis for IMCI expansion.

Tuberculosis control

Continued progress was observed in the field of tuberculosis control in the Region. The Regional Office, in close collaboration with the countries, made substantial efforts in the implementation of the regional strategy on tuberculosis control, which aims to achieve directly observed treatment, short-course (DOTS ALL OVER) by 2000 in all countries of the Region and tuberculosis elimination by the year 2010 in the countries with low incidence of tuberculosis. Accordingly, many activities have taken place in different areas of tuberculosis control. These included programme reviews, development of human resources, support for laboratory activities, distribution of relevant documents and advocacy. Promotion of intersectoral collaboration for tuberculosis control was given special focus in 1998. As a result, the DOTS strategy has been implemented more widely in the Region and tuberculosis control has been further strengthened.

Review of the epidemiological situation of tuberculosis in the Region

The epidemiological situation of tuberculosis in the Region was assessed for individual countries. The expected incidence of tuberculosis was estimated based on available information, such as results of tuberculin surveys and information on case notifications. The results of these estimates showed that countries in the Region could be classified into three categories: high incidence countries (more than 100 cases per 100 000 population per year)—Afghanistan, Djibouti, Iraq, Morocco, Pakistan, Somalia, Sudan and Republic of Yemen; intermediate incidence countries (20 to 100 cases per 100 000 population per year)—Egypt, Lebanon, Islamic Republic of Iran, Palestine, Saudi Arabia, Syrian Arab Republic and Tunisia; and low incidence countries (less than 20 cases per 100 000 population per year)—Bahrain, Cyprus, Jordan, Kuwait, Libyan Arab Jamahiriya, Oman, Qatar and United Arab Emirates.

The estimated incidences for countries of the Gulf Cooperation Council relate to nationals only. If tuberculosis incidence for the non-national populations is included in the estimate, all these countries will have intermediate incidence of tuberculosis.

The total number of estimated new cases of tuberculosis in the Region in 1998 was 612 000. Figure 5.2 shows the breakdown of these cases by country. Of tuberculosis cases in the Region, 94% occur in nine countries: Afghanistan, Egypt, Islamic Republic of Iran, Iraq, Morocco, Pakistan, Somalia, Sudan and Republic of Yemen.

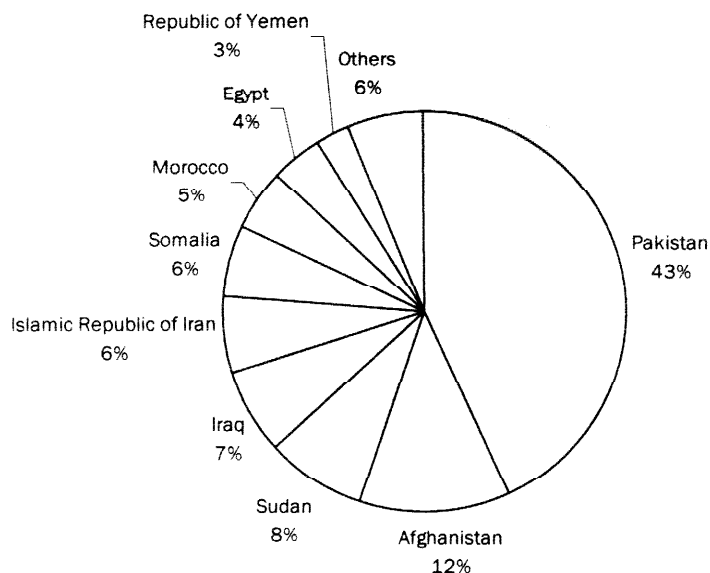


FIGURE 5.2 Burden of tuberculosis in the Eastern Mediterranean Region, based on estimated cases by country, 1998

Total number of estimated cases in the Region = 612 000

Implementation status of DOTS ALL OVER in the Region

Implementation/expansion of DOTS strategy was further promoted in the Region. As shown in Table 5.6, by the end of 1998 seven countries (Bahrain, Cyprus, Djibouti, Jordan, Morocco, Oman and Qatar) had achieved DOTS ALL OVER. Five countries (Cyprus, Iraq, Jordan, Lebanon and Saudi Arabia) started implementation of DOTS during 1998 and are at different levels of coverage while Cyprus has already achieved DOTS ALL OVER. Four countries (Kuwait, Sudan, Syrian Arab Republic and Republic of Yemen) have achieved rates of 50%-90% DOTS coverage. In four countries (Egypt, Islamic Republic of Iran, Saudi Arabia and Somalia) the DOTS coverage is 10%-49%. In five countries (Afghanistan, Iraq, Lebanon, Pakistan and Tunisia) DOTS coverage is less than 10% of the total population of the country. In the Libyan Arab Jamahiriya, Palestine and United Arab Emirates the implementation of DOTS is expected to start during 1999.

TABLE 5.6 DOTS Implementation status in the Eastern Mediterranean Region, 1998

DOTS coverage category	Country	DOTS coverage (%) ^a	Smear conversion rate (%)	Treatment success rate (%)
DOTS ALL OVER (100%)	Bahrain ^b	100	70 ^f	59 ^g
	Cyprus ^{c,d}	100	33 ^h	NA
	Djibouti	100	96 ⁱ	75 ^j
	Jordan ^c	100	94 ^h	NA
	Morocco	100	85 ^g	83 ^k
	Oman	100	93 ^f	91 ^g
	Qatar	100	92 ^g	92 ^g
50%–99%	Kuwait ^e	90	80 ^g	73 ^k
	Sudan	65	94 ^g	75 ^a
	Yemen, Republic of	60	87 ^g	78 ^a
	Syrian Arab Republic	55	91 ^g	92 ^a
10%–49%	Saudi Arabia ^c	40	NA	NA
	Iran, Islamic Republic of	28	99 ^g	87 ^k
	Egypt	19	93 ^g	90 ^j
	Somalia	15	82 ^g	89 ^j
<10%	Iraq ^c	9	94 ^h	NA
	Lebanon ^c	9	NA	NA
	Pakistan	8	66 ^j	74 ^j
	Tunisia	5	100 ^g	93 ^j
	Afghanistan	<3	NA	NA
Not yet started	Libyan Arab Jamahiriya			
	Palestine			
	United Arab Emirates			

Sources: Regional tuberculosis surveillance, *DOTS quarterly fax*, the meeting of national managers of tuberculosis control programmes in the Eastern Mediterranean Region, September 1998 and the subregional meeting for the tuberculosis elimination initiative in the Member States of the Gulf Cooperation Council, November 1998

NA not available

^a As at 31 December 1998

^b Information on nationals only

^c As these countries started DOTS projects in 1998, information on smear conversion and treatment outcome is not fully available as yet

^d Three smear-positive cases were registered during the 2nd quarter of 1998 and one case became smear-negative at the end of the third month of treatment

^e Of 73 cases registered in 1997, 13 cases (18%) left the country during the treatment

Note. Information was collected for the following periods: ^f1st half of 1998, ^g1997, ^h2nd quarter of 1998, ⁱ1st half of 1997, ^j1996

Integrated control of disease

All DOTS projects continued to produce remarkable outcomes in terms of smear conversion and treatment results. It has also become obvious that the DOTS strategy can be successfully implemented providing there is effective political commitment and strong technical leadership.

Tuberculosis elimination initiative in the countries with low incidence of tuberculosis in the Region

The tuberculosis elimination initiative in the six member countries of the Gulf Cooperation Council aims to reduce the incidence rates of smear-positive pulmonary tuberculosis to 1 per 100 000 population by 2010. The Regional Committee endorsed this target in 1997 as the target for all countries with low incidence of tuberculosis in the Region. Accordingly, Cyprus and Jordan, which also have low incidence of tuberculosis, have joined this initiative.

The third meeting of the GCC initiative was held in November 1998. It was attended by the directors-general of health, managers of national tuberculosis programmes and WHO staff. Considerable progress has been made in the initiative. DOTS ALL OVER has been achieved in Bahrain, Oman and Qatar. Kuwait is in the final stage of accomplishing the target, and Saudi Arabia and the United Arab Emirates are in the phase of expansion of the DOTS projects. The participants prepared comprehensive plans of action for 1999 and made explicit recommendations, one of which was to establish a GCC tuberculosis elimination coordination committee.

Intersectoral collaboration for tuberculosis control

Diagnosis and treatment of tuberculosis cases are carried out by several different partners in many countries of the Region. These include national tuberculosis control programmes of ministries of health, government health care institutions run by ministries other than the ministries of health, the private health care sector and nongovernmental organizations, such as anti-tuberculosis associations. There is a great need to establish good collaboration among these partners so that standardized procedures on tuberculosis control can be put in place.

In order to discuss this important subject, the Regional Office organized a special session during the meeting of national managers of tuberculosis control programmes in the Region in September 1998. The meeting was attended by not only the national tuberculosis managers from all countries

of the Region, but also representatives of the private health sector from six countries (Egypt, Lebanon, Morocco, Pakistan, Saudi Arabia and Syrian Arab Republic) and representatives of nongovernmental organizations from seven countries (Egypt, Iraq, Jordan, Somalia, Sudan, Syrian Arab Republic and Republic of Yemen). The participants underlined the importance of intersectoral collaboration for tuberculosis control and prepared a collaboration protocol for national tuberculosis programmes, the private sector and nongovernmental organizations. In the protocol, establishment of a national board representing all partners in tuberculosis control and formulation of national tuberculosis guidelines by involving all partners were recognized as the important prerequisites for the initiation of intersectoral collaboration.

Support to national tuberculosis control programmes

The Regional Office provided continuous support to national tuberculosis programmes in the Region, which was effective in inducing good momentum among the concerned health personnel and decision-makers towards the accomplishment of DOTS ALL OVER.

- *Annual review of progress.* All national tuberculosis programme managers participated, together with WHO staff, in the meeting of national managers of tuberculosis control programmes in the Region in Cairo in September 1998, reviewing the progress and constraints in the promotion of the DOTS strategy. The annual review provided the national managers with a clear view of their current situation regarding tuberculosis control and of the actions necessary to accomplish DOTS ALL OVER. Accordingly, the participants prepared national plans of action.
- *In-depth programme reviews.* The Regional Office supported in-depth reviews of national tuberculosis programmes in Egypt and the Islamic Republic of Iran with the aim of evaluating the policies and procedures of the programmes. These reviews were found to be very effective in generating political support from decision-makers and creating clear understanding of the actions necessary for the accomplishment of DOTS ALL OVER among all personnel concerned.
- *Review of DOTS projects.* In addition to the in-depth reviews, the Regional Office assisted 10 countries and UNRWA in implementing or expanding the DOTS strategy *by jointly reviewing their programmes and preparing plans of action for improvement, expansion and ensuring sustainability.*

- *Recruitment of tuberculosis officers.* WHO human resources in technical areas at regional and country levels were further strengthened in 1998. At the Regional Office, an additional tuberculosis officer was recruited. In Somalia, one full-time WHO tuberculosis officer was recruited to assist the concerned agencies and nongovernmental organizations in strengthening and expanding DOTS projects. WHO also facilitated recruitment of national tuberculosis officers in Afghanistan, Pakistan and Somalia to assist national authorities in expanding DOTS projects.
- *Human resources development.* The Regional Office carried out two regional training courses on tuberculosis control in 1998 to train tuberculosis managers and coordinators on practical aspects of the DOTS strategy; 24 participants from 12 countries were trained. Development of a core group of tuberculosis consultants was further promoted in the Region. Tuberculosis managers and experts from Iraq, Kuwait, Morocco, Syrian Arab Republic and Tunisia received practical training through their inclusion in WHO missions. The Regional Office continued to support training activities at the national level. In 15 countries, extensive training courses on the DOTS strategy were carried out with WHO support for concerned health personnel of all levels. In addition, 19 tuberculosis experts from eight countries were awarded WHO training fellowships.
- *Laboratory capacity development.* The Regional Office assisted three countries in establishing a laboratory network with a system of quality control of smear examination in 1998. In Egypt and the Islamic Republic of Iran, laboratory experts joined the in-depth review exercises and evaluated relevant laboratory activities and made practical recommendations. The laboratory expert who joined the Iranian review visited the Islamic Republic of Iran again at the end of 1998 to support the formulation of laboratory guidelines. Another laboratory consultant visited Kuwait and reviewed activities of the national reference laboratory. In addition, as an outcome of the visit of the laboratory consultant in 1997, Oman started national surveillance on anti-tuberculosis drug resistance in line with the WHO global project.
- *Tuberculosis surveillance.* The regional tuberculosis surveillance system was further improved. Information on case notifications and treatment outcome are collected regularly from all countries and are summarized in the 1998 WHO report on global tuberculosis control. Moreover, in

order to closely monitor implementation of the DOTS strategy in the Region, a new system called DOTS quarterly fax was started at the end of 1998.

- *Research on cost-effectiveness of DOTS.* The Regional Office, in collaboration with the Royal Tropical Institute in the Netherlands, initiated research on assessment of the cost-effectiveness of DOTS projects by collecting information from the national tuberculosis programmes in Egypt and Syrian Arab Republic. The objective of the research is to assess the effectiveness of DOTS projects in economic terms so that DOTS projects could obtain greater political and in particular financial support. This is the first study to be conducted on this subject in the Region. Results are expected before the end of 1999.
- *Dissemination of WHO documents and publications.* The Regional Office continued to disseminate essential information on tuberculosis control throughout the Region. A small information booklet on tuberculosis, What you should know about tuberculosis was published in Arabic and English. The WHO document, TB advocacy. A practical guide 1999 was translated into Arabic and distributed widely. The Regional Office also prepared documents for World Tuberculosis Day 1999 as well as posters and translation of the WHO report on the tuberculosis epidemic into Arabic.
- *Advocacy.* World Tuberculosis Day, 24 March 1998, was commemorated widely throughout the Region with the theme of DOTS ALL OVER. The 1998 campaign succeeded in raising public awareness and generating more support from decision-makers.
- *Coordination between donors.* The Regional Office continued to strengthen its coordination and partnership role with donors involved in tuberculosis control in the Region. For Iraq, the Regional Office coordinated with the Japan Anti-Tuberculosis Association and the International Union Against Tuberculosis and Lung Disease (IUATLD) to obtain the support necessary for the start of a DOTS demonstration project. The Regional Office also coordinated with the Government of the Netherlands in Egypt, the Japan International Cooperation Agency in the Republic of Yemen and the Norwegian Lung and Heart Association and IUATLD in Sudan. These collaborative efforts focused on DOTS implementation, human resources development and joint monitoring of progress.

Interregional and subregional tuberculosis control initiatives

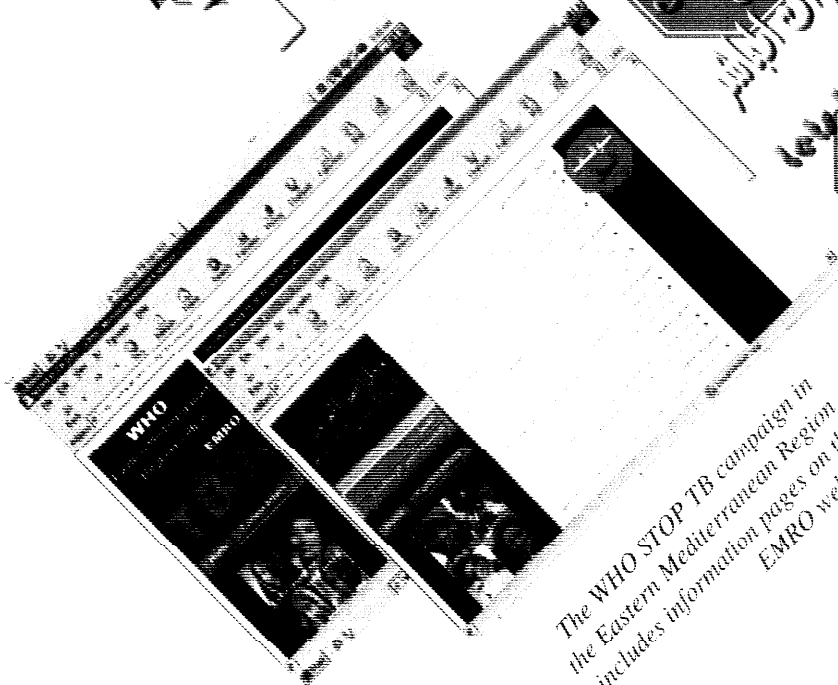
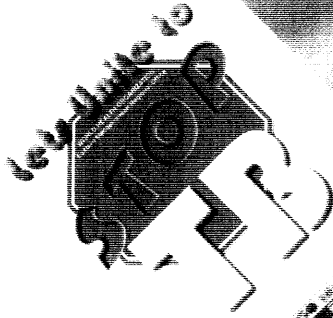
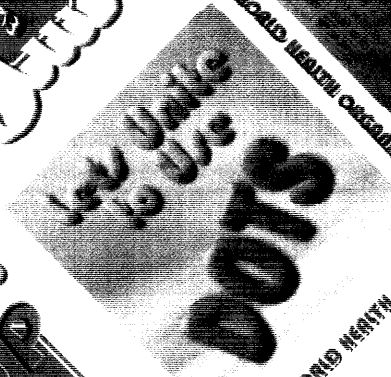
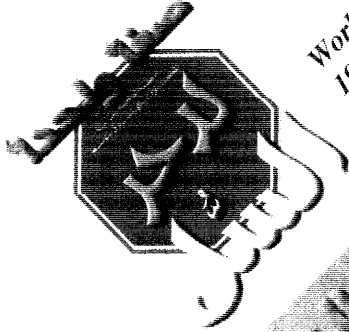
The Regional Office continued its collaborative effort with the Regional Office for Africa in support of the Horn of Africa Tuberculosis Control Initiative (HATCI). The third meeting of HATCI was held in Nairobi, Kenya, in April 1998 with the participation of national managers of tuberculosis programmes and WHO representatives from the countries of the Horn of Africa (Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan and Uganda), in addition to WHO staff from headquarters, and from the African and Eastern Mediterranean Regional Offices. The participants discussed cross-border tuberculosis control activities extensively and jointly prepared practical plans of action. The plans identified the health facilities in border areas by name and their expected roles in dealing with tuberculosis patients who cross the border during treatment. Implementation of the plans will be reviewed in the fourth meeting of HATCI, which will take place in mid-1999.

The Regional Office supported the launch of another subregional initiative for the countries of the Near East (Cyprus, Iraq, Jordan, Lebanon, Palestine and Syrian Arab Republic). These countries are all committed to implementation of the DOTS ALL OVER strategy. The Regional Office organized the first meeting of this Near East Tuberculosis Control Initiative (NETCI) in the Syrian Arab Republic in May 1998. The meeting was attended by national managers of tuberculosis programmes and WHO representatives from the countries in the Near East. The participants agreed upon the launch of the initiative and identified several areas of collaborative work such as joint human resources development, exchange of experiences and joint laboratory activities.

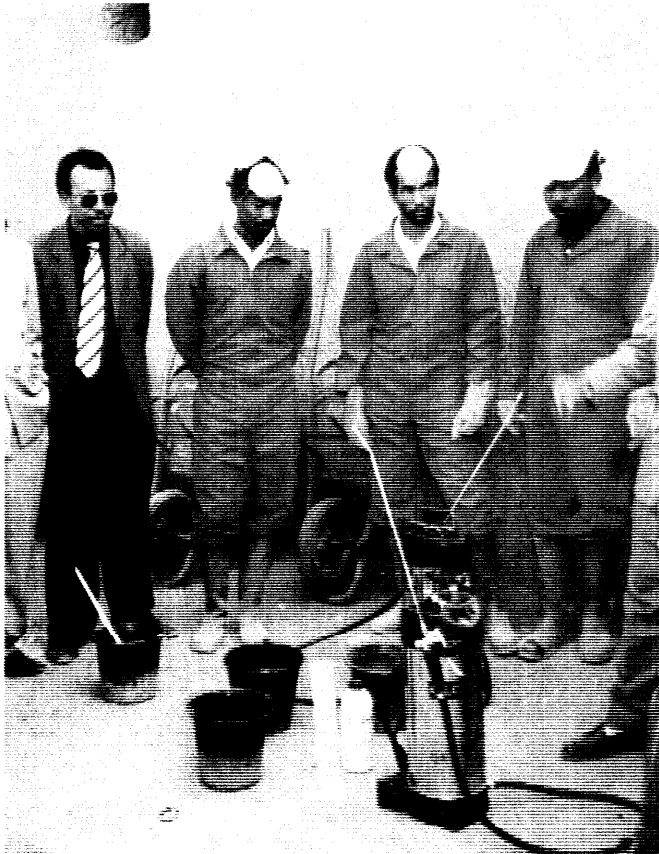
Control of emerging diseases and drug resistance

Remarkable progress was made in bringing the important issue of emerging diseases and drug resistance to the forefront in most countries of the Region. The various strategic approaches of the regional plan for the prevention and control of emerging diseases were revisited and reaffirmed at an intercountry meeting of the directors of communicable diseases. The meeting, the first follow-up following the 1995 regional conference on the subject, was held in Damascus, Syrian Arab Republic, in July 1998. This intercountry meeting was used as a forum to discuss achievements in implementing the plan and constraints faced so far.

World Tuberculosis Day
1999 promoted the use
of DOTS



The WHO STOP TB campaign in
the Eastern Mediterranean Region
includes information pages on the
EMRO web site



Members of the Global Alliance for Elimination of Trachoma, which met in Ouarzazate, Morocco, in October 1998, observed village teams carry out spraying against flies to reduce transmission of blinding trachoma

Progress made in developing and strengthening national disease surveillance is referred to under section 2.4. One of the main elements in effective surveillance is laboratory support. The role of the laboratory in supporting surveillance activities at different levels in the health system was particularly highlighted. Laboratory-based surveillance of specific diseases was pilot tested in Egypt. Success in this regard was coupled with further strengthening of the laboratory capacities in the main regional collaborating centres.

Efforts were made to facilitate linkage in the laboratory network at regional and global level. The causative agents of several outbreaks were determined through rapid transfer of samples to reference laboratories within and outside the Region. A project to support laboratory-based sentinel surveillance of specific communicable diseases, including viral haemorrhagic fever, at the regional level was discussed with NAMRU-3 in Cairo, Egypt and, it is hoped, will be implemented in 1999. The main problem remains the weakness of public health laboratories in several countries. Some of these laboratories are not yet able to identify even the most common pathogens.

Strengthening preparedness for epidemics and epidemic management capabilities continued in 1998. Development of country plans in 1997 was followed up by visits of WHO experts to the countries and a wrap-up intercountry meeting on surveillance and epidemic preparedness and response held in Muscat, Oman, in December 1998. Several national training workshops were held in 1998 to train health workers at different levels with assistance from the Regional Office and the national master trainer, trained in 1997. The draft regional training manual on epidemic management for district health officials was revised more than once after field testing and national expert review, and a final draft was presented at the December meeting in Oman for final endorsement. Once finalized, the manual will form part of the surveillance training kit.

The Regional Office took major steps in 1998 to strengthen its mechanism of regional rapid response to outbreaks of infectious diseases. It developed a cooperative agreement with NAMRU-3 and the CDC-supported Field Epidemiology Training Programme in Egypt to investigate outbreaks of public health importance in the Region and initiate a rapid response mechanism to manage such outbreaks. This agreement was signed late in 1998 and an executive committee was formed to administer the agreement. The terms of reference included developing proposals to ensure necessary resources;

developing a roster of available experts; developing protocols for investigation of outbreaks of specific diseases; and developing guidelines outlining the roles and responsibilities of organizations involved in outbreak investigations. The first meeting of the executive committee was held in December 1998, and it is expected that the operational aspect of the agreement will be initiated in 1999.

Exchange of information and communication between the countries of the Region and neighbouring countries regarding surveillance data and outbreak notification was strengthened in 1998. The Regional Office continued to issue circulars, press releases and information bulletins dealing with new developments in knowledge and skills related to epidemiology and control of emerging infectious diseases.

The intercountry workshop on Creutzfeldt-Jakob disease surveillance, held in Cairo, Egypt, in February 1998, recommended, for the first time, that national CJD surveillance should be initiated using the standard WHO case definitions. The workshop also recommended that countries should implement the recommendations proposed by WHO on measures to be taken to minimize risks to humans from exposure to tissues, products or devices that may potentially be contaminated with transmissible spongiform encephalopathy agents.

The outbreak of Rift Valley fever which occurred in southern Somalia and northern Kenya in late 1997 and early 1998 subsided leaving behind several issues to be addressed, particularly in relation to the problem of intersectoral collaboration in the prevention and control of the disease in humans and animals, and the question of export of livestock from affected countries. Rift Valley fever is likely to be one of the emerging diseases of importance to this part of the world. The Regional Office, in collaboration with the Regional Office for Africa and WHO headquarters, is planning to organize an interregional meeting in 1999 to discuss several aspects of the problem.

Limited outbreaks of Crimean-Congo haemorrhagic fever were reported in 1998 from Afghanistan and Pakistan. The Regional Office extended the assistance needed to investigate and manage these outbreaks.

Control of other communicable diseases of regional specificity

The Regional Office continued its' efforts this year to assist countries in developing their capabilities to deal with communicable diseases of national and regional priority. These efforts included human resources development,

enhancing laboratory capabilities for identification of priority pathogens and providing assistance in developing national plans for the prevention and control of these diseases. The following disease problems continued to need priority attention.

Meningococcal meningitis

Several activities were conducted in 1998 in the implementation of the regional plan for emergency preparedness and control of meningococcal meningitis. These included publication and distribution of the Arabic and English versions of the revised technical guidelines on the control of meningococcal meningitis to all countries in the Region and printing and wide distribution of the Arabic version of the three-volume training manual on detection and control of epidemic meningococcal disease. The guidelines on laboratory methods for the diagnosis of meningitis were also translated into Arabic and widely distributed in Arabic-speaking countries.

National training workshops using the standardized training modules were supported in Egypt, Islamic Republic of Iran, Morocco, Oman, Sudan, Syrian Arab Republic and Republic of Yemen. A training workshop on laboratory diagnostic techniques in bacterial meningitis was held in Cairo, Egypt, in collaboration with CDC, Atlanta, and was attended by participants from Egypt, Jordan, Lebanon and Syrian Arab Republic. Assessment of the laboratory situation and the capacity to identify bacterial pathogens of meningitis was conducted in Egypt, Jordan and Syrian Arab Republic. It is also planned to conduct such an assessment in Pakistan in 1999. A similar mission to Iraq was postponed twice in 1998.

Laboratory-based surveillance of bacterial meningitis was initiated in pilot projects in several countries and is expected to expand rapidly in 1999. Weekly reporting of meningitis was initiated in most countries of the Region and regular reporting to the Regional Office was established with several countries.

The Regional Office continued its role in disseminating information on the global situation of meningococcal meningitis to all countries. It also continued to participate actively in the work of the Interagency Coordinating Group on meningococcal meningitis. In collaboration with WHO headquarters, the Regional Office is in the process of supporting special studies on the cost-effectiveness of preventive vaccination which is practised by several countries in the Region.

The recent upsurge of epidemic meningitis in the African meningitis belt increased the interest of countries in this important problem. According to epidemiological models and previous experience, it was expected that Sudan, the only country of the Region lying in the meningitis belt, might face an unusual occurrence in 1999. In reality, reports in December 1998 indicated an increased number of cases in the state of Northern Darfur. A serious epidemic developed during the first 5 months of 1999 with over 30 000 cases and 2000 deaths. A WHO team, in collaboration with the national authorities, investigated the situation and initiated proper containment measures, including the provision of vaccine and autodestruct syringes. In addition, contingency plans were made for possible scenarios that might develop. The epidemic has started to fade away, and the situation is returning to normal.

The pilgrimage season passed without any abnormal incidents of meningitis. As usual the Saudi Arabian authorities issued their regulations for protection against meningococcal meningitis and these requirements were distributed to all concerned authorities in the world.

Epidemic diarrhoea (cholera in particular)

Cholera was reported, either by its frank name or by other names such as severe gastroenteritis or severe diarrhoea, from several countries in the Region. Some countries still decline to report cholera cases to WHO as "cholera". However, they were ready this year to report cases and deaths from "severe gastroenteritis", as well as to implement measures appropriate for the control of cholera *per se*. Afghanistan and Pakistan were hit by large outbreaks of "severe gastroenteritis". WHO offices in various regions of Afghanistan were fundamental in initiating and supporting containment measures. Supplies were sent to all areas under unfavourable conditions and when no other agency was working in the country. The number of reported cases of "severe gastroenteritis" was undoubtedly inflated but the case fatality rate after the first few weeks of the outbreak was within acceptable ranges. WHO also collaborated with Pakistan in the investigation of outbreaks of "severe gastroenteritis" in several provinces. It was obvious that weaknesses in the national surveillance system were behind the late detection of the nature of the first waves of the outbreak. Delayed institution of proper control measures led to the wide spread of the outbreak, however the authorities subsequently acted efficiently to reduce mortality and to

limit the spread and by late 1998 no more cases of "severe gastroenteritis" were reported.

The Islamic Republic of Iran reported the occurrence of cholera in its territories early in the summer of 1998. The national authorities dealt ably and efficiently with the situation and the case fatality rate was below 1%. The number of cases declined rapidly and the outbreak faded before the end of the year. A cholera outbreak in northern Iraq late in 1998 was properly contained, with assistance from WHO.

The annual cycle of cholera repeated itself this year in the Horn of Africa, although with less severity. The WHO initiative for cholera control in the Horn of Africa was launched; the executive committee of the initiative met in Addis Ababa in late September 1998 to discuss the operational plan for 1998-99. The plan included a phase of situation analysis regarding preparedness and capabilities in the countries of the Horn and development of implementable plans to improve both. Such an assessment was completed in Djibouti by a WHO mission. Sudan and Somalia undertook an internal assessment using the tool developed by the WHO coordinator of the initiative. Other steps were taken to strengthen coordinated surveillance and control activities in the border areas of the concerned countries.

A WHO expert visited the Syrian Arab Republic to assess the capacity to diagnose agents of dysentery and to conduct a laboratory training workshop to that effect. No outbreaks of bloody diarrhoea were reported to WHO from the countries of the Region.

Viral hepatitis

The Regional Office extended its support to several activities outlined in the regional plan for the prevention and control of viral hepatitis. WHO experts visited the Syrian Arab Republic and the Republic of Yemen to assess the current situation and assist in developing national plans for the prevention and control of viral hepatitis and in improving surveillance of this group of diseases. Support was extended to other countries in conducting national workshops and on acquiring diagnostic materials. Egypt continued its research activities to determine the epidemiological pattern of the various forms and is in the process of expanding its pilot project of hepatitis laboratory-based surveillance to cover more governorates.

The main outlines of the WHO guidelines on prevention and control of hepatitis C, which were developed with active participation from the Region,

were distributed to all concerned authorities. Adaptation of these guidelines for national use is expected to take place in 1999.

Influenza

Regional laboratories have contributed to the global influenza surveillance. Successful efforts in initiating sentinel laboratory-based surveillance of influenza were undertaken in Egypt and the Syrian Arab Republic. Pakistan is expected to join this process in 1999. As usual the Regional Office disseminated information released by WHO headquarters about the global status of influenza and the vaccine composition effective for the 1998-99 season.

Zoonoses

The main activities of the Regional Office in the field of prevention and control of zoonoses were directed towards the improvement of surveillance systems at national and subnational levels, training of staff, strengthening of diagnostic facilities and promotion of health education.

National training courses on major zoonoses were conducted for primary health care personnel in three provinces of the Islamic Republic of Iran. The national programme in the Syrian Arab Republic organized, with WHO collaboration, eight workshops on surveillance and control of rabies, brucellosis and salmonellosis at provincial level. Training activities were also supported in Iraq, Jordan, Lebanon, Morocco, Sudan and Republic of Yemen. Two fellows from the Syrian Arab Republic completed overseas training in surveillance and control of zoonoses.

In the field of brucellosis control, a regional WHO Mediterranean Zoonoses Control Programme workshop on human and animal brucellosis epidemiological surveillance was held in Damascus, Syrian Arab Republic, in May 1998. The participants reviewed the status of diagnosis and current procedures for reporting of brucellosis and identified measures for strengthening surveillance capabilities and intersectoral cooperation at district and provincial levels in order to assure early detection and implementation of the necessary prevention and control actions.

A WHO consultant was assigned to Jordan to assess the present situation of cystic echinococcosis and to assist the national authorities in the development of a national control plan. Formulation of a pilot project on echinococcosis control in one selected governorate in Jordan was

recommended in order to test the available tools for surveillance and control and to assess the cost-effectiveness of different control approaches. The implementation of the proposed project will need close cooperation between the veterinary and health sectors.

A WHO consultant visited Morocco to advise on surveillance, prevention and treatment of brucellosis. WHO also provided support for the organization of serology surveys on brucellosis among populations in several provinces of this country. The Regional Office continued to strengthen diagnostic facilities for brucellosis at governorate level in Egypt and Sudan.

A regional seminar on rabies prevention and control was organized by the Regional Office in Teheran, Islamic Republic of Iran, in July 1998. The participants reviewed the available methods for surveillance, prevention and control of rabies and adopted a regional strategy. The national programmes for rabies control in Afghanistan, Pakistan and Republic of Yemen were provided with human rabies vaccine.

Production of health education materials on zoonoses is essential to successful programmes as the role of the community in prevention and control is significant. Production of health education materials on zoonoses was supported in Iraq, Tunisia and Republic of Yemen.

Control of tropical diseases of regional specificity

The magnitude of the problem of tropical diseases still requires serious attention. The recent advances in the diagnosis, treatment and surveillance of tropical diseases have made it possible to reduce the burden of these diseases in some countries through sustainable implementation of control programmes. At the same time, the shortage of adequate financial and human resources at country level, political instability, sociocultural factors, intensive migration of populations, high population density and inadequate sanitation are still adversely affecting progress in the control of tropical diseases in some endemic areas of the Region. WHO continued to emphasize the importance of further integration of tropical disease control into national public health systems and the use of an integrated approach to disease control.

Schistosomiasis

The distribution of schistosomiasis has changed significantly in endemic countries of the Region during the past decade. These changes have been consistently linked to both political commitment and the implementation

of control strategies. Significant success was achieved in Egypt, Jordan, Morocco, Saudi Arabia and Syrian Arab Republic, while the problem of schistosomiasis continued to be serious and even worsened in some areas of Iraq, Somalia, Sudan and Republic of Yemen.

The Regional Office continued to provide technical assistance and support to the national programmes of schistosomiasis control in endemic countries of the Region. Particular attention was given to improvement of diagnostic capabilities and training of different categories of public health staff in surveillance and control of schistosomiasis. The national schistosomiasis control programme in Egypt and the Republic of Yemen has been supplied with modern diagnostic test kits for identification of urinary and intestinal forms of schistosomiasis. The surveillance activities for schistosomiasis in Upper Egypt were strengthened through WHO support to the Aswan Centre for Research, Training and Control in the form of diagnostic equipment. Drugs for treatment of schistosomiasis patients were provided to the national programmes in Sudan and the Republic of Yemen.

WHO collaborated in the organization of workshops and training courses on prevention and control of schistosomiasis in Iraq, Jordan, Saudi Arabia, Sudan, Syrian Arab Republic, Tunisia and Republic of Yemen, and national seminars on elimination of schistosomiasis were organized with WHO's assistance in Morocco and Saudi Arabia.

In an effort to prevent the formation of new foci of transmission of schistosomiasis, WHO supported the organization of active surveillance of schistosomiasis among populations living near water development schemes in Sudan and the Republic of Yemen. In these and other endemic countries, health education materials as well as audiovisual equipment have been provided for reinforcement of public awareness and support of health education activities.

The Regional Office supported the preparation of a manual on schistosomiasis and tropical disease control for primary health care personnel in the Republic of Yemen. The document will facilitate the integration of tropical disease surveillance and control activities within the existing public health infrastructure.

Leishmaniasis

The incidence and prevalence of visceral and cutaneous forms of leishmaniasis continued to be significant in some countries of the Region,

particularly in endemic areas with widespread migration of population, rapid urbanization and economic development. The man-made environmental changes that result in areas where there are agro-industrial projects facilitate the creation of favourable conditions for leishmaniasis transmission. The control of leishmaniasis, especially the zoonotic forms, requires close cooperation and coordination of activities between health and other sectors.

The Regional Office continued to cooperate with the national programmes for leishmaniasis control in studying the epidemiology of different forms of leishmaniasis, strengthening of surveillance, integration of control activities within public health systems, promotion of training and support for production of health education materials.

A WHO consultant was assigned to the Syrian Arab Republic to assist in identification of an animal reservoir of transmission of cutaneous leishmaniasis in new agro-industrial zones and to advise on appropriate control measures. The activities of the national programme in Iraq were reviewed by a WHO consultant and recommendations were made regarding strengthening of data collection and analysis, control options and promotion of research on leishmaniasis.

Training of different categories of public health personnel in the diagnosis, treatment and control of leishmaniasis continued during 1999. National workshops for physicians and nurses on prevention and control of leishmaniasis were conducted with WHO's support in Afghanistan, Iraq, Jordan, Oman, Sudan and Syrian Arab Republic, and national training courses on diagnosis of leishmaniasis were held for laboratory technicians in Afghanistan, Oman, Sudan and Syrian Arab Republic.

During 1998 the Regional Office supported the national programmes in Afghanistan and Sudan with provision of drugs for treatment of leishmaniasis, and supplied diagnostic materials to Oman for identification of leishmaniasis. Fellows from Palestine and the Syrian Arab Republic were trained in diagnosis, typing and management of leishmaniasis at the WHO Collaborating Centre for Research and Training on Leishmaniasis in Tunisia. WHO supported the organization of special surveys on leishmaniasis among populations at risk of infection in three eastern states in Sudan.

Trypanosomiasis

The Regional Office continued to support activities on surveillance and control of trypanosomiasis in Sudan through provision of diagnostic

materials, drugs and organization of training for laboratory personnel on diagnosis of trypanosomiasis. WHO health education materials on trypanosomiasis were translated into Arabic and provided to health care personnel in trypanosomiasis-endemic areas.

Control of sexually transmitted diseases (Including AIDS)

Epidemiological situation

□ *HIV/AIDS*

The AIDS epidemic is spreading slowly but surely in the Region, as evidenced by the increasing number of new cases of AIDS reported every year (Table 5.7). The number of cases reported to date for 1998 is 1045 compared to 1207 cases in 1997, 1010 cases in 1996 and 806 cases in 1995. The cumulative total of AIDS cases reported in the Region since the beginning of the epidemic has reached 7424 which constitutes less than half a per cent of the global total. However, taking into account underdiagnosis, underreporting and reporting delays, the actual number of AIDS cases in the Region is estimated to be about 20 000. The largest number of AIDS cases has been reported from Sudan, followed by Djibouti, Morocco and Tunisia. However, the AIDS morbidity rate is highest in Djibouti.

Heterosexual transmission remained the predominant mode of HIV transmission, accounting for 86.7% of the total AIDS cases reported in 1998. Other modes of transmission were homosexual (2.6%), injecting drug use (3.6%), blood and blood products (4.1%) and perinatal (3.0%). Of particular note was the large number of infections due to parenteral transmission among injecting drug users in the Islamic Republic of Iran and among children in the Libyan Arab Jamahiriya.

HIV testing among various population groups detected 3179 HIV-infected persons in 1998, compared to 3725 in 1997, 2582 in 1996 and 2819 in 1995. HIV surveillance among selected population subgroups in 1998 revealed that the prevalence among patients with sexually transmitted diseases (STD) was 2.9% in the Republic of Yemen; the prevalence among injecting drug users was 0.8% in Bahrain and 0.5% in the Islamic Republic of Iran; the prevalence among prisoners was 26.5% in the Republic of Yemen; 2.5% in Bahrain, 1.4% in Pakistan, 0.6% in the Islamic Republic of Iran and

0.3% in Oman; and the prevalence among tuberculosis patients was 17.2% in Djibouti, 1.9% in Oman, 0.7% in Egypt and 0.2% in Pakistan. Screening of blood donations in 1998 showed prevalence rates as high as 2.3% in Djibouti, 1.5% in Somalia and 1.4% in Sudan.

TABLE 5.7 Reported AIDS cases in the Eastern Mediterranean Region

Country	Up to 1991	1992	1993	1994	1995	1996	1997	1998	Total 1990	
Afghanistan ^a	0	0	...	...	...	...	...	...	0	
Bahrain	4	3	4	4	5	8	5	15	11	59
Cyprus	25	7	2	7	11	5	18	10	6	91
Djibouti	58	107	144	144	196	231	358	434	111	1783
Egypt	27	12	23	29	22	16	14	25	33	201
Iran, Islamic Republic of	19	25	16	32	19	16	27	40	21	215
Iraq	0	7	6	21	37	16	15	2	4	108
Jordan	12	8	7	8	6	2	4	12	11	70
Kuwait	3	3	2	2	5	4	5	2	19	45
Lebanon	27	13	7	22	12	18	5	8	35	147
Libyan Arab Jamahiriya	5	2	3	2	3	2	3	7	5	32
Morocco	70	28	30	44	77	57	66	92	93	557
Oman	91	25	32	37	51	28	24	36	33	357
Pakistan	30	16	18	16	9	20	19	19	23	170
Palestine	5	1	6	1	3	3	1	9	3	32
Qatar	52	10	3	7	6	4	2	4	1	89
Saudi Arabia	34	10	6	12	38	37	100	112	39	388
Somalia ^b	13	...	...	...	...	...	...	...	...	13
Sudan	320	188	184	191	201	257	221	270	511	2343
Syrian Arab Republic	13	7	3	3	4	6	9	8	8	61
Tunisia	98	36	38	52	50	65	54	62	44	499
United Arab Emirates ^b	8	...	...	...	...	...	...	...	...	8
Yemen, Republic of	1	0	3	4	3	11	60	40	34	156
Total	915	508	537	638	758	806	1010	1207	1045	7424

... Information not received

Cases reported up to:

^a 31 December 1991

^b 31 December 1990

Integrated control of disease

▣ *Other sexually transmitted diseases*

A total of nearly 600 000 cases of STD were reported in 1998 from the countries of the Region. This is a very small proportion of the 10 million cases estimated to have occurred in the Region in that year. The diagnosis of 70% of the identified cases was based on syndromic diagnosis and the rest on etiological diagnosis. Among the syndromically diagnosed cases, vaginal discharge was the commonest syndrome (68.0%), followed by urethral discharge (12.0%), pelvic inflammatory disease (7.2%) and genital ulcer (6.0%). Among etiological diagnosed cases, candidiasis was the commonest (31.4%), followed by trichomoniasis (23.1%), chlamydial infection (17.6%) and others. Serological screening of blood donations for syphilis showed a prevalence of 0.3% in Bahrain, 0.8% in Morocco, 0.3% in Oman, 0.5% in Qatar, 0.5% in Tunisia and 0.3% in the Republic of Yemen while similar screening of pregnant women showed a prevalence of 0.4% in Bahram and 0.8% in Oman. The Regional Office encouraged countries to conduct studies to determine the prevalence of STD, particularly among women attending antenatal and gynaecology clinics.

Support to national AIDS/STD programmes

The Regional Office continued to provide technical support to countries in the implementation of the national AIDS/STD programmes. This included expertise from the Regional Office and consultants, training and fellowships. The Regional Office responded quickly to urgent requests for technical assistance from the Libyan Arab Jamahiriya, sending teams on two separate occasions. Funds were provided for supplies and equipment, national training activities, surveillance, STD prevalence studies, educational activities and production of educational materials. The total financial support under the regular budget to the countries in 1998-99 exceeded US\$ 590 000. An additional US\$ 400 000 were also allocated from the headquarters' regular budget for priority activities in the countries. Furthermore, the Regional Office signed an umbrella letter of agreement with UNAIDS for execution of projects in the countries of the Region supported by strategic planning development funds of UNAIDS. Under this arrangement, letters of agreement have, so far, been signed for Jordan, Lebanon, Morocco and Syrian Arab Republic.

Monitoring and evaluation

The Regional Office continued to monitor national AIDS/STD programmes through quarterly surveillance reports, progress reports on programme implementation and staff visits. The Regional Office made continuous efforts to improve the reporting system and as a result received surveillance reports for 1998 from most countries.

Intercountry meetings

The Regional Office organized an intercountry workshop on STD prevalence study which helped the participating countries to either prepare the proposal for the study or refine the proposal they had prepared earlier. Another intercountry meeting reviewed the progress in prevention of perinatal transmission of HIV and discussed the feasibility of implementing the interventions in the countries of the Region. The recommendations made by this meeting were discussed further for local adaptation at the national level meetings held with financial support from the Regional Office.

Publications

On the occasion of World AIDS Day, the Regional Office prepared and distributed a package that included the Regional Director's message, facts sheets about HIV/AIDS in the Region and in the world, briefing materials on the theme of World AIDS Day and a television interview with the Regional Director. The Regional Office continued to publish the quarterly newsletter *EMR AIDSnews* which contains news, reports and articles on important aspects of HIV, AIDS and STD. The Regional Office also reprinted various technical guidelines and documents, in Arabic and English, which were much in demand in the countries.

UNAIDS

The Regional Office continued to collaborate with UNAIDS in implementation of intercountry as well as country level activities. At the intercountry level, UNAIDS provided funds for intercountry meetings and publications. At the country level, the Regional Office executed the UNAIDS-funded projects and the WHO Representatives played an important role in the United Nations Theme Groups on HIV/AIDS. The location of an Intercountry Programme Adviser in the Regional Office resulted in further coordination and collaboration with UNAIDS at the regional level.

Malaria control

The Regional Office continued to support countries in their efforts to implement the Regional Plan of Work for Malaria Control based on the Global Malaria Control Strategy that was approved by the Fortieth Session of the Regional Committee for the Eastern Mediterranean in 1993.

Epidemiological situation in general

Countries of the Eastern Mediterranean Region are situated in three eco-epidemiological zones with respect to malaria: afrotropical, oriental and palaeartic. Consequently, there are striking dissimilarities among the countries of the Region in relation to the malaria problem, although all of them are malaria-receptive.

About 45% of the population of the Eastern Mediterranean Region lives at risk of both *Plasmodium falciparum* and *P. vivax* malaria, and an additional 15% at risk of *P. vivax* alone. The estimated annual number of malaria cases is about 14 million, out of which 95% are estimated to occur in four countries: Afghanistan, Somalia, Sudan and Republic of Yemen. Malariogenic conditions are most favourable in the areas of afrotropical malaria that encompass sub-Saharan Africa (including Djibouti, Somalia and Sudan), Republic of Yemen and the adjoining south-western part of Saudi Arabia. Ecological determinants of malaria are in many ways interrelated with sociopolitical and economical factors. Malaria is part of a vicious circle: it generates poverty and poverty prevents effective control of malaria.

By malaria control status, the countries of the Region may be classified as follows.

1. Countries where malaria transmission does not occur or sporadically occurs after importation: Bahrain, Cyprus, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Palestine, Qatar, Tunisia. In these countries the challenge is to prevent reintroduction of malaria.
2. Countries with strong health systems and effective malaria control programmes, where malaria is quite well contained: a) eradication of malaria is feasible and sustainable if achieved: Egypt, Morocco, Oman, United Arab Emirates; b) malaria morbidity may be brought down: Islamic Republic of Iran, Pakistan, Saudi Arabia, Syrian Arab Republic. The challenge in these countries is to sustain effective control that may lead to eradication in the foreseeable future in some of them.

3. Countries with a very serious malaria problem: a) countries with afrotropical malaria: Djibouti, Somalia, Sudan, Republic of Yemen, some of them with damaged health systems (Somalia and south Sudan)—the challenge in these countries is to establish effective health systems and control malaria; b) countries outside the area of afrotropical malaria, but with damaged health systems: Afghanistan, Iraq—the challenge in these countries is to control malaria and rehabilitate the health systems.

Technical problems, such as the presence of chloroquine-resistant *P. falciparum* and resistance of vectors to insecticides, continue to beset the Region. Although there was no spectacular rise in these problems in most of the countries in 1998, there are indications that chloroquine resistance is increasing in Somalia faster than elsewhere. In most situations, however, chloroquine can still be used as a first-line drug in *P. falciparum* and is 100% effective in *P. vivax* malaria.

The malaria situation seems also to be affected by climatic change. It particularly affects the arid and semi-arid epidemic-prone areas, and recent epidemics in Sudan, the Horn of Africa and the Republic of Yemen may be attributed to increased and unseasonable rainfall, at least in some cases. Increase in temperatures also led to malaria outbreaks at high altitudes that are normally malaria-free, which is probably the cause of epidemics on the highland fringe at an altitude of about 2000 m in the Republic of Yemen.

□ *Epidemiological situation in countries of groups 1 and 2*

Epidemiological information on countries in groups 1 and 2 is given in Table 5.8. In this table, only parasitologically confirmed cases are given, since most of these countries do not accept a clinical diagnosis of malaria as valid. Most countries classify cases epidemiologically. Exceptions are countries with relatively high incidence in which classification of cases is mostly unnecessary, since the overwhelming majority of cases are indigenous. In the table, indigenous, introduced and relapsing cases are taken together as a group of autochthonous (in other words, locally transmitted) cases.

During 1998, the countries of the first group, by and large, maintained their transmission-free status. However, malaria continues to be imported into these countries, sometimes on a massive scale, which may lead to a temporary restoration of transmission.

TABLE 5.8 Number of parasitologically confirmed cases in countries with no or sporadic transmission (group 1) and countries with well established malaria control programmes (group 2)

Country	1996 cases		1997 cases		1998 cases		Species involved in local transmission
	Total	Auto chthonous	Total	Auto chthonous	Total	Auto chthonous	
<i>Group 1</i>							
Bahrain	172	0	162	0	135	0	nil
Cyprus	4	0	4	0	2	0	nil
Jordan	200	4	135	2	122	0	<i>P. vivax</i>
Kuwait	811	0	746	0	746	0	nil
Lebanon	35	3	74	3	34	4	<i>P. vivax</i>
Libyan Arab Jamahiriya	NA	NA	14	NA ^a	12	0	?
Palestine	NA	NA	4	0	5	0	nil
Qatar	420	0	368	0	265	0	nil
Tunisia	34	0	27	0	42	0	nil
<i>Group 2</i>							
Egypt ^a	25	23	11	4	13	0	<i>P. falciparum</i> > <i>P. vivax</i>
Iran, Islamic Republic of ^b	56 362	Most	38 684	Most	32 951	Most	<i>P. falciparum</i> ≈ <i>P. vivax</i>
Morocco ^c	102	53	125	76	129	68	<i>P. vivax</i>
Oman	1 265	603	1 026	129	1 093	114	<i>P. falciparum</i> > <i>P. vivax</i>
Pakistan	98 035	Most	77 480	Most	71 603	Most	<i>P. falciparum</i> ≈ <i>P. vivax</i>
Saudi Arabia ^d	21 007 15 221		20 631 17 692		20 631	Most	<i>P. falciparum</i> > <i>P. vivax</i>
Syrian Arab Republic ^e	345	280	130	83	67	Most	<i>P. vivax</i>
United Arab Emirates ^f	139	2	99	1	60	0	<i>P. falciparum</i> > <i>P. vivax</i>

> Predominance of one species

≈ Approximate parity of two species

NA: Not available

^a Transmission only within Fayoum governorate

^b Endemic areas mostly in the south-eastern corner of the country

^c Transmission only in two limited areas

^d Endemic areas only in the south-west of the country

^e Transmission mostly in the north-eastern corner of the country

^f Very limited transmission on the border with Oman

[?] Not classified

In many of the countries of the second group, malaria transmission continues only in limited areas (Egypt, Morocco, United Arab Emirates), and in some *P. falciparum* has been eliminated (Morocco, Syrian Arab Republic). During the past few years, intensive malaria control has led to a continuous decrease of transmission in Egypt, Morocco, Oman and United Arab Emirates. Malaria eradication seems feasible, in the foreseeable future, in all the latter countries. Oman has conducted a programme aiming at malaria eradication since 1990; in Morocco, a plan for intensification of control aiming at clearing up the last residual foci within 4 years has been recently developed. It is hoped that Egypt will eliminate the last residual foci of malaria and reformulate the aims of its programme accordingly. As for the United Arab Emirates, the receptivity of the country is low, except in a few areas bordering Oman. Success with malaria eradication in the United Arab Emirates largely depends on the situation in Oman, so cooperation between these two countries is essential.

□ *Epidemiological situation in countries of group 3*

The situation remained very serious in the countries belonging to the third group. The numbers of malaria cases reported from these countries grossly underestimate the true dimensions of the problem. Hence, it was felt more appropriate to make estimates as shown in Table 5.9.

TABLE 5.9 Number of recorded and estimated cases of malaria in countries with severe malaria problems (group 3)

Country	Last year reported	Recorded number of cases	Estimated number of cases	Species involved in local transmission
Afghanistan	1998	288 014	2 900 000	<i>P. vivax</i> > <i>P. falciparum</i>
Djibouti	1997	4 314	80 000	<i>P. falciparum</i> > <i>P. vivax</i>
Iraq	1997	9 594	38 000	<i>P. vivax</i>
Somalia	1993	3 049	2 000 000	<i>P. falciparum</i> > <i>P. vivax</i>
Sudan	1998	5 062 000	7 500 000	<i>P. falciparum</i> > <i>P. vivax</i>
Yemen, Republic of	1997	1 394 495	2 000 000	<i>P. falciparum</i> > <i>P. vivax</i>
Total		6 761 466	14 518 000	

> Predominance of one species

Countries with afrotropical malaria benefited from additional WHO inputs in the form of the Director-General's initiative for intensified support for malaria control in Africa. The regional share of US\$ 2 million, received in 1997 and 1998, went to Djibouti, Somalia and Sudan. From 1998, the Republic of Yemen was also included in intercountry activities under this scheme, as a country that belongs to the afrotropical malaria zone and extrabudgetary funds amounting to US\$ 200 000 were made available.

Activities under this scheme addressed the most important issues for the countries with afrotropical malaria: a) prevention, forecast, early detection and control of malaria epidemics; b) management of severe and complicated malaria; and c) strengthening of surveillance. The special allocations have already allowed malaria control programmes to be strengthened in Djibouti, Somalia and Sudan, mostly in terms of capacity-building and rehabilitation of the national malaria control programmes.

The situation in respect of supply of drugs improved markedly in the past few years; there is no scarcity of drugs at the central level, however, distribution to the periphery is sometimes faulty. It is believed that improvement in epidemic preparedness helped to avert epidemics in central Sudan in October 1998 following widespread floods and a study is under way to confirm this.

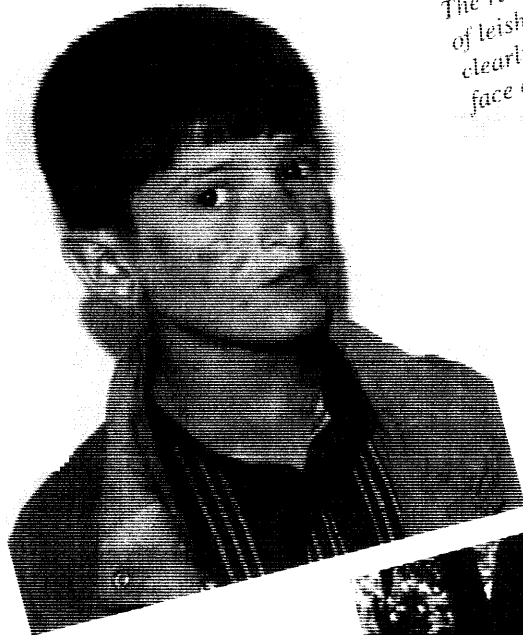
Intercountry activities under this scheme helped to develop a coordinated approach to management of severe malaria: prevention, forecast, early detection and control of malaria epidemics, and evaluation of the impact of malaria control.

In Djibouti, although an epidemic expected after floods at the end of 1997 was averted around the capital following preventive measures, a serious epidemic occurred in rural areas in 1998.

In Somalia, organized malaria control was possible only in some areas in the north-west of the country. In the south, malaria control was carried out in some areas through nongovernmental organizations that are being supported by WHO. Towards the end of 1997, south Somalia was hit by heavy floods that affected the Juba and Shebelle basins and led to a severe epidemic of malaria in early 1998.

In Sudan, rehabilitation of the national malaria control programme at the federal and state levels made malaria control more effective, at least in some states. There were no major epidemics in 1998 in central Sudan. However, in the conflict-torn areas in the south, the spread of malaria continues unabated.

The ravaging effects
of leishmaniasis are
clearly visible on the
face of this child

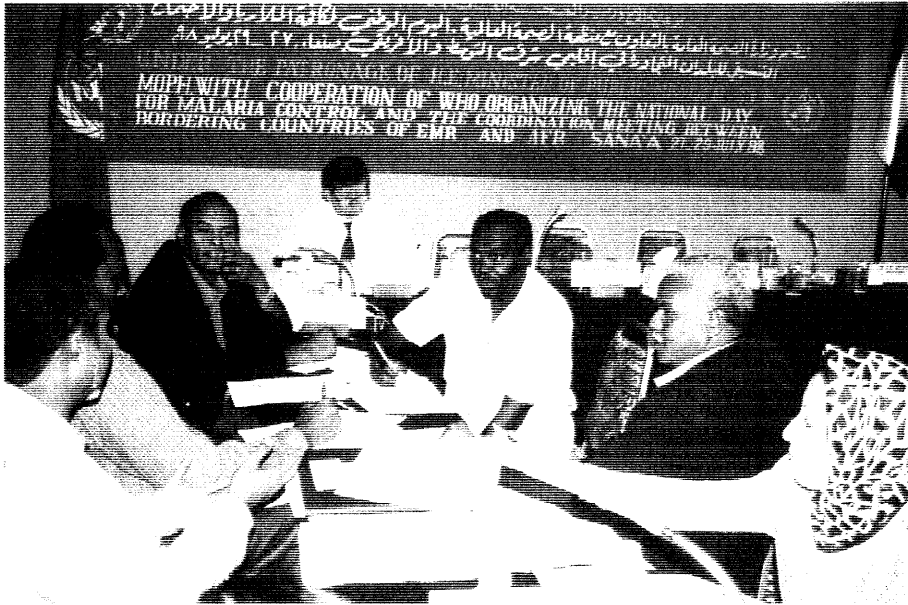


تجربة لمكافحة
داء الليشمانيات الجلدي
باستخدام الناموسيات
المشربة بالبيريثرويد
في بعض القرى
القريية من
حلب، سوريا

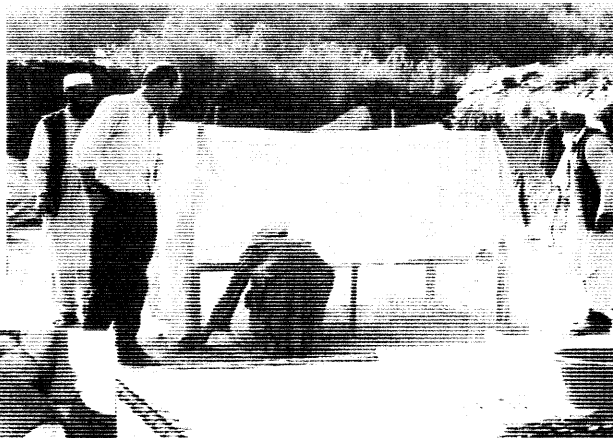


Recent publications on malaria and
leishmaniasis

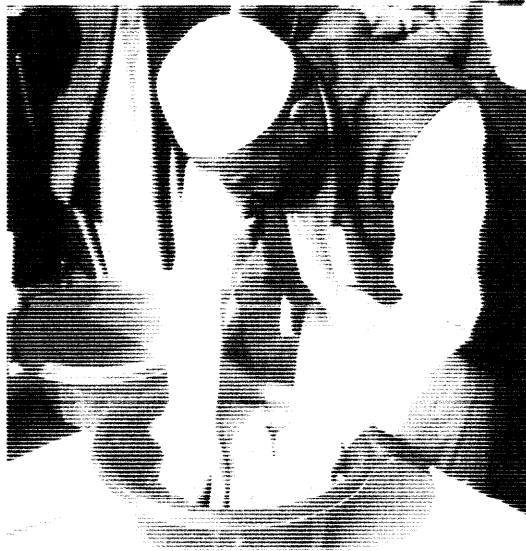
Roll Back Malaria



Participants (above) from Djibouti, Eritrea, Somalia and Sudan discuss coordination of malaria prevention and control activities at a coordination meeting for border countries of the Eastern Mediterranean and African Regions



Insecticide-impregnated bednets offer good protection against malaria and other vector-borne diseases. The methodology of treating bednets with insecticide and setting them up was demonstrated during a regional consultation held in Pakistan, November 1998.



In the Republic of Yemen, steps to revitalize the national malaria control programme were taken in the wake of the epidemic of 1996. There is a strong political commitment to considering malaria as the priority health problem, and considerable funds have already been allocated by the Government. However, malaria control does not yet cover all the malarious areas of the country, and additional funds could not be used purposefully to build up a system for epidemic preparedness. The country was unprepared for a serious epidemic in 1998 that exacted a toll of at least 1000 lives.

In the countries of the third group that are outside the afrotropical zone, malaria does not pose insurmountable technical problems but the seriousness of the situation is due to the disruption of health services. In Afghanistan, health services were unable to carry out organized malaria control activities, except in limited areas and mostly with the help of nongovernmental organizations. The rise of *P. falciparum* incidence in some areas is alarming. In Iraq, although extensive indoor spraying curtailed the major epidemic of *P. vivax* malaria of 1992-95, the operation could not be continued properly owing to international sanctions and deterioration of the health system.

Role of WHO

The objectives of the regional programme are to prevent and control malaria, particularly in the areas where it represents an important health problem, and to maintain the malaria-free status in countries or areas where it has been already achieved.

In its support to the national malaria control programmes, the Regional Office continued to concentrate on strengthening the technical component and managerial capabilities of the programmes, through provision of services of technical staff and consultants, technical guidance and training.

The most important technical issues are the development of mechanisms for predicting, early detection and control of malaria epidemics, development of a system of continuous monitoring of the therapeutic efficacy of drugs, and reorientation of malaria surveillance and information systems towards monitoring the incidence of severe cases and mortality due to malaria. Most countries require strengthening of the central core of the malaria control programme and improvement in the representation of malaria in primary health care activities. There is a continuous shortage of mid-level and senior entomological staff which leads to irrational and wasteful use of insecticides in a number of countries.

During 1998 visits of consultants were arranged to Afghanistan, Djibouti, Islamic Republic of Iran, Somalia, Sudan and Republic of Yemen. A short-term professional has been supported in Afghanistan and short-term national advisers in Jordan, Somalia, Sudan and Republic of Yemen.

WHO continues to promote cooperation between neighbouring countries in malaria control. A coordination meeting was arranged by the Regional Office in consultation with AFRO in which Djibouti, Eritrea, Somalia, Sudan and Republic of Yemen participated. Another example of bilateral cooperation were the joint activities between Egypt and Sudan, aiming at prevention of penetration of the afrotropical vector *Anopheles arabiensis* from Sudan. Coordination of efforts in malaria control within WHO, particularly the Regional Office for Africa and headquarters, and with other United Nations agencies, particularly the UNICEF, was given priority.

Training continued to be supported, including fellowships and training courses at country and intercountry levels. Two regional training centres are now active. The Blue Nile Research and Training Institute in Wad Medani is expected to conduct its third nine-month masters degree course in malaria control in 1999 after being renovated with the support of WHO. In 1998, a three-week course on malaria entomology was also conducted at that centre. The Regional Training Centre in the Islamic Republic of Iran based on the field station of the Teheran School of Public Health in Bandar Abbas conducted its second training course in August–November 1998, and a similar course is expected to be conducted in 1999. In 1999, support to centres in Sennar (Sudan) and Gizan (Saudi Arabia) is contemplated.

To respond to the need for applied field research in major tropical diseases, an EMRO/CTD/TDR small grants scheme has functioned since 1992. Malaria was included in the scheme in 1995, and a total of 22 projects have received financial support from the scheme. The next round of applications launched in 1999 also features malaria as a theme.

Roll Back Malaria initiative

The Roll Back Malaria (RBM) initiative was promulgated by the WHO Director-General in May 1998. Its innovation, compared with previous efforts to fight malaria, is that RBM will work not only through new tools for controlling malaria but also by strengthening the health services to affected populations.

RBM will implement its activities through partnerships with other international organizations (UNDP, World Bank and UNICEF), governments in endemic and nonendemic countries, academic institutions, the private sector and nongovernmental organizations.

The overall aim of RBM in the Eastern Mediterranean Region is to ensure that by 2030, malaria is neither a major contributor to morbidity and mortality in any country nor of significant socioeconomic consequence.

A plan for a preparatory phase of RBM in the Eastern Mediterranean Region was developed in consultation with WHO headquarters and the secretariat of the African Malaria Initiative (AIM) in November-December 1998, and circulated to the countries for comments. In January 1999 the final draft was forwarded to headquarters to seek funding.

The purpose of the plan is to engage countries of the Region, along with their national and international partners, in a coordinated series of preparatory activities leading up to the launch, in 2000, of a major regional initiative to Roll Back Malaria in all Eastern Mediterranean countries, as part of the wider global RBM movement.

In 1999 the following activities will be programmed using the Roll Back Malaria funds:

- a consultation process to develop and agree upon the RBM regional plan and budget for 1999;
- RBM-AIM country needs assessments in countries with afrotropical malaria (group 3a): Djibouti, Somalia (Hargeisa), Sudan, Republic of Yemen;
- special assessments for countries under complex emergency with damaged health systems (group 3b): Afghanistan, Iraq, Somalia (Mogadishu), south Sudan;
- sustaining good programmes in countries with effective systems and good malaria control (group 2) and preventing reintroduction in countries without transmission (group 1); this will include intercountry malaria coordination meetings, including those belonging to different WHO Regions;
- promoting malaria eradication in countries where interruption of malaria transmission is feasible and potentially sustainable (Egypt, Morocco, Oman and United Arab Emirates);
- establishing resource networks to support development, implementation and sustaining of country programmes;

- human resource development for regional capacity-building for malaria control: this will include interim support to regional training centres for malaria control in Bandar Abbas (Islamic Republic of Iran), Wad Medani and Sennar (Sudan) and Gizan (Saudi Arabia);
- strengthening Regional Office staff capacity to implement the RBM 1999 action plan and regional RBM future plans (recruitment of new staff and provision of equipment);
- mobilization of resources (financial and human) from the Region and further afield for both the 1999 planning work and the future country programmes;
- strengthening of applied research.

5.3 Control of noncommunicable diseases

Cancer control

The growing cancer burden, globally and in developing countries, calls for greater investment in health resources specific to cancer control and prevention strategies. The main risk factors involved are diet, tobacco, infection and hormones, all of which lend themselves to preventive action. Available evidence shows that cancer is attaining considerable proportions in many countries of the Region and is now reported as one of the leading causes of death. Countries and the Regional Office continued their cancer control efforts in response to Regional Committee resolution EM/RC43/R.12. Collaborative efforts were directed towards development of comprehensive national programmes for cancer control. Support was provided also for various activities such as cancer prevention, identification of main risk factors, early detection, and improvement of palliative care.

Special emphasis was placed on initiating awareness of the significance of the problem by strengthening national capability to estimate the problem and developing national cancer information systems (cancer registries). Improvement of the national cancer registry was supported in Bahrain, Egypt, Islamic Republic of Iran, Iraq, Oman, Palestine, Saudi Arabia and Syrian Arab Republic through workshops and national training courses. The Regional Office also supported activities concerned with early detection of cancer and improvement of diagnostic techniques in Egypt, Libyan Arab Jamahiriya and Saudi Arabia.

In its efforts to strengthen national capabilities in cancer control, the Regional Office supported Egypt, Islamic Republic of Iran and Iraq in publishing national guidelines for early prevention of cancer and ensured wide distribution of Regional Office and other publications related to cancer control and prevention to countries and relevant organizations in the Region.

With regard to human resources development, training courses, workshops, seminars and fellowships for health professionals have been organized in Bahrain, Iraq, Libyan Arab Jamahiriya, Pakistan, Sudan and Tunisia with WHO support. Special emphasis was devoted to human resources in therapeutic and palliative care and cancer research.

Cardiovascular diseases control

In most countries of the Region, cardiovascular diseases, including coronary heart disease, hypertension, stroke and rheumatic heart diseases, continue to be of increasing public health importance. This is mainly because of progressive urbanization and socioeconomic transformation, changes in nutritional patterns, obesity, lifestyle and less physical activity. All these factors increase the risk of morbidity and premature death, particularly from cardiovascular diseases.

Since treatment of established cardiovascular diseases is expensive and often ineffective, prevention and control is the best way of avoiding the burden of those diseases and any unnecessary health care expenditure. In line with this, WHO collaborative efforts with national programmes emphasized the importance of continued advocacy for healthy lifestyles and for integrating prevention into primary health care.

Technical and financial support was provided to Bahrain, Egypt, Iraq, Morocco, Oman, Pakistan and Syrian Arab Republic to strengthen prevention programmes and conducting epidemiological surveys. National training workshops and fellowships was funded in Bahrain, Islamic Republic of Iran, Iraq, Jordan, Kuwait and Oman to support the main strategy on prevention and control of cardiovascular diseases, rheumatic fever and hypertension.

The regional publication on the prevention and control of cardiovascular diseases continued to be widely distributed to countries and relevant organizations. Furthermore technical and financial support was provided to produce and print special guidelines for management of cardiovascular diseases and educational pamphlets in Islamic Republic of Iran, Iraq, Jordan, Pakistan and Saudi Arabia.

Diabetes control

Diabetes mellitus is a widespread disease constituting a heavy burden on the national health systems in the Region. It is on the increase and its impact on health systems will increase in the future. Because of the importance of prevention, the Regional Office continued national programmes for diabetes prevention and control along with other noncommunicable diseases.

Technical and financial support was provided for the implementation of diabetes surveillance programmes and proper data collection in Bahrain, Pakistan, Qatar, Sudan, Tunisia and United Arab Emirates. National training courses and workshops were organized in Bahrain, Islamic Republic of Iran, Iraq, Jordan, Syrian Arab Republic and Republic of Yemen to strengthen national capabilities in prevention, control and management of the disease complications. Special funds were allocated for publication of national guidelines and other educational materials in Islamic Republic of Iran, Morocco, Oman, Pakistan and Republic of Yemen.

Intercountry collaboration was emphasized and promoted throughout regional conferences and workshops (Lebanon and Morocco) to allow for sharing views and expertise within the Region. The Regional Office continued to maintain its strong link with WHO collaborating centres on diabetes to support their activities at the national level.

Control of genetic and other noncommunicable diseases

The magnitude and health burden of genetic disorders is rapidly increasing in the Eastern Mediterranean Region which is characterized by special cultural and demographic characteristics that require the development of appropriate genetics services. Haemoglobin disorders and glucose-6-phosphate dehydrogenase deficiency are common in most countries of the Region and well organized services for these disorders are a priority.

The Regional Office provided a wide range of health programmes to assist countries in prevention and control of genetic and congenital disorders and to increase awareness among health professionals and policy-makers regarding the size and magnitude of the problem in the Region. WHO staff and consultants provided technical support to Bahrain, Islamic Republic of Iran, Iraq and Saudi Arabia in the control of genetic and congenital disorders. Special emphasis was placed on the collection of epidemiological information on these disorders and on provision of resources to support these

programmes. Training of health professionals and upgrading of the available resources in aspects of control of congenital diseases were supported in Bahrain, Islamic Republic of Iran, Iraq and Jordan.

Community control of genetic and congenital disorders continued to be widely distributed to countries and relevant organizations. Funds were also provided for publication of various educational materials in the Islamic Republic of Iran to train primary health care workers and to educate the population in relevant aspects of medical genetics.

Control of blindness

More and more countries are undertaking activities to address the problem of blindness. In Egypt, the Research Institute for Ophthalmology proposed a project to control blindness in two phases. Phase 1 involves the assessment of the magnitude of the problem and the causes of blindness, and phase 2 would see the establishment of a national programme to control blindness in Egypt. Jordan and the Republic of Yemen are finalizing the surveys started in 1997 and will conduct national seminars to develop national plans of action.

Oman finalized its survey and obtained support from WHO headquarters for the development of an effective programme to eliminate trachoma using the SAFE approach (surgery for intumed eyelids, antibiotics use, facial cleanliness and environmental improvement). In this endeavour Oman follows in the footsteps of Morocco, which recently evaluated its very successful national trachoma control programme. This programme, the first comprehensive national programme addressing all aspects of the SAFE strategy in an innovative fashion, hosted the third meeting of the Alliance for the Global Elimination of Trachoma, in Ouarzazate, Morocco, in October 1998. Participants at the Alliance meeting had the opportunity of observing the activities of the programme in the field, and were struck by the strong community support for the programme and the achievements of the local communities in addressing the environmental aspect of the SAFE strategy in a truly participatory manner.

In the spirit of technical cooperation among developing countries, the Regional Office will facilitate a visit to Oman by a team from the Moroccan blindness control programme, to share their experiences with the Omani group and to benefit from the initiative of Oman in developing family health carnets, for possible introduction in Morocco.

Djibouti, Egypt, Morocco, Pakistan and Republic of Yemen are pursuing activities to reduce the backlog in cataract surgery and train staff at different levels in up to date techniques of cataract surgery. In Bahrain, Jordan, Pakistan and Palestine, training of teachers and peripheral health workers in prevention of avoidable blindness and identification of visual loss will help ensure the integration of primary eye care into primary health care and school health. Several countries are also reviewing or developing national plans of action for blindness prevention.

A main thrust of the Regional Office in prevention and control of blindness in the Region is that of building partnerships. A good example of such a partnership is the good relationship and the active collaboration that exists in the Region between WHO and IMPACT-EMR Foundation, which led to the joint establishment of a postgraduate training course for ophthalmologists in the Republic of Yemen. This course is a joint effort of WHO, the Ministry of Public Health in Republic of Yemen and IMPACT-EMR and has already graduated two batches.

Control of deafness

The very active programme on blindness control in Morocco has now expanded and will also address the problem of deafness and hearing impairment. A survey of the prevalence and causes of deafness and hearing impairment will be carried out in Tetouan province. In Bahrain, deafness control activities have been ongoing for some time now and the main thrust is towards developing guidelines for screening, and training on the early detection of deafness. The Libyan Arab Jamahiriya has planned a national survey on the prevalence and causes of deafness and hearing impairment and will be assisted technically and financially in this endeavour by WHO. Unavoidable delays occurred in the publication of the regional document on deafness, which is still being finalized. New information from the surveys carried out recently will hopefully be available for inclusion.

6

Administrative services

6.1 Personnel

Personnel services continued to ensure the recruitment, training and administration of staff and consultants in support of the Organization's programmes. An organogram of the Regional Office is given in Annex 1. Table 6.1 shows the distribution of professional posts by organizational level.

TABLE 6.1 Professional posts as at 31 December 1998 (all sources of funds)

Organizational level	Number of professional posts
Regional	71
Intercountry	16
Country (including WHO Representatives' offices)	35
Total	122

Emphasis continues to be focused on the need to recruit well-qualified staff from unrepresented and underrepresented nationalities, as well as those below the midpoint of the desirable range for adequate representation, and women. The Organization's minimum target for recruitment from such nationalities is 60%. Unlike the previous year, this target was not realized during 1998. In December 1998, the Director-General revised the target for new appointments of women in the professional and higher categories with a view to achieving gender parity in the Organization in the coming decade. It therefore raised the percentage from 50% to 60% but also expanded the time-frame to meet the target from 2002 to 2010. The percentage of women among fixed-term professional staff recruited in the Eastern Mediterranean Region in 1998 was 14.3% as compared to 20% in 1997. The percentage of professional female staff in the Regional Office and in the field is 20.68%.

The distribution by nationality of professional staff in the Region is listed in Annex 2. Fifty-one (51) of the 87 regional professional staff (58.6%) are nationals of countries in the Region.

As at 31 December 1998, in addition to regular staff members, 229 persons were employed in their country of nationality on special services agreements.

During 1998, 246 short-term consultants were recruited, 45.93% of whom represented nationalities from the Region. The distribution of consultants by major programme area is shown in Table 6.2.

TABLE 6.2 Distribution of recruited consultants by programme area, 1998

Programme area	No. of consultants	Percentage
Health policy and management	59	23.89
Health services development	54	21.86
Promotion and protection of health	56	22.67
Integrated control of disease	77	31.17
Others	1	0.41
Total	247	100

6.2 General administration

New WHO Regional Office building

After a long period of detailed planning and design the contract for the construction of the new Regional Office building in Cairo was signed with Arabian International Construction in September 1998. The completion date of the building is scheduled for end November 1999 and the building should be ready for occupancy in the first quarter of 2000.

At the time of writing in May 1999, the funds available for the construction of the building, including pledges received from governments and private donors, do not permit the finishing of the interior of the 5th, 6th and 7th floors of the building. It is hoped that further contributions will be received for this purpose as well as to cover other one-time costs associated with the transfer of the office from Alexandria to Cairo, such as staff relocation and replacement of obsolete furniture, supplies and equipment.

Meetings

The administration provided support to 69 meetings held in the Region in 1998 (Annex 3).

6.3 Budget and finance

The reporting period covers the first year of the 1998-99 biennium. In 1998, the imposition of a 3% global programme budget implementation reduction resulted in lowering the regional regular budget allocation for the biennium from US\$ 90.2 million to US\$ 87.5 million.

As of 31 December 1998, US\$ 54 million was obligated under the regular budget, or 62% of the available funds at 31 December 1998, compared with 67% obligated at the end of the first year of the previous biennium.

Obligations incurred against extrabudgetary funds during 1998 amounted to US\$ 19.7 million.

Country statistical profiles

Table 1. Demographic indicators

Country	Area (km ²)	Population		Crude birth rate (‰)	Crude death rate (‰)	Population growth rate (%)		Population <15 years (%)	Population 65+ years (%)	Depend- ency ratio (%)	Total fertility rate (R)			
		Total (000)	Urban (%)			Y	Y				Y	Y	R	Y
Afghanistan	652 225	20 452	25	48.0	23.0	95	2.5	96	45.6	3.0	95	94	6.2	95
Bahrain	707	620	89	21.6	2.9	97	3.6	96	31.1	2.2	50	57	3.4	97
Cyprus	9 251	855	69	14.9	7.7	96	0.7	96	24.7	11.0	56	96	2.1	96
Djibouti	23 000	670	76	47.5	17.7	94	4.3	95	37.6	2.1	66	96	5.8	91
Egypt	1 001 450	61 880	47	28.4	6.4	98	2.1	96	35.0	3.3	62	57	3.6	95
Iran, Islamic Republic of	1 648 000	61 505	61	18.7	4.2	98	1.1	96	39.5	4.3	78	96	2.6	96
Iraq	435 052	21 847	71	35.0	11.0	95	2.4	96	42.6	3.3	85	93	4.7	96
Jordan	91 100	4 732	80	34.0	6.0	98	3.4	97	41.4	2.6	79	55	4.4	97
Kuwait	17 818	1 809	100	23.7	2.2	97	3.2	96	26.0	1.3	36	57	3.2	97
Lebanon	10 452	3 700	85	24.6	7.4	96	1.7	96	28.0	4.0	47	57	2.5	96
Libyan Arab Jamahiriya	1 775 500	4 664	85	40.0	7.0	96	3.3	96	39.0	2.2	70	55	4.1	95
Morocco	710 850	27 775	53	23.2	6.3	98	1.8	97	34.6	4.6	64	57	3.0	97
Oman	309 500	2 302	74	29.0	3.7	98	2.8	95	47.0	3.1	100	57	4.8	98
Pakistan	796 095	139 020	32	34.0	8.7	97	2.7	97	41.2	3.8	82	57	5.3	97
Palestine ^a	6 162	2 893	46	36.2	3.4	98	3.0	98	43.0	4.8	1.6	56	4.6	98
Qatar	11 427	693	100	14.9	1.5	96	8.1	95	27.8	1.1	39	56	2.8	95
Saudi Arabia	2 149 700	18 855	80	35.2	5.1	97	3.5	97	41.8	2.6	80	53	5.9	97
Somalia	637 657	6 602	26	45.5	18.3	97	3.0	97	44.0	3.9	92	57	6.8	96
Sudan	2 506 000	30 526 ^b	33	37.8	11.5	93	2.6	98	43.7	3.8	90	59	5.7	99
Syrian Arab Republic	185 180	15 597	50	42.0	6.1	95	3.3	96	44.7	3.0	91	58	4.2	94
Tunisia	154 530	9 333	61	18.9	5.6	97	1.7	94	33.5	7.4	69	57	2.4	97
United Arab Emirates	83 600	2 624	79	17.8	1.9	97	5.9	97	25.3	1.1	38	57	4.9	95
Yemen, Republic of	555 000	16 333	24	52.6	21.0	95	3.7	96	47.1	3.7	103	56	5.9	94
EMR total/ average	13 770 300	455 087	46	32.1	8.9		2.4		40.1	3.7	78		4.4	

Y Reference year for data provided

... Data not available

^a Population under Palestinian National Authority, UNRWA care for

^b 3.573 million Palestinian refugees in 1998
Estimate

Table 2. Socioeconomic Indicators

Country	Adult literacy rate 15+ years			School enrolment ratio (first level)			School enrolment ratio (second level)			Per capita GNP (US\$)	Unemployed (%)	Regular smokers 15+ years					
	T	M	F	T	M	F	T	M	F			T	M	F			
															(%)	(%)	(%)
Afghanistan	27	45	14	95	15	20	10	90	180	95	3.4	90	...	...	...	...	...
Bahrain	86	90	80	91	85	84	87	96	8090	97	2.8	95	17	25	9	95	95
Cyprus	94	98	90	92	100	100	100	96	12860	96	3.0	97	...	...	...	...	...
Djibouti	57	74	40	96	40	45	34	96	480	93	59.0	96	31	53	4	95	95
Egypt	51	63	37	95	100	100	100	96	1220*	97	9.4	96	...	...	...	...	...
Iran, Islamic Republic of	80 ^b	85 ^b	74 ^b	96	97	98	96	97	2188	97	3.2	96	20	33	7	94	94
Iraq	54	63	51	95	90	95	85	95	3610 ^c	92	13.8	93	...	...	...	...	...
Jordan	86	91	81	97	94	94	95	95	1330	97	13.3	97	50	88	12	96	96
Kuwait	88	90	86	97	100	100	100	98	19300	96	0.5	97	...	...	...	...	...
Lebanon	88	93	84	97	98	98	98	97	3750*	97	8.5	97	54	61	47	97	97
Libyan Arab Jamahiriya	82	91	74	96	106	107	104	96	6760	96	...	...	...	...	...	...	...
Morocco	42	55	31	95	73	85	60	92	1310	96	16.0	95	50 ^d	96 ^d	5	92	92
Oman	80	84	76	95	109	112	106	93	6760	97	...	...	9	16	2	95	95
Pakistan	39	51	28	97	75	85	64	96	470	96	5.0	97	14	25	4	96	96
Palestine	84	92	77	95	100	100	100	98	1380	96	28.0	96	21	40	3	95	95
Qatar	79	79	80	95	89	86	91	92	14760	91	...	...	...	...	...	...	...
Saudi Arabia	75	85	65	96	112	113	106	93	6880	94	...	...	53	...	...	95	95
Somalia	24	36	14	95	10	13	6	90	150	96	...	...	...	...	...	...	...
Sudan	53	66	41	93	58	...	...	93	330	93	16.6	96	...	...	...	...	...
Syrian Arab Republic	79	89	69	96	100	100	100	96	1490	95	5.0	91	...	...	...	...	...
Tunisia	67	79	55	95	99	100	96	94	1770	94	15.5	96	35	61	8	94	94
United Arab Emirates	86	83	89	96	89	90	85	97	16500	96	1.8	96	10	21	1	95	95
Yemen, Republic of	45	68	23	94	60	80	39	96	260	96	12.2	94	60	...	...	95	95
EMR average	54	66	44	...	79	85	73	...	1570	...	8.1	...	26	...	...	...	...

Y Reference year for data provided

... Data not available

GNP Gross national product

GDP Gross domestic product

^a Per capita GDP

^b For population aged 10+ years

^c Per capita GNP is equivalent to US\$ 761 at 1990 prices

^d Survey results for 18 year old students

Table 3. Budgetary resources indicators

Country	Allocated to MOH from total government budget		MOH expenditure as % of GNP		National health expenditure as % of GNP		National health expenditure devoted to local health care (%)		Annual budget of MOH (per capita)		National expenditure on health (per capita)	
	(%)	Y	(%)	Y	(%)	Y	(%)	Y	(US\$)	Y	(US\$)	Y
Afghanistan	...	...	...	...	...	...	...	...	...	...	...	...
Egypt	9.2	97	3.4	96	4.5	95	22	96	210	96	309	95
Cyprus	6.0	95	1.9	95	4.8	95	...	...	250	95	685	95
Djibouti	4.3	96	7.5	95	...	...	60	93	15	96	...	...
Egypt	2.2	96	1.0*	96	4.2	95	64	96	10	96	55	96
Iran, Islamic Republic of	8.3	97	3.0	97	4.5	97	47	97	65	97	...	...
Iraq	...	...	...	...	...	...	...	...	...	...	...	...
Jordan	5.6	97	2.6	97	7.5	97	...	...	40	97	115	97
Kuwait	6.9	96	2.5	96	...	...	21	95	422	96	...	...
Lebanon	4.9	97	1.0*	97	8.5*	96	...	...	46	97	310	96
Libyan Arab Jamahiriya	6.0	96	...	...	...	...	40	96	124	97	...	...
Morocco	4.5	97	1.1	95	4.0	97	23	93	13	95	...	...
Oman	5.6	97	0.9	95	3.2	93	73	94	147	97	...	...
Pakistan	5.0	96	0.7	97	6.6	96	59	96	4	96	31	96
Palestine	10.7	97	2.3	96	8.0	96	...	...	37	96	125	96
Qatar	5.3	96	2.4*	96	2.5*	96	44	96	309	96	319	96
Saudi Arabia	5.9	99	3.0	90	8.0	90	...	...	107	96	...	...
Somalia	...	...	...	...	1.5*	90	...	...	...	...	...	...
Sudan	4.8	90	...	...	1.0	92	50	95	3	90	...	...
Syrian Arab Republic	2.9	95	1.5	95	...	...	...	...	19	96	...	...
Turisia	9.6	96	2.3	97	5.4	97	30	92	47	94	123	97
United Arab Emirates	7.7	97	4.5	94	9.0	90	...	...	148	97	311	94
Yemen, Republic of	4.6	96	1.6	94	4.6	95	17	95	4	96	...	...
EMR average	5.9		2.5		5.9		56		27		52	

Y Reference year for data provided

... Data not available

* As % of GDP

GNP Gross national product
MOH Ministry of health

Table 4. Human and material resources indicators

Country	Physicians		Dentists		Pharmacists		Nursing and midwifery personnel		Hospital beds		PHC units and centres	
	R	Y	F	Y	R	Y	R	Y	R	Y	R	Y
Afghanistan	1.1	97	0.0	97	0.20	97	1.8	97	30	97	0.4	97
Bahrain	10.0	97	0.90	97	2.00	97	28.2	97	233	97	0.4	97
Cyprus	25.5	96	6.0	95	10.40	95	44.7	96	505	96	...	...
Djibouti	1.4	96	0.7	96	0.20	96	1.4	96	190	96	0.1	96
Egypt	20.2	96	2.0	96	5.30	96	23.2	96	204	97	0.1	96
Iran, Islamic Republic of	8.5	96	1.60	96	1.10	96	25.9	96	164	96	3.1	96
Iraq	5.5	98	0.7	98	1.13	98	21.6	95	145	98	0.1	98
Jordan	16.6	97	4.90	97	7.70	97	29.6	97	280	97	2.1	97
Kuwait	18.9	97	2.60	97	3.50	96	41.5	97	275	97	0.4	97
Lebanon	21.0	97	8.00	97	5.00	97	10.0	97	360	97	2.1	96
Libyan Arab Jamahiriya	12.8	97	1.00	96	2.30	96	36.0	96	430	97	2.1	97
Morocco	4.6	97	0.40	97	1.10	96	10.5	97	98*	97	0.7	96
Oman	13.3	98	0.90	98	1.30	98	31.5	98	223	98	1.0	97
Pakistan	5.7	97	0.23	97	3.40	96	3.4	96	54	97	1.1	97
Palestine	5.2	98	0.79	98	3.00	95	5.1	96	116	94	3.7	96
Qatar	12.6	96	2.00	96	5.10	96	25.9	96	165	95	1.9	96
Saudi Arabia	16.6	97	1.60	97	2.10	97	32.0	97	231	97	1.0	97
Somalia	0.4	97	0.02	97	0.01	97	4.0	97	42	97	0.2	97
Sudan	0.9	96	0.07	96	0.11	96	5.8	96	81	95	1.3	96
Syrian Arab Republic	14.4	98	7.40	98	5.30	98	15.9	98	121	98	0.7	98
Tunisia	7.0	97	1.30	97	1.70	97	28.6	97	173	97	2.1	97
United Arab Emirates	18.1	97	2.60	96	8.10	95	34.1	96	264	95	0.3	97
Yemen, Republic of	2.3	96	0.16	96	0.40	96	5.1	95	69	96	0.9	96
EMR average	8.8		1.25		2.8		14.9		12.2		1.3	

Y Reference year for data provided
 ... Data not available
 * In public sector only
 PHC Primary health care

Table 5. Indicators of coverage with primary health care

Country	Population with access to local health services			Infants fully immunized (1998) with						Pregnant women given 2 doses of tetanus toxoid (1998) (%)
	Total (%)	Urban (%)	Rural (%)	BCG (%)	DPT (%)	OPV (%)	Measles vaccine (%)	Hepatitis B vaccine (%)		
Afghanistan	35	55	25	97	33	34	35	36	"	19
Bahrain	100	100	100	96	"	98	98	100	95	80
Cyprus	100	100	100	94	"	98	98	90	88	"
Djibouti	80	...	...	93	35	23	23	21	"	16
Egypt	98	100	96	96	97	96	96	98	96	61
Iran, Islamic Republic of	94	100	80	97	98	100	100	100	93	75
Iraq	98	100	96	97	76	86	86	79	3	45
Jordan	98	98	96	96	"	91	91	86	83	22
Kuwait	100	100	100	98	"	95	94	99	99	8
Lebanon	95	98	85	96	"	96	96	91	"	"
Libyan Arab Jamahiriya	100	100	100	96	100	97	97	93	...	"
Morocco	77	100	50	95	90	93	93	91	"	33
Oman	95	100	90	98	96	100	99	98	99	96
Pakistan	81	100	72	96	97	79	79	76	"	58
Palestine	100	100	100	94	91	98	98	94	92	26
Qatar	100	100	100	98	99	94	94	90	92	"
Saudi Arabia	99	100	95	95	92	94	94	93	95	66
Somalia	20	50	15	93	57	24	24	47	"	41
Sudan	...	...	...	...	81	69	72	63	"	55
Syrian Arab Republic	95	...	...	96	100	97	97	97	91	53
Tunisia	84	...	...	95	91	96	96	94	93	50
United Arab Emirates	99	99	99	97	98	94	94	95	96	"
Yemen, Republic of	55	...	...	96	77	68	68	66	"	26
EMR average	84	98	70	96	89	82	82	80	79	53

Y Reference year for data provided

... Data not available

... Not included in national programme of immunization

DPT Diphtheria-pertussis-tetanus

OPV Oral poliovaccine

BCG Bacille Calmette-Guérin

Table 5. Indicators of coverage with primary health care (concluded)

Country	Population with access to safe drinking water (%)		Population with adequate excreta disposal facilities (%)		Pregnant women attended by trained personnel (%)		Deliveries attended by trained personnel (%)		Infants attended by trained personnel (%)		Married women (15-49) using contraceptives (%)	
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Afghanistan	12	98	3	97	10	97	15	97	20	96	..	..
Bahrain	100	96	100	96	97	95	98	95	96	96	62	95
Cyprus	100	96	100	96	100	96	100	97	100	96	..	..
Djibouti	80	96	50	93	58	94	60	94	60	94	..	..
Egypt	84	96	70	96	39	96	62	96	89	95	48	96
Iran, Islamic Republic of	95	97	98	97	77	97	86	97	62	97	56	97
Iraq	77	94	70	94	73	97	83	97	79	97	18	92
Jordan	98	96	65	95	92	97	92	97	99	91	53	97
Kuwait	100	98	100	98	100	98	100	98	100	98	..	..
Lebanon	94	96	97	96	87	96	96	97	96	91	63	98
Libyan Arab Jamahiriya	95	96	86	95	81	96	99	96	100	92	45	95
Morocco	57	95	72	97	43	97	47	97	62	92	59	97
Oman	88	95	85	95	98	98	92	98	98	98	40	97
Pakistan	62	96	39	96	27	96	35	96	..	..	22	96
Palestine	84	96	31	96	92	93	97	93	97	96	32	96
Qatar	100	96	100	96	100	95	100	95	100	95	..	..
Saudi Arabia	93	94	86	94	90	97	92	95	96	95	..	..
Somalia	31	96	43	96	35	96	20	96	..	..	5	96
Sudan	60	95	22	95	78	95	86	93	30	91	10	93
Syrian Arab Republic	88	96	71	95	90	95	83	95	96	95	60	94
Tunisia	89	97	80	94	85	97	82	97	96	95	65	97
United Arab Emirates	97	96	99	96	99	97	99	97	99	97	28	95
Yemen, Republic of	39	95	19	95	26	92	35	92	..	..	10	92
EMR average	71	..	58	..	37	..	56	..	69	..	36	..

Y Reference year for data provided
 .. Data not available

Table 6. Health status indicators

Country	Newborns with birth weight at least 2.5 kg		Children with acceptable weight for age		Infant mortality rate		Probability of dying before reaching 5th birthday		Maternal mortality rate		Life expectancy at birth			
	(%)	Y	(%)	Y	R	Y	R	Y	R	Y	T	M	F	
Afghanistan	80	92	65	97	165	95	250	95	170.0	96	43.5	43.0	44.0	93
Bahar	91	96	91	95	8	97	11	96	3.9	96	72.4	70.4	75.3	93
Cyprus	91	93	...	...	8	96	10	96	1.5	97	77.6	75.3	79.8	95
Djibouti	80	92	86	95	13.4	93	16.4	90	...	...	49.0	...	...	...
Egypt	91	92	88	95	25	98	35	92	17.4	93	64.7	62.9	66.4	93
Iran, Islamic Republic of	94	97	84	97	23	98	33	96	3.7	97	69.0	68.0	70.0	95
Iraq	76	96	77	97	11.2	94	14.0	94	13.0	94	58.0	57.0	59.0	91
Jordan	92	95	91	96	28	97	39	96	4.1	97	68.0	65.0	69.5	97
Kuwait	93	97	90	95	13	97	16	97	1.6	97	75.3	73.8	76.4	97
Lebanon	92	96	97	96	28	96	32	96	10.4	96	71.3	69.0	72.0	95
Libyan Arab Jamahiriya	96	95	85	95	24	95	30	95	4.0	95	66.0	63.0	67.0	95
Morocco	96	95	91	97	37	98	46	97	22.8	97	68.8	67.1	70.7	97
Oman	92	98	76	95	18	98	25	98	2.1	96	72.2	71.3	74.2	93
Pakistan	75	96	74	96	86	96	137	95	30.0	95	62.5	62.9	62.1	95
Palestine	94	95	95	95	18	95	31	95	2.9	96	72.3	69.0	75.5	95
Qatar	91	96	...	...	12	96	15	96	1.0	95	74.3	71.2	74.5	95
Saudi Arabia	95	95	93	92	21	95	30	96	1.8	93	72.4	69.9	73.4	95
Somalia	...	...	28	93	126	97	265	97	160.0	90	46.2	44.7	47.9	97
Sudan	...	...	67	91	108	96	157	96	36.5	93	54.0	52.5	55.5	95
Syrian Arab Republic	93	97	85	94	28	98	32	98	9.5	98	68.0	67.0	69.0	93
Tunisia	95	94	91	95	29	97	43	94	6.9	94	71.9	70.2	73.5	97
United Arab Emirates	95	96	86	95	9	97	11	97	0.2	97	73.0	72.0	74.0	96
Yemen, Republic of	53	94	61	94	79	96	122	94	100.0	91	57.5	53.0	59.0	95
EMR average	82	...	78	...	71	...	108	...	38.2	...	63.2	62.4	65.9	...

Y Reference year for data provided

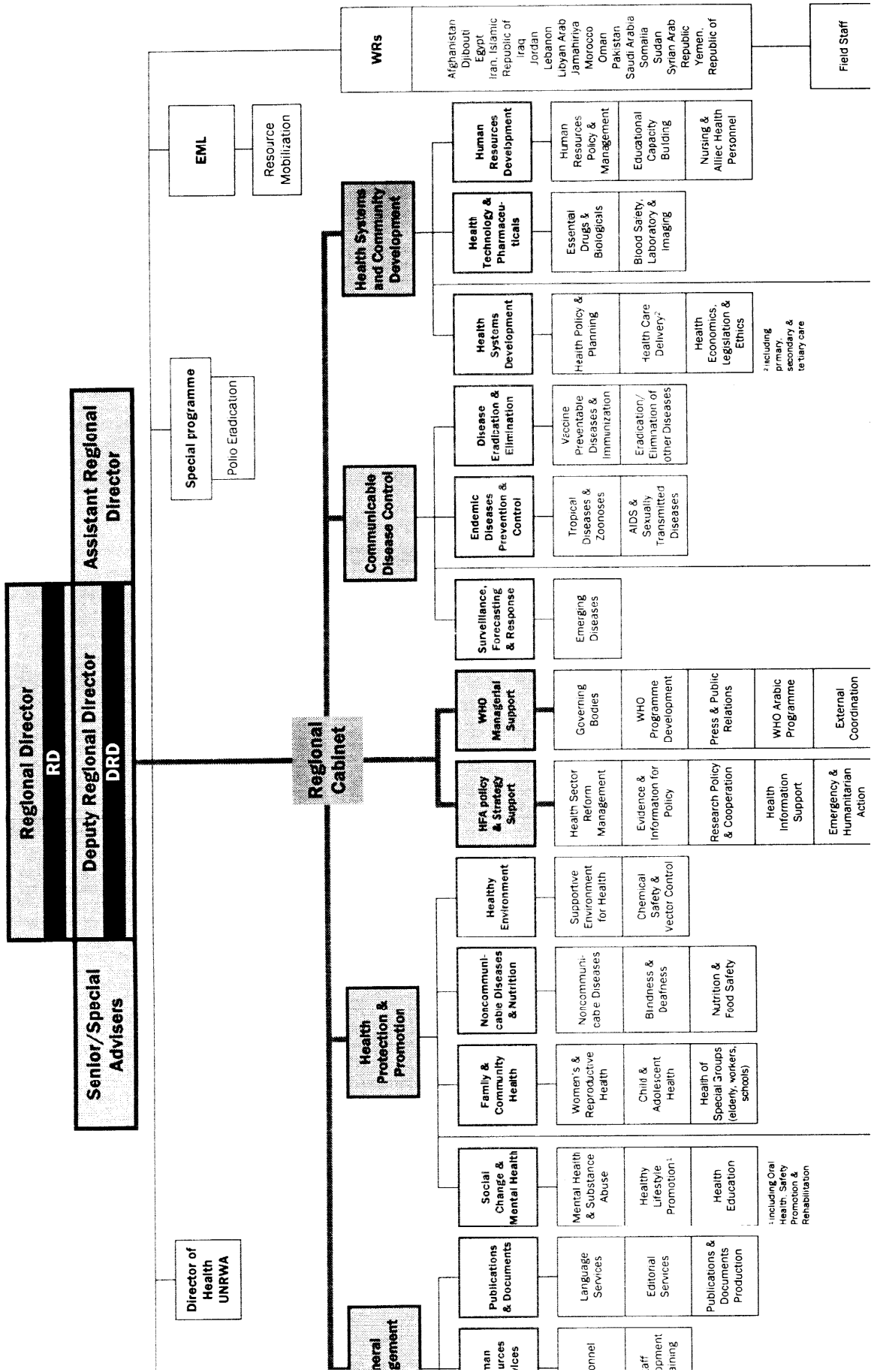
... Data not available

Table 7. Selected morbidity indicators

Country	Annual number (N) of reported cases of																			
	Cholera		Malaria		Polio- myelitis		Measles		Pulmonary tuberculosis		Diphtheria		Tetanus		Neonatal tetanus		AIDS		Meningococcal meningitis	
	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y
Afghanistan	35166	98	2900000	98	59	98	2205	98	120000	98	84	98	383	98	310	98	0	91	...	...
Bahrain	0	98	135	98	0	98	4	98	92	98	0	98	0	98	0	98	0	98	11	98
Cyprus	0	98	2	98	0	98	1	98	32	97	0	98	0	98	0	98	0	98	6	98
Djibouti	603	98	80000	97	0	98	198	98	2535	97	2	98	0	98	0	98	0	98	11	98
Egypt	0	98	13	98	35	98	4868	98	11040	97	3	98	1198	98	471	98	33	98	384	98
Iran, Islamic Republic of	7865	98	32951	98	4	98	2731	98	7287	98	13	98	38	98	14	98	21	98	123	98
Iraq	839	98	38000	97	37	98	43755	98	8938	98	181	98	38	98	38	98	4	98	40	98
Jordan	0	98	122	98	0	98	428	98	224	98	0	98	1	98	1	98	11	98	43	98
Kuwait	0	98	746	97	0	98	90	98	401	97	0	98	1	98	0	98	19	98	0	98
Lebanon	0	98	34	98	0	98	966	98	513	97	0	98	5	98	1	98	35	98	3	98
Lithuania	0	98	12	98	0	98	50	98	369	98	0	92	10	98	0	98	5	98	4	98
Madagascar	0	98	68	98	0	98	7208	98	17666	97	0	98	17	98	6	98	93	98	433	97
Oman	0	98	1093	98	0	98	5	98	135	98	0	98	5	98	0	98	33	98	4	98
Pakistan	0	97	71603	98	339	98	2333	98	44759	97	20	98	1957	98	1918	98	23	98	10362	97
Palestine ^a	0	98	5	98	0	98	117	98	387	96	0	98	5	98	1	98	3	98	2	98
Qatar	1	98	263	98	0	98	116	98	139	98	0	98	0	98	0	98	1	98	3	98
Saudi Arabia	0	98	2063	97	1	98	5519	98	2303	97	0	98	21	98	10	98	39	98	42	98
Somalia	10554	98	2000000	93	12	98	3075	98	3663	97	0	98	111	98	99	98	5	90	...	...
Sudan	0	96	7000000	93	50	98	500	98	2300	98	67	98	53	98	53	98	511	98	503	98
Syrian Arab Republic	0	98	6	98	0	98	5400	98	3079	97	5	98	34	98	32	98	3	98	537	98
Tunisia	0	98	42	98	0	98	123	98	1439	98	0	97	3	98	1	98	44	98	15	98
United Arab Emirates	0	98	60	98	0	98	296	98	736	97	0	98	4	98	0	98	8	90	12	97
Yemen, Republic of	60	96	2000000	97	14	98	8785	98	9318	97	24	98	12	95	12	95	34	98	634	96
Total new cases in 1998	55128		12506472		551		88803		141523		399		3884		2955		1045		2140	

Y Reference year for data provided
 ... Data not available
 * Estimate
 † Imported cases
 ‡ Autochthonous
 § Total cases reported by both Palestinian National Authority and UNRWA
 ¶ Mostly imported but some autochthonous
 †† Mostly autochthonous but some imported
 ††† Mostly expatriates
 †††† Partial reporting

Structure of the WHO for the Eastern Mediterranean



Annex 2

a) Professional staff in the Eastern Mediterranean Region, by number and nationality

as at 31 December 1998

Nationality	Regional/Intercountry	Country	Total
Afghanistan	2	-	2
Austria	1	-	1
Bahrain	2	-	2
Canada	2	-	2
Denmark	1	-	1
Djibouti	-	1	1
Egypt	9	-	9
France	1	-	1
Ghana	1	-	1
India	-	1	1
Iran, Islamic Republic of	4	1	5
Iraq	1	-	1
Japan	1	-	1
Jordan	6	1	7
Lebanon	1	-	1
Mauritania	-	1	1
Morocco	2	1	3
Myanmar	-	1	1
Nepal	1	-	1
Netherlands	2	-	2
Pakistan	3	1	4
Philippines	-	1	1
Republic of Yemen	-	2	2
Russian Federation	4	-	4
Rwanda	-	1	1
Saudi Arabia	1	-	1
Slovakia	1	-	1
Somalia	-	2	2
Sri Lanka	-	1	1
Sudan	1	3	4
Syrian Arab Republic	5	-	5
Tunisia	2	-	2
Turkey	1	-	1
United Kingdom	2	-	2
United Republic of Tanzania	-	1	1
United States of America	6	5	11
Total	63	24	87

Note: the above figures a) do not include staff on leave-without-pay (LWOP), b) are funded from all sources and c) exclude two staff members (1 interregional and 1 UNAIDS)

b) Professional staff from Eastern Mediterranean Region Member States, by number and nationality

as at 31 December 1998

Country	Total in WHO	Of which in EMR
Afghanistan	2	2
Bahrain	2	2
Cyprus	-	-
Djibouti	1	1
Egypt	11	9
Iran, Islamic Republic of	7	5
Iraq	1	1
Jordan	7	7
Kuwait	1	-
Lebanon	5	1
Libyan Arab Jamahiriya	1	-
Morocco	3	3
Oman	-	-
Pakistan	6	4
Qatar	-	-
Saudi Arabia	1	1
Somalia	2	2
Sudan	5	4
Syrian Arab Republic	6	5
Tunisia	8	2
United Arab Emirates	-	-
Yemen, Republic of	2	2
Total of EMR nationalities	71	51
Total of other nationalities	1208	36
Grand total	1279	87

Note: the above figures a) do not include staff on leave-without-pay (LOWP) and b) are funded from all sources

Annex 3

WHO/EMRO meetings held in the Eastern Mediterranean Region

between 1 January and 31 December 1998

Meeting title, location and date	No. of participants
Meeting on intensive support to malaria control in the African countries of Eastern Mediterranean Region, Alexandria, Egypt, 3-5 February 1998	13
Workshop on Creutzfeldt-Jakob disease, Cairo, Egypt, 14-16 February 1999	30
Fourth meeting of the Regional Interagency Coordination Committee (RIACC), Alexandria, Egypt, 16-17 February 1998	35
WHO/EMRO/AGFUND intercountry training workshop on environmental and health effects of exposure to static and time-varying electromagnetic fields for the member states of the Gulf Cooperation Council, Dubai, United Arab Emirates, 22-25 February 1998	36
Third interregional meeting on tuberculosis for the countries in the Horn of Africa, Nairobi, Kenya, 1-2 April 1998	28
Intercountry training workshop on the use of HACCP in national food control programmes, Tunis, Tunisia, 13-17 April 1998	30
Consultation on regional self-sufficiency in the local production of essential drugs and vaccines, Alexandria, Egypt, 23-25 April 1998	7
WHO-HQ/CEHA regional workshop on introducing environmental health training manual and trainer's guide, Amman, Jordan, 26 April-7 May 1998	22
Nineteenth session of the Eastern Mediterranean Advisory Committee on Health Research (EM/ACHR), Beirut, Lebanon, 28-30 April 1998	29
Twenty-second meeting of the Regional Consultative Committee, Amman, Jordan, 2-3 May 1998	19
Coordination meeting on prevention of cross-border transmission of wild poliovirus, Alexandria, Egypt, 3-4 May 1998	24
Intercountry meeting on follow-up achievements of the safe motherhood initiative in the Eastern Mediterranean Region: a decade after Nairobi, Sana'a, Republic of Yemen, 3-6 May 1998	47
AGFUND/CEHA regional seminar on monitoring environmental health conditions including monitoring the water supply and sanitation sector, Damascus, Syrian Arab Republic, 4-7 May 1998	24
Workshop on electronic data management in poliomyelitis laboratories in the Eastern Mediterranean Region, Alexandria, Egypt, 10-12 May 1998	21
Expert group meeting on evaluation of the district team problem solving (DTPS) approach in the Eastern Mediterranean Region, Muscat, Oman, 12-14 May 1998	27
WHO-EMRO/ROPME intercountry training workshop on microbiological monitoring of coastal recreational waters for member states of the Gulf Cooperation Council, Kuwait, 16-20 May 1998	20
Workshop on evaluation of intensified malaria control, Alexandria, Egypt, 20-22 May 1998	17

**WHO/EMRO meetings held in the Eastern Mediterranean Region
between 1 January and 31 December 1998 (continued)**

Meeting title, location and date	No. of participants
Inter-country meeting of EMLIBNET focal points, Alexandria, Egypt, 25-28 May 1998	28
Subregional meeting on tuberculosis control for the countries of the Near East, Damascus, Syrian Arab Republic, 30 May-1 June 1998	11
Fifteenth intercountry meeting for national EPI managers and eleventh EPI regional technical advisory group meeting, Bhurban, Pakistan, 30 May-2 June 1998	86
Second intercountry meeting of directors of poliomyelitis laboratories in the Eastern Mediterranean Region, Bhurban, Pakistan, 1-3 June 1998	17
Second subregional meeting on prevention of cross-border transmission of wild poliovirus, Bhurban, Pakistan, 3 June 1998	19
CEHA regional workshop on low-cost technology for domestic wastewater reclamation and reuse, Amman, Jordan, 8-11 June 1998	12
Regional consultation on development of technical guidelines and integrated environmental management norms for healthy villages, Tabriz, Islamic Republic of Iran, 7-11 June 1998	21
First meeting of chairpersons of the national committees for certification of poliomyelitis eradication in the Eastern Mediterranean Region, Alexandria, Egypt, 15-16 June 1998	29
WHO/EMRO/ROPME intercountry training workshop on technical guidelines to assess marine pollution and to control associated risks for the member states of the Gulf Cooperation Council, Teheran, Islamic Republic of Iran, 16-18 June 1998	18
Inter-country consultation on basic development needs: review and evaluation, Alexandria, Egypt, 24-26 June 1998	29
Fifteenth meeting of the Regional Director with WHO representatives and regional office staff, Alexandria, Egypt, 28 June-2 July 1998	24
Inter-country meeting of directors of communicable disease control on emerging infectious diseases, Damascus, Syrian Arab Republic, 4-7 July 1998	31
EMRO/TDR/CTD small grants scheme for tropical diseases research, Alexandria, Egypt, 7-9 July 1998	9
Joint WHO/MI/UNICEF/ILSI workshop on fortification of flour for control of micronutrient deficiencies in the Eastern Mediterranean Region, Middle East and North Africa, Beirut, Lebanon, 13-16 July 1998	66
Consultation on private medical education in the Eastern Mediterranean Region: a necessity or a de facto, Alexandria, Egypt, 20-21 July 1998	18
Informal consultation on modifying the evaluation tool, Alexandria, Egypt, 22-23 July 1998	6
Inter-country meeting on essential health indicators, Teheran, Islamic Republic of Iran, 26-28 July 1998	22
Coordination meeting between bordering countries of the Eastern Mediterranean Region and African Region, Sana'a, Republic of Yemen, 27-29 July 1998	13
Inter-country workshop on measles elimination, Damascus, Syrian Arab Republic, 1-3 August 1998	30

**WHO/EMRO meetings held in the Eastern Mediterranean Region
between 1 January and 31 December 1998 (continued)**

Meeting title, location and date	No. of participants
Symposium on improving continuing education for health personnel in the Region, Teheran, Islamic Republic of Iran, 13-16 August 1998	19
Second coordination meeting on prevention of cross-border transmission of wild poliovirus, Aleppo, Syrian Arab Republic, 26-27 August 1998	25
Regional consultation for developing guidelines for adolescent health education within the framework of cultural and religious norms in the Eastern Mediterranean Region, Istanbul, Turkey, 2-4 September 1998	22
Intercountry workshop on acceleration of measles control, Sana'a, Republic of Yemen, 5-7 September 1998	28
Multinational workshop on environmental health impact assessment (EHIA) of development projects for French speaking countries, Tunis, Tunisia, 8-12 September 1998	21
Meeting of national managers of tuberculosis control programmes in the Eastern Mediterranean Region, Cairo, Egypt, 12-14 September 1998	53
CEHA regional workshop on chemical safety, Damascus, Syrian Arab Republic, 26-30 September 1998	22
Regional seminar on rabies prevention and control, Teheran, Islamic Republic of Iran, 28-30 September 1998	17
First consultation on vaccine supply and quality and local production in the Eastern Mediterranean countries, Amman, Jordan, 29 September-1 October 1998	36
Forty-fifth session of the Regional Committee, Beirut, Lebanon, 3-6 October 1998	163
Intercountry training course on laboratory diagnosis of measles, Tunis, Tunisia, 5-8 October 1998	16
Intercountry workshop on STD prevalence study, Amman, Jordan, 12-15 October 1998	22
Pharmacovigilance/adverse drug reaction monitoring training workshop, Rabat, Morocco, 16-18 October 1998	23
Fifth interregional meeting for coordination of Operation MECACAR, Cairo, Egypt, 20-22 October 1998	61
Intercountry workshop on DOTS, Lattakia, Syrian Arab Republic, 24-29 October 1998	29
Regional seminar on preparation of drinking-water quality standards, Rabat, Morocco, 26-28 October 1998	22
WHO/UNICEF regional consultation on integrated management of childhood illness (IMCI), Rabat, Morocco, 26-30 October 1998	65
Thirteenth meeting of national fellowships officers, Nicosia, Cyprus, 2-4 November 1998	16
Intercountry workshop on planning community-based preventive oral health programmes for children, Beirut, Lebanon, 9-13 November 1998	29
Third subregional meeting on tuberculosis elimination initiative in member states of the Gulf Cooperation Council, Doha, Qatar, 14-16 November 1998	17

Annex 3

**WHO/EMRO meetings held in the Eastern Mediterranean Region
between 1 January and 31 December 1998 (concluded)**

Meeting title, location and date	No. of participants
Regional meeting of directors of health laboratory services, Rabat, Morocco, 16-20 November 1998	34
Regional consultation on the elimination of leprosy, Cairo, Egypt, 23-25 November 1998	14
Regional consultation on insecticide-impregnated bednets and other materials, Islamabad, Pakistan, 23-25 November 1998	45
Third meeting of the regional polio certification commission, Alexandria, Egypt, 25-26 November 1998	25
Intercountry workshop on emergency preparedness and response, Hammamat, Tunisia, 29 November-1 December 1998	24
Consultation on development of health education material on communicable diseases, Islamabad, Pakistan, 30 November-3 December 1998	13
Intercountry workshop on DOTS, Peshawar, Pakistan, 30 November-5 December 1998	14
Consultation on organizational structures of ministries of health in the Eastern Mediterranean Region, Limassol, Cyprus, 4-6 December 1998	16
Intercountry meeting of directors of national surveillance systems, Muscat, Oman, 5-10 December 1998	46
Intercountry workshop on quality assurance in laboratory medicine, Muscat, Oman, 6-10 December 1998	38
Interregional focal point meeting, Alexandria, Egypt, 14-17 December 1998	15
Training workshop on research methodology, Casablanca, Morocco, 14-19 December 1998	25
Post-marketing surveillance workshop including adverse events following immunization (French), Rabat, Morocco, 15-17 December 1998	34

Annex 4

New publications and documents issued by WHO/EMRO in 1998

No.	Title	Originator
Publications		
1	Coordinated health and human resources development Technical Report Series No. 801 Language: Arabic	Headquarters
2	Family care directory Second edition Language: Arabic	EMRO
3	Field guide on rapid nutritional assessment in emergencies Language: French	EMRO
4	Guide to chemotherapy and chemoprophylaxis in bacterial infections WHO Regional Publications, Eastern Mediterranean Series No. 4 Second edition Language: English	EMRO
5	Malaria: a manual for community health workers Language: Arabic	Headquarters
6	Nursing education in the Eastern Mediterranean Region Guidelines on future directions EMRO Technical Publications Series No. 26 Language: English	EMRO
7	Nursing education in the Eastern Mediterranean Region: Prototype technical nursing curriculum EMRO Technical Publications Series No. 26 Language: English	EMRO
8	Nursing education in the Eastern Mediterranean Region: Prototype baccalaureate nursing curriculum EMRO Technical Publications Series No. 26 Language: English	EMRO
9	Prevention of disabilities in patients with leprosy: a practical guide Language: Arabic	Headquarters
10	Strengthening the performance of community health workers in primary health care Technical Report Series No. 780 Language: Arabic	Headquarters
11	Teaching for better learning Second edition Language: Arabic	EMRO
12	Textbook of medical physiology Ninth edition Language: Arabic	Saunders

New publications and documents issued by WHO/EMRO in 1998

(continued)

No.	Title	Originator
13	Islamic rulings on smoking The Right Path to Health: Health Education through Religion Series No. 1 Language: French	EMRO
14	Islamic rulings on smoking The Right Path to Health: Health Education through Religion Series No. 1 Language: Urdu	EMRO
15	Water and sanitation in Islam The Right Path to Health: Health Education through Religion Series No. 2 Language: Urdu	EMRO
16	Islamic rulings on animal slaughter The Right Path to Health: Health Education through Religion Series No. 3 Language: Urdu	EMRO
17	Health: an Islamic perspective The Right Path to Health: Health Education through Religion Series No. 4 Language: Urdu	EMRO
18	Health promotion through Islamic lifestyles: the Amman declaration The Right Path to Health: Health Education through Religion Series No. 5 Language: Urdu	EMRO
19	The role of religion and ethics in the prevention and control of AIDS The Right Path to Health: Health Education through Religion Series No. 6 Language: Urdu	EMRO
20	Environmental health: an Islamic perspective The Right Path to Health: Health Education through Religion Series No. 7 Language: Urdu	EMRO
21	Islamic rulings on circumcision The Right Path to Health: Health Education through Religion Series No. 8 Language: Urdu	EMRO
22	Islamic rulings on circumcision The Right Path to Health: Health Education through Religion Series No. 8 Language: Somali	EMRO
23	The work of WHO in the Eastern Mediterranean Region Annual Report of the Regional Director, 1 January to 31 December 1997 Languages: Arabic/English	EMRO

Annex 4

New publications and documents issued by WHO/EMRO in 1998

(continued)

No.	Title	Originator
Periodicals		
1	<i>Bridge newsletter</i> , No. 16, Winter/Spring 1997 Language: Arabic	Headquarters
2	<i>EMR AIDSnews</i> , Vol. 1 No. 4 Language: English	EMRO
3	<i>EMR AIDSnews</i> , Vol. 2 No. 1 Language: English	EMRO
4	<i>EMR AIDSnews</i> , Vol. 2 No. 2 Language: English	EMRO
5	<i>Eastern Mediterranean health journal</i> , Vol. 3 No. 3 Language: Arabic/English/French	EMRO
6	<i>Eastern Mediterranean health journal</i> , Vol. 4 No. 1 Language: Arabic/English/French	EMRO
7	<i>Eastern Mediterranean health journal</i> , Vol. 4 No. 2 Language: Arabic/English/French	EMRO
8	<i>Safe motherhood newsletter</i> , No. 22, 1996 Language: Arabic	Headquarters
9	<i>Safe motherhood newsletter</i> , No. 23, 1997 Language: Arabic	Headquarters
10	<i>World health magazine</i> , December 1997 Language: Arabic	Headquarters
11	<i>World health magazine</i> , June 1997 Language: Arabic	Headquarters
Documents		
1	A guide to carrying out a survey of the case-load of sexually transmitted diseases in general outpatient clinics Language: English	EMRO
2	A guide to eliminating leprosy as a public health problem Second edition 1997 Language: English	Headquarters
3	A practical guide to HIV/AIDS surveillance Language: English	EMRO
4	A practical guide to case management of sexually transmitted diseases for health care personnel Language: English	EMRO
5	Changing patterns of disease and their impact on WHO collaborative programmes EMRO Technical Papers Series No. 5 Language: Arabic/English	EMRO
6	Control of epidemic meningococcal disease: WHO practical guidelines Second edition Language: Arabic	Headquarters

Annex 4

New publications and documents issued by WHO/EMRO in 1998

(continued)

No.	Title	Originator
7	Control of sexually transmitted diseases Second edition Language: English	EMRO
8	Detection and control of epidemic meningococcal disease: facilitator's guide Language: Arabic	Headquarters
9	Detection and control of epidemic meningococcal disease: exercise book Language: Arabic	Headquarters
10	Detection and control of epidemic meningococcal disease: technical guidelines Language: Arabic	Headquarters
11	Emergency health system guidelines for planning and implementation of health emergency preparedness and response Language: Arabic	Ministry of Health and Population, Egypt/EMRO
12	Eradication and elimination of diseases with specific reference to measles and tuberculosis EMRO Technical Papers Series No. 6 Language: Arabic/English	EMRO
13	Ethics of medicine and health EMRO Technical Papers Series No. 4 Language: Arabic/English	EMRO
14	Fortification of flour with iron in countries of the Eastern Mediterranean, Middle East and North Africa Language: English	EMRO
15	Guide to good prescribing: a practical manual Language: Arabic	Headquarters
16	Guidelines for conducting an assessment of the prevalence of sexually transmitted disease in women attending antenatal and gynaecology clinics Language: English	EMRO
17	Guidelines for the management of drug-resistant tuberculosis Language: Arabic	Headquarters
18	Guidelines on the use of the WHO prevention indicators package in the Eastern Mediterranean Region Language: English	EMRO
19	Lymphatic filariasis: reasons for hope Language: Arabic	Headquarters
20	Management of childhood illness (adapted version) Language: English	Headquarters/ Federal Ministry of Health, Sudan

Annex 4

New publications and documents issued by WHO/EMRO in 1998

(continued)

No.	Title	Originator
21	Management of nutrition programmes: flexible modules for training: Introduction Language: English	EMRO
22	Management of nutrition programmes: flexible modules for training: Module 1: Essentials of nutrition and development Language: English	EMRO
23	Management of nutrition programmes: flexible modules for training: Module 2: Nutrition in the community Language: English	EMRO
24	Management of nutrition programmes: flexible modules for training: Module 3: Communication, extension and training Language: English	EMRO
25	Management of nutrition programmes: flexible modules for training: Module 4: Management of nutrition programmes and projects Language: English	EMRO
26	Management of nutrition programmes: flexible modules for training: Module 5: Supportive disciplines Language: English	EMRO
27	Management of nutrition programmes: Flexible modules for training: Module 6: Participant individual project Language: English	EMRO
28	Mental health promotion for schoolchildren: a manual for school teachers and school health workers Language: English	EMRO
29	Plan of action for health and environment in the Eastern Mediterranean Region Language: Arabic	EMRO
30	Promotion of breast-feeding through maternal and child health services and primary health care Language: Arabic	EMRO
31	STD case management workbook 1: Programme introduction and the transmission and control of STD/HIV Language: Arabic	Headquarters
32	STD case management workbook 2: Using flow-charts for syndromic management Language: Arabic	Headquarters
33	STD case management workbook 3: History-taking and examination Language: Arabic	Headquarters
34	STD case management workbook 4: Diagnosis and treatment Language: Arabic	Headquarters
35	STD case management workbook 6: Partner management Language: Arabic	Headquarters

Annex 4

New publications and documents issued by WHO/EMRO in 1998

(concluded)

No.	Title	Originator
36	STD case management workbook. 7: Recording and development plan Language: Arabic	Headquarters
37	Surveillance of communicable diseases: a training manual Language: English	EMRO
38	TB advocacy: a practical guide 1999 Language: Arabic	Headquarters
39	TB/HIV: a clinical manual Language: Arabic	Headquarters
40	The basic development needs initiative: integrated community development in action Language: English	EMRO
41	Treatment of tuberculosis: guidelines for national programmes Language: Arabic	Headquarters
42	Water supply and sanitation, handbook of financial principles and methods Language: Arabic	Headquarters
43	What you should know about: tuberculosis Languages: Arabic/English	EMRO

Annex 5

WHO collaborating centres in the Eastern Mediterranean Region

as at February 1999

Title	Field	Designation date
<i>WHO Collaborating Centre for Acquired Immunodeficiency Syndrome (AIDS), Cairo, Egypt</i>	AIDS	1987
<i>WHO Collaborating Centre for Acquired Immunodeficiency Syndrome (AIDS), Kuwait, Kuwait</i>	AIDS	1987
<i>Centre collaborateur de l'OMS pour le Diagnostic du SIDA en Laboratoire, Casablanca, Morocco</i>	AIDS	1992
<i>Centre collaborateur de l'OMS pour la Prevention de la Cécité, Tunis, Tunisia</i>	Blindness	1983
<i>WHO Collaborating Centre for Prevention of Blindness, Riyadh, Saudi Arabia</i>	Blindness	1985
<i>WHO Collaborating Centre for Prevention of Blindness, Rawalpindi, Pakistan</i>	Blindness	1993
<i>WHO Collaborating Centre on Research and Training in Breast-feeding, Teheran, Islamic Republic of Iran</i>	Breast-feeding	1996
<i>WHO Collaborating Centre for Cancer Control and Lymphoma Research, Kuwait, Kuwait</i>	Cancer	1987
<i>WHO Collaborating Centre for Cardiovascular Diseases, Teheran, Islamic Republic of Iran</i>	Cardiovascular disease	1973
<i>WHO Collaborating Centre for Cardiovascular Diseases, Karachi, Pakistan</i>	Cardiovascular disease	1988
<i>WHO Collaborating Centre for International Classification of Diseases, Kuwait, Kuwait</i>	Classification of diseases	1994
<i>WHO Collaborating Centre for Treatment, Education and Research in Diabetes and Diabetic Pregnancies, Karachi, Pakistan</i>	Diabetes	1991
<i>WHO Collaborating Centre for Research and Training in Diabetes Programme Development, Muscat, Oman</i>	Diabetes	1992
<i>WHO Collaborating Centre for Diabetes Research, Education and Primary Health Care, Amman, Jordan</i>	Diabetes	1998
<i>WHO Collaborating Centre for Regulation and Registration of Drugs, Ministry of Health, Tunis, Tunisia</i>	Drugs	1998
<i>WHO Collaborating Centre for Educational Development of Medical and Health Personnel, Teheran, Islamic Republic of Iran</i>	Educational development	1995
<i>WHO Collaborating Centre for Educational Development of Health Personnel, Karachi, Pakistan</i>	Educational development	1996
<i>WHO Collaborating Centre for Research and Training in Educational Development, Wad Medani, Sudan</i>	Educational development	1996

**WHO collaborating centres in the Eastern Mediterranean Region
as at February 1999 (continued)**

Title	Field date	Designation
<i>WHO Collaborating Centre for Environmental Health Engineering, Lahore, Pakistan</i>	Environmental health	1997
<i>FAO/WHO Collaborating Centre for Food Contamination Monitoring, Cairo, Egypt</i>	Food safety	1977
<i>FAO/WHO Collaborating Centre for Food Contamination Monitoring, Doha, Qatar</i>	Food safety	1979
<i>WHO Collaborating Centre for Haemoglobinopathies, Thalassaemias and Enzymopathies, Riyadh, Saudi Arabia</i>	Genetic blood disorders	1991
<i>WHO Collaborating Centre for Community Control of Thalassaemia, Nicosia, Cyprus</i>	Genetic blood disorders	1986
<i>WHO Collaborating Centre for Health and Biomedical Information, Teheran, Islamic Republic of Iran</i>	Health and biomedical information	1993
<i>WHO Collaborating Centre on Health Education, Sana'a, Republic of Yemen</i>	Health education	1997
<i>WHO Collaborating Centre for Health Management, Riyadh, Saudi Arabia</i>	Health management	1993
<i>WHO Collaborating Centre for Research in Human Reproduction, Alexandria, Egypt</i>	Human reproduction	1974
<i>WHO Collaborating Centre for Research in Human Reproduction, Karachi, Pakistan</i>	Human reproduction	1976
<i>WHO Collaborating Centre for Health Manpower Development, Ismailia, Egypt</i>	Human resources development	1988
<i>Centre collaborateur de l'OMS pour la Recherche et la Formation en Immunologie, Tunis, Tunisia</i>	Immunology	1982
<i>Centre collaborateur de l'OMS pour Recherche et Formation en Leishmaniose, Tunis, Tunisia</i>	Leishmaniasis	1994
<i>WHO Collaborating Centre for Training and Research in Maintenance and Repair of Health Care Equipment, Nicosia, Cyprus</i>	Maintenance and repair of equipment	1987
<i>WHO Collaborating Centre for Research and Training in Malaria and other Vector-borne Diseases, Cairo, Egypt</i>	Malaria	1981
<i>WHO Collaborating Centre for Research and Training in Mental Health, Rawalpindi, Pakistan</i>	Mental health	1987
<i>Centre collaborateur de l'OMS pour la Recherche et la Formation en Santé mentale, Casablanca, Morocco</i>	Mental health	1992
<i>WHO Collaborating Centre for Research and Training in Mental Health, Cairo, Egypt</i>	Mental health	1993
<i>WHO Collaborating Centre for Mental Health Teheran Institute of Psychiatry, Teheran, Islamic Republic of Iran</i>	Mental health	1997

**WHO collaborating centres in the Eastern Mediterranean Region
as at February 1999 (continued)**

Title	Field date	Designation
<i>WHO Collaborating Centre for Nuclear Medicine, Kuwait, Kuwait</i>	Nuclear medicine	1988
<i>WHO Collaborating Centre for Nursing Development, Manama, Bahrain</i>	Nursing	1990
<i>WHO Collaborating Centre for Nursing Development, Irbid, Jordan</i>	Nursing	1997
<i>WHO Collaborating Centre for Research and Training in Nutrition, specifically on Assessment of Nutrition Status and Iron Deficiency Anaemia, Cairo, Egypt</i>	Nutrition	1992
<i>WHO Collaborating Centre for Research and Training in Nutrition (Nutrition in primary health care and Iodine Deficiency Disorders), Teheran, Islamic Republic of Iran</i>	Nutrition	1992
<i>WHO Collaborating Centre for Occupational Health, Alexandria, Egypt</i>	Occupational health	1972
<i>Centre collaborateur de l'OMS de Recherche et de Formation en Médecine du Travail, Tunis, Tunisia</i>	Occupational health	1992
<i>WHO Collaborating Centre for Research, Training and Demonstration for Oral Health, Damascus, Syrian Arab Republic</i>	Oral health	1986
<i>WHO Collaborating Centre for Research and Training in Oral Health, Karachi, Pakistan</i>	Oral health	1992
<i>WHO Collaborating Centre for Pesticide Analysis, Karachi, Pakistan</i>	Pesticide analysis	1988
<i>Centre collaborateur de l'OMS pour Formation et Recherche en Administration sanitaire et Santé publique, Rabat, Morocco</i>	Public health administration	1993
<i>Centre collaborateur de l'OMS pour Recherche et Formation en Matière de Développement de la Formation des Personnels de la Santé, Tunis, Tunisia</i>	Public health administration	1994
<i>WHO Collaborating Centre on Quality Assurance for Clinical Laboratories, Teheran, Islamic Republic of Iran</i>	Quality assurance	1994
<i>WHO Collaborating Centre for Reference and Research on Rabies, Teheran, Islamic Republic of Iran</i>	Rabies	1973
<i>WHO Collaborating Centre for Radiation Protection, Rabat, Morocco</i>	Radiation	1998
<i>WHO Collaborating Centre for Management of Renal and Urological Disorders, Mansoura, Egypt</i>	Renal and urological disorders	1993
<i>WHO Collaborating Centre for Schistosomiasis Control, Cairo, Egypt</i>	Schistosomiasis	1986

Annex 5

**WHO collaborating centres in the Eastern Mediterranean Region
as at February 1999 (concluded)**

Title	Field date	Designation
<i>WHO Collaborating Centre for Traditional Medicine, Khartoum, Sudan</i>	Traditional medicine	1984
<i>WHO Collaborating Centre for Transfusion Medicine, Amman, Jordan</i>	Transfusion medicine	1995
<i>WHO Collaborating Centre for Transfusion Medicine, Tunis, Tunisia</i>	Transfusion medicine	1995
<i>WHO Collaborating Centre for Tuberculosis, Teheran, Islamic Republic of Iran</i>	Tuberculosis	1993
<i>Centre collaborateur de l'OMS pour la Recherche et de la Formation dans la Domaine de l'Approvisionnement en Eau potable, Rabat, Morocco</i>	Water supply	1993
<i>WHO Collaborating Centre for Research and Training in Viral Diagnostics, Islamabad, Pakistan</i>	Virology	1982
<i>WHO Collaborating Centre for Virus Reference and Research, Kuwait, Kuwait</i>	Virology	1984