International Journal of Occupational Medicine and Environmental Health, Vol. 10, No 2, 113–139, 1997

OCCUPATIONAL AND ENVIRONMENTAL HEALTH POLICY

IMPLEMENTATION OF THE WHO GLOBAL STRATEGY FOR OCCUPATIONAL HEALTH FOR ALL

PLAN OF ACTION

covering the specific period 1996–2001

PART I

The WHO Executive Board, at its Ninety-Seventh Session, in January 1996, recognized the vital role of occupational health in sustainable development and public health as a whole, endorsed the WHO Global Strategy for Occupational Health for All (Resolution EB97.R6). In May 1996, the World Health Assembly discussed occupational health and adopted a resolution on the WHO Global Strategy for Occupational Health for All (WHA49.12), requesting the Director-General to promote the implementation of the Global Strategy for Occupational Health for All within the framework of the Ninth General Programme of Work. Member States were urged to devise national programmes on occupational health for all, based on the global strategy, with special attention to pull occupational health services for the working population, including migrant workers, workers in small enterprises, in the informal sector, and for other occupational groups at high risk and with special needs, including children at work. Therefore, the draft Plan of Action for the Implementation of the WHO Global Strategy for Occupational Health for All has been prepared. The description of all 10 objectives of the global strategy, at both the international and national levels, are merged with appropriate activities of WHO and other contributing organizations. The Global Network of the WHO Collaborating Centres in Occupational Health is given a special role in the implementation of the global strategy.

INTRODUCTION

The majority of the world's population (58%) spend one-third of their adult life at work, thus contributing actively to the development and well-being of society. The workplace is often a dangerous environment, thus work may have both positive and adverse effects on the health of the working population. The negative health outcome of work-related occupational hazards, which consists of 120 million occupational injuries with 200,000 fatalities, one million permanent disabilities and about 157 million occupational diseases due to exposure to physical, chemical, biological and other occupational hazards, leads to a tremendous economic burden in countries. However, 20%–50% of working people in developed countries, and 80%–90% in developing countries have no access to adequate occupational health services.

A Global Strategy for Occupational Health for All, as a common vision and instrument to mitigate the adverse effects of occupational hazards and to meet emerging problems has been developed through the global network of the WHO

Collaborating Centres in Occupational Health, with the participation of 52 Collaborating Centres from 35 countries worldwide, as well as the main UN agencies (ILO, UNDP), and NGOs, such as ICOH, IOHA, IEA and others. The WHO Global Strategy for Occupational Health for All was developed along the lines of four policy orientations of the WHO Ninth General Programme of Work, covering the period 1996–2001, bearing in mind the following basic principles:

1) Occupational health and safety is an integral component of the health concept, which is part of socioeconomic development.

2) Occupational health and safety at work is a fundamental human right and worldwide social goal.

3) Political commitment for a nation as a whole, and not only Ministry of Health and/or Ministry of Labour is essential for the attainment of Occupational Health for All.

4) Participation of all parties in the planning and implementation of health and safety at work through an intersectoral coordinating multidisciplinary body is a key factor.

On the basis of a situation analysis using available indicators, the Global Strategy identifies the most evident needs for improvement of occupational health and safety, including priority areas at national and international levels, and lists the following 10 major priority objectives for action at the national and international level:

1) Strengthening of international and national policies for health at work and developing the necessary policy tools.

2) Development of a healthy work environment.

3) Development of healthy work practices and promotion of health at work.

4) Strengthening of occupational health care services.

5) Establishment of appropriate support services for occupational health.

6) Development of occupational health standards based on scientific risk assessment.

7) Development of human resources for occupational health.

8) Establishment of registration and data systems; development of information services for experts, effective transmission of data and raising of public awareness through public information.

9) Strengthening of research.

10) Development of collaboration in occupational health with other organizations.

The WHO Global Strategy for Occupational Health for All is a new step forward, covering the period 1996–2001, and a practical and integrated response to meet the challenges and emerging problems of occupational health in the years to come. With its ten objectives, it provides:

– an organization-wide strategy and objectives in occupational health,

– a unifying framework in technical cooperation and action programmes at the international and country level,

– a tool to create awareness and political commitment at all levels,

– a mechanism to promote international collaboration and intersectoral cooperation and coordination.

Political action for the implementation of the Global Strategy is a crucial element at the national and international level. At the global level, it has been endorsed by the WHO Executive Board (Resolution EB97.R6) at its 97th Session

in January 1996, and adopted by the World Health Assembly in May 1996 (WHA49.12). The key to successful implementation of the Global Strategy is the involvement of all partners at all levels, such as the ILO and other UN agencies concerned, nongovernmental organizaions, such as ICOH and its scientific committees, IOHA, IEA, ISSA, national professional associations, trade unions, employers' and industrial associations.

The Global Network of the WHO Collaborating Centres will play a special role in the implementation of the Global Strategy, which will become a major term of reference of each collaborating centre. Many centres will also play an important role at the international level.

The Plan of Action for Implementation of the Strategy at the international level, with a description of the major areas of work at the national level, has been developed along the 10 strategy objectives listed above. It constitutes the first part of the Plan of Action for implementation of the Global Strategy.

The second component (Part II) of the Plan of Action is the contribution of the Global Network of the WHO Collaborating Centres in Occupational Health. It will be developed after the Third Meeting of the WHO Collaborating Centres in Occupational Health, which will be held in April 1997.

STRATEGY OBJECTIVE 1: STRENGTHENING OF INTERNATIONAL AND NATIONAL POLICIES FOR HEALTH AT WORK AND DEVELOPMENT OF POLICY TOOLS (Table)

Globalization of the economy, and political and socioeconomic changes in the last decade created new realities with new problems for health care systems, and for occupational health in particular. Rapid changes in socioeconomic structures, technologies and demography, have seen the emergence of new occupational health needs and should be taken into consideration in making policies. The majority of the world's work force is still not served by adequate occupational health services and the "silent" epidemics of occupational diseases continues. Therefore, there is evident need to strengthen international and national policies for health at work and to develop policy tools.

Areas of action — international

A strong occupational health element should be included in all WHO policy programmes and plans, including the 9th General Programme of Work.

WHO will provide stimuli and support to Member States in the preparation of appropriate occupational health policies and programmes by transmitting information from international experience and from other countries. This is needed particularly in the developing and newly industrialized countries, and in the economies in transition.

Areas of action — national

National policy and programmes for the further development of occupational health should be reviewed and prepared in collaboration with government and social partners. Without prejudicing the primary responsibility of the employer for health and safety at work, government policy, legal actions and enforcement are needed to

ensure minimum levels of health and safety in all sectors of the economy, including small-scale enterprises, the informal sector, agriculture and the self-employed. Occupational health programmes should be considered integral components of socioeconomic development. Guidance given by WHO and ILO policy documents should be used when appropriate. A national programme for developing occupational health should include:

– updating of legislation and standards,
– definition and, if needed, strengthening of the role of the competent authority,
– emphasis on the primary responsibility of the employer for health and safety at work,
– establishment of mechanisms for tripartite collaboration between government, employers and trade unions for implementation of national occupational health programmes,
– education, training and information of experts, employers and workers,
– developmet of occupational health services,
– analytical and advisory services,
– research,
– development and, if needed, establishment of registration systems of occupational accidents, diseases and, if possible, exposures,
– action to ensure collaboration between employers and workers at the workplace and enterprise level.

The national occupational health system is realized at the enterprise level and at the local level in the form of occupational health services provided by occupational health teams in collaboration with employers and workers.

STRATEGY OBJECTIVE 2: DEVELOPING THE HEALTHY WORK ENVIRONMENT (Table)

Occupational health problems are to a great extent derived from hazardous factors in the work environment. In most countries, hazardous exposures and factors that have adverse effects on the health of workers are still found in high numbers of workplaces. The achievement of targets for equity in health stipulated in the WHO Health-for-All strategy requires intensive actions for better work environments in virtually every country. Most hazardous conditions at work are in principle preventable and the primary prevention approach is the most cost-effective strategy for their elimination and control. Criteria and actions for the planning and design of healthy and safe work environments that are conducive to physical, psychological and social well-being should be considered. With guidance and support from WHO, other international organizations and professional NGOs, countries will include in their national occupational health programmes a strong element for improvement of the physical and psychological work environment by using the primary prevention approach.

Areas of action – international

By using international scientific and expert support, together with support from other relevant programmes within WHO and outside, WHO will produce

scientifically based guidelines for primary prevention of priority occupational hazards and should generate health-based criteria, standards and guidelines for the development of healthy work environments. Full use of the outputs of IPCS will be made. Collaboration will be strengthened between the WHO Workers' Health Programme and professional NGOs, such as the International Commission on Occupational Health (ICOH) and International Occupational Hygiene Association (IOHA) and International Ergonomic Association (IEA), trade unions and others.

Areas of action – national

Every country should carry out national surveys representative of all workplaces and occupations and examine the occurrence, distribution and levels of occupational health and safety hazards and thus identify priority problems.

Within the framework of national occupational health policy and programmes, strengthened national actions should be initiated with clear objectives for reduction and prevention of priority hazards at work, such as high-risk chemical and physical exposures and unreasonable physical workload of psychological workloads that lead to severe occupational accidents and diseases.

For the establishment and planning of new work environments, health-based criteria should be given to planners, designers and builders.

STRATEGY OBJECTIVE 3: DEVELOPMENT OF HEALTHY WORK PRACTICES AND PROMOTION OF HEALTH AT WORK (Table)

Many occupational hazards can be effectively avoided and controlled through the adoption of appropriate working practices by the worker and through providing him or her with information, tools, work organization and work aids that enable the performing of work tasks without risk to health. This requires knowledge of health hazards at work and how to reduce and avoid these hazards. In some instances, personal protective devices may be needed. The introduction of healthy and safe work practices requires the development, validation and distribution of guidelines, codes of practice, effective education and counselling methods.

Workers' lifestyles may have a specific or general impact on their occupational health and safety and working capacity. Health education on avoiding the combined effects of lifestyle factors and occupational exposures should be effectively provided. Health promotion that introduces healthy lifestyles and supports the maintenance of such lifestyles with appropriate information, counselling and educational measures should be undertaken and should preferably be included in occupational health services programmes. Health promotion should be directed particularly to the maintenance of the working capacity of the workers.

Areas of action – international

WHO will provide health education, information and health promotion, as well as information and training materials and model programmes for:

– strengthening working capacity and providing guidance in healthy and safe working practices providing guidelines for general health education, information and promotion campaigns that introduce healthy lifestyles among the working population.

Areas of action – national

The national occupational health programme should encourage occupational health institutions and experts to include health promotion as an element of occupational health programmes in enterprises. The primary responsibility for this activity should lie with occupational health services and, where appropriate, collaboration with other bodies active in health promotion should be considered.

Health education for the adoption of healthy and safe working practices and for avoiding lifestyles hazardous to health and working capacity should be provided to workers as an integral element of occupational health services.

Occupational health personnel should be given training and education in promotion to enable them to carry out these activities as a part of their occupational health practice.

STRATEGY OBJECTIVE 4: STRENGTHENING OF OCCUPATIOAL HEALTH SERVICES (OHS) (Table)

In many developing and newly industrialized countries, no more than 5%–10% of the working population, and in several industrialized countries, less than 50%, have access to adequate OHS in spite of the evident needs. Yet, the emerging problems of occupational health call for the development of OHS for all workers in all sectors of the economy and in all enterprises, as well as for the self-employed. Some industrialized countries have successfully achieved this objective in accordance with ILO Convention No. 161 on Occupational Health Services, and WHO Resolutions on comprehensive occupational health services, and have found the programme both feasible in terms of health and sustainable development from the economic point of view.

Modern occupational health services draw from each relevant profession, discipline or science – be it biomedical or environmental – all the required elements and integrates them into a comprehensive multidisciplinary approach aimed at the protection and promotion of workers' health through actions related both to the work environment and to the workers themselves. Disciplines relevant for OHS include occupational medicine and nursing, occupational hygiene, work physiology and physiotherapy, ergonomics, safety and work psychology.

Areas of action – international

– WHO will include in its programme on occupational health a special element for the development of OHS for all working people.

– Guidelines for the organization and implementation of such services will be provided by WHO in collaboration with other relevant bodies.

– Special emphasis will be given to the development of OHS for small-scale enterprises and the self-employed, including agricultural workers.

– International technical and information support will be allocated through WHO Regional Offices to facilitate development of OHS at the national level.

– In this action, various service provision models, including the primary health care approach, will be used where available and appropriate.

Areas of action – national

– Each country should include in its national occupational health policy and programme objectives and actions for the gradual development of OHS for all workers, starting from those at highest risk and those in underserved groups.

– The preventive approach should be given the highest priority.

– Countries are encouraged to provide support services and other infrastructures needed for development of multidisciplinary OHS.

– Due consideration should be given to the needs of OHS for the self-employed, agricultural workers, persons employed in small-scale enterprises, migrant workers and those in the informal sector. In most instances, such services can be provided by primary health care units specially trained in occupational health.

STRATEGY OBJECTIVE 5: ESTABLISHMENT OF SUPPORT SERVICES FOR OCCUPATIONAL HEALTH (Table)

Effective occupational health practice requires not only the front-line OHS at enterprise and local level, but also several expert services that individual companies or workplaces may not afford to sustain. Expert advisory and analytical services of occupational hygienists, ergonomists, psychologists, physiologists, safety engineers, and toxicologists, among others, will be needed. Many countries have organized such services in institutes of occupational health, but many others rely on services provided by universities, large industries or individual consultancies. However they are organized, support services should be available for all practitioners in OHS. In all steps of occupational health practice the principles of total quality management and continuous quality improvement should be followed.

Areas of action – international

– WHO will give guidance and transmit experience and, if necessary, give advice to countries on why and how to organize expert services for occupational health.

– International collaboration between experts providing these services will be encouraged to facilitate the development of their professional expertise.

– The need for research back-up for the development of expert services will be considered by WHO and other international organizations.

– Systems for developing and maintaining good scientific-technical quality in all services and methods employed in occupational health activities will be ensured by WHO and the international professional bodies.

Areas of action – national

– Governments and authorities responsible for occupational health should ensure the availability of expert services for OHS by guaranteeing the availability of expert institutions with the necessary capacity and manpower.

– Development of expert services should be part of the national programme for occupational health.

– The potential shortage of experts should be considered in the planning of training curricula and programmes for occupational health.

– A national quality assurance and quality management element should be included in occupational health programmes and appropriate training should be provided to responsible personnel.

STRATEGY OBJECTIVE 6: DEVELOPMENT OF OCCUPATIONAL HEALTH STANDARDS BASED ON SCIENTIFIC RISK ASSESSMENT (Table)

To ensure minimum levels of health and safety at work, standards which define the safe levels of various exposures and other conditions of work are needed. The standards also serve as a reference for assessment of the of monitoring and provide guidelines for planners. In the future development of standards, the high variation in workers' sensitivity to occupational exposures should be considered. The fact that many individuals are not what is considered to be "average" should be taken into account. A relevant scientific basis for setting standards should be ensured through collaboration with research organizations.

Areas of action international

– WHO will continue its efforts to produce principles and scientific bases for health-based standards concerning the major occupational exposures and other conditions of work, including chemical, physical, biological and ergonomic factors. Full use of the outputs of other programmes and various professional NGOs will be made.

– Guidelines will be provided on principles for the development of psychosocial quality of work.

– Research needed for setting standards will be strengthened.

– As far as appropriate and possible, WHO will facilitate and encourage international collaboration and international harmonization of standards.

Areas of action – national

– By using guidance and support from international organizations and relevant professional and scientific communities, each country should adopt a basic set standards to be used as criteria for the evaluation of the occupational health and safety aspects of various exposures, including chemical, physical, biological and ergonomic factors. Where formal standards are not feasible or appropriate, guidelines and codes of practice should be prepared (e.g. on psychological factors).

– Production of standards and limit values for occupational exposures, which should be included as elements of national occupational health programmes.

– Collaboration with bodies responsible for occupational health and safety with employees' and workers' organizations should be ensured when standards are being set.

– Countries should collaborate in the production of a scientific basis for standards.

STRATEGRY OBJECTIVE 7: DEVELOPMENT OF HUMAN RESOURCES FOR OCCUPATIONAL HEALTH (Table)

Occupational health is a broad expert activity that utlizes the basic knowledge of several other disciplines, such as medicine, chemistry, physics, toxicology, physiology, psychology and safety technology. Competent occupational health activities require appropriate training in these fields.

Many of the industrialized countries have trained sufficient numbers of occupational medical experts to provide one physician per 2000–3000 workers and about one nurse per 1000–2000 workers (with a wide range of variation). Many European countries and those of North America, as well as Australia and Japan, have established special diploma curricula in occupational health, and some countries require specialization or diploma as a condition for the right to carry out occupational health practice. Special training in occupational health is available for nurses in most countries.

The training of specialists other than medical experts for the multidisciplinary occupational health team is much less systematically organized in most countries. Special curricula for occupational hygiene are available in six European countries and in the United States and Canada. WHO has defined the profile of the occupational hygienist on the basis of defined areas of knowledge in an effort to promote international harmonization of training curricula. Training of physiotherapists specialized in occupational health is also available in some countries while the special training of occupational psychologists is rare. For many western European countries, training of safety engineers is well organized. There is universal shortage of both expert resources and training in developing and newly industrialized countries. This is due to three main reasons:

a) lack of effective legislation and lack of requests from authorities and employers make the employment opportunities for such experts minimal.

b) In the absence of requests, vocational training institutions and universities have not organized and developed curricula for the training of experts in occupational health.

c) In some instances, where training is available, it is oriented to clinical occupational medicine only which, though important, does not give full response to the needs for expertise in a preventive workplace-oriented occupational health service.

Equally important is the awareness and knowledge of managers and foremen of the key principles of occupational health and safety. The awareness, knowledge and skills of workers and the self-employed are key factors for appropraiate safety and health behaviour and for adopting safe working practices. There is a universal need for training in the basic principles of occupational health and safety for workers who need such knowledge in their everyday work and employers who decide on the organization of work and other working conditions. In such guidance, the need for a multidisciplinary approach should be specially addressed.

Areas of action – international

WHO will include in its programme on occupational health a specific element on the training of various groups of experts in occupational health.

– In collaboration with scientific communities, other international bodies such as ILO, ICOH and IOHA, and by using support from the network of the WHO Collaborating Centres in Occupational Health and relevant professional associations, WHO will prepare appropriate guidelines for training curricula for key expert groups in occupational health.

– Where individual countries are not able to carry out appropriate training programmes at national level, WHO will establish regional and subregional training programmes for training and education of experts in occupational health through its network of Collaborating Centres in Occupational Health and, when appropriate, through its special programmes such as EHG, GEENET and GET NET, and through its Regional Offices in particular.

– Countries with well-established training capacities in occupational health will be encouraged to provide expert advice and support in the organization of such training programmes subregionally or bilaterally.

Areas of action – national

– Each country should include in its national programme on occupational health an element of training of sufficient numbers of experts to implement the national programme and to ensure sufficient personnel resources for OHS.

– Governments should ensure that the necessary elements of occupational health will be included in the basic training curricula of all who may in the future deal with occupational health issues.

– Training in occupational health should also be given in connection with vocational training and in training programmes for workers, employers and managers.

– In all training, the need for a multidisciplinary approach in occupational health should be taken into consideration, ensuring involvement of occupational medicine and nursing, occupational hygiene, ergonomics and work physiology, occupational safety and other relevant fields.

OBJECTIVE 8: ESTABLISHMENT OF REGISTRATION AND DATA SYSTEMS, DEVELOPMENT OF INFORMATION SERVICES FOR EXPERTS, EFFECTIVE TRANSMISSION OF DATA, AND RAISING OF PUBLIC AWARENESS THROUGH PUBLIC INFORMATION (Table)

Analysis of reliable data and establishment of trends in occupational health, as well as recognition of priorities at national and local level are of utmost importance both for decision-making on policies and for occupational health practice.

There should be at least one well-development focal point with sufficient library resources and modern data systems for the country. This focal point should be linked with international information and data networks. Progressive development of national networks is currently needed to provide technically feasible and cost-effective solutions.

Occupational health practice, training, research and communication are critically dependent on an effective supply of scientific and practical information and the availability of relevant databases. Such databases and information services are needed for each country and for each occupational health team. CD-ROM technology is able to provide relevant international data banks to individual experts

at a reasonable cost. Several information networks also serve experts in specific fields such as toxicology, medicine, chemistry and technology. Access to information systems for experts in each country should be taken as an objective of the national occupational health programme. Information networks can also be developed on a subregional or regional basis.

Provision of CD-ROM information services to key institutions in each Member State is a realistic objective and could be realized through, for example, the network of the WHO Collaborating Centres in Occupational Health and, if appropriate, in collaboration with ILO International Safety and Health Information Centre (CIS), IPCS and the International Register of Potentially Toxic Chemicals (IRPTC). Multilateral and bilateral collaboration in transmission of information and sharing of experiences between countries and institutions will be further developed by the network.

Much progress in the prevention of occupational health hazards has been made thanks to identification of adverse health effects by epidemiological research. It usually takes a long time before sufficient numbers of cases are noted and properly analysed. Because of this, control actions have often been made *post hoc*, particularly in instances where health outcomes were uncertain or unknown. New observations are occasionally made on occupational hazards, injuries and diseases that have not been reported before or that were not known to be work-related. Preventive action is often delayed due to the uncertainty of the etiology of the problem. Collection of reports of new cases into an international data bank may help in planning and organizing multicentre studies or studies using pooled data. Such a data bank of interesting reports of new cases could be organized within the framework of the network of the WHO Collaborating Centres in Occupational Health.

Data on the demography of working populations, on economic activities and enterprises, on occupational diseases and accidents, and on the most important exposures and outcomes such as cancer are of vital importance for carrying out occupational health activities, for analysing trends and setting priorities for prevention and control, and for carrying out epidemiological and other types of research. In most countries, registers of data on occupational health and safety do not cover the whole working population and are not accurate enough for practical purposes. The development of occupational and environmental data registers for each country has been recommended recently by the Second European Conference on Health and Environment and by several working groups of WHO, but further efforts should be made to meet the needs of occupational health.

Awareness of the needs and objectives of occupational health among the public at large, decision-makers, politicians, employers and workers is of utmost importance for decision-making and action. Several countries have established effective information activities for public information by using journals, other written information and electronic communication media.

Areas of action — international

— WHO should, in collaboration with CIS/ILO and other relevant bodies, prepare guidelines for registration of occupational diseases and accidents and, if appropriate and feasible, for collection of data on other important aspects of

occupational health, including priority exposures. Development of national data systems should be supported by appropriate training.

– Establishment of international data banks on new observations of occupational hazards and outcomes should be undertaken by the network of the WHO Collaborating Centres in Occupational Health.

– WHO should collaborate with CIS/ILO, IPCS and IRPTC to provide Member States with appropriate CD-ROM information sstems by using the network of the WHO Collaborating Centres in Occupational Health, CIS and IRPTC focal points.

Areas of Action – national

– Each country should review its data and registration systems of occupational diseases and accidents and, if necessary, by the year 2000 develop them to fully cover basic occupational health and safety data, with the assistance of international organizations. The comparability of data should be ensured by collaboration between the countries through WHO or bilaterally.

– Each country should, through its WHO Collaborating Centres, link into the WHO data bank of new occupational hazards and outcomes.

– Each country is encouraged to join the WHO/ILO project for a CD-ROM data bank on occupational health and safety and distribute this data to its appropriate national networks. At least one focal point with such a data bank should be found in each country by the year 1997.

– A public information element should be included in the programme for occupational health and information. Media should be effectively supplied with scientific information on occupational health and safety by national research institutions and professional bodies.

OBECTIVE 9. STRENGTHENING OF RESEARCH (Table)

Research is critical to the development of occupational health administration and planning, training and education, risk identification, assessment and practice. Much support is obtained from international research centres on occupational health. Because many occupational health problems vary according to national circumstances and practices, and in order to ensure the effective transfer of the results of international research and practice to the national level, each country needs national research programmes in occupational health. Most industrialized countries have delegated responsibility for such research to a national institute of occupational health or to a special department of occupational health in a university. The oldest institutes of occupational health were established in industrialized countries 50–70 years ago, while most developing countries do not have such a centre although their needs may be even more evident than hose of industrialized countries. The main tasks of such a centre are the following:

a) to provide the necessary critical mass of scientific and expert human resources that can offer expert support to national programmes and transfer international knowledge into the country;

b) to provide scientific and advisory support for policy-makers and decision-makers in the development of occupational health;

c) to support and guide the development of provincial, local and company programmes in occupational health;

d) to provide research, training, information and service support for all involved in the development of occupational health.

While well-established in many industrialized countries, the experience of institutions in countries such as China, India and Thailand, is highly positive.

Areas of action – international

– WHO will encourage countries to establish and strengthen the national centre of excellence for occupational health, such as institute of occupational health or other bodies. The centre could further facilitate the development of other centres within the country, thus leading gradually to a national network.

– Where needed, WHO will transmit information and experience and provide expert assistance in the establishment of national centres.

– Each centre is encouraged to join the Network of the WHO Collaborating Centres in Occupational Health.

– By the year 2000, the majority of countries that have not yet established a national centre of occupational health will have such an institution in operation and will have joined the network of the WHO Collaborating Centres in Occupational Health.

– With the assistance of its network of Collaborating Centres in Occupational Health, WHO will stimulate and coordinate research of global importance in occupational health, such as the provision of scientific basis for standard setting and assessment of occupational health risks.

Areas of action – national

– Each government should establish or strengthen its national centre for occupational health and, if appropriate, the network of centres.

– Each country should have at least one such centre functional by the year 2000.

– Such a centre should be given the responsibility of carrying out research, information, training, and if appropriate, advisory and analytical and measurement services in support of occupational health practice.

– The national research programme for surveying the occupational health and safety situation, for developing competence and methodology in occupational health and for responding to national occupational health problems should be a part of the national occupational health programme.

– Effective international collaboration in research should be ensured by collaboration with the international scientific community, including the ICOH Scientific Committees and within the context of the network of the WHO Collaborating Centres.

OBJECTIVE 10: DEVELOPMENT OF COLLABORATION IN OCCUPATIONAL HEALTH AND OTHER ACTIVITIES AND SERVICES (Table)

Successful implementation of the Global Strategy requires close collaboration between WHO/OCH and several other organizations, such as ILO, ICOH and many NGOs. Collaboration within WHO is also necessary with counterparts including IPCS, the programmes for communicable and non-communicable diseases, environment and health, and health promotion, and above all close work with the Regional Offices.

Occupational health activities have several links with other parallel activities, such as occupational safety, environmental health and environmental protection, primary health care and specialized hospital-based health care. In certain special situations, such as emergency response, occupational health activities are expected to collaborate intensively with several other services, such as rescue groups, fire services and police. In all such collaborative links the role of occupational health experts is to provide expert knowledge on potential hazards in the work environment and their effects on the health of workers. Occupational health experts often also have much experience of the practical prevention of hazards. Collaborative arrangements with neighbouring services may vary according to country and local conditions, but such links should always be established and maintained for the benefit of all the collaborating partners.

In developing occupational health practices for special groups, such as farmers, the self-employed, small-scale industries and home industries, collaborative links may be needed with various extension organization, industrial associations and several nongovernmental voluntary organizations. Such links may facilitate the implementation of occupational health programmes among economic activities that are more informal and more difficult to reach than conventional well-organized industry and service enterprises.

Areas of action – international

– WHO will further develop its collaboration with ILO by providing health-related input to ILO's work and more specifically to the joint ILO/WHO Committee on Occupational Health and to CIS/ILO. Collaboration with the International Social Security Association (ISSA) is also relevant for occupational health and related social security issues.

– WHO/OCH will develop and maintain its close working relations and practical collaboration with all relevant units within the Organization, including PCS/IPCS and the Programme for Promotion of Environmental Health.

– WHO/OCH will maintain and develop the Network of the WHO Collaborating Centres in Occupational Health and should encourage additional countries to joint the network.

– Collaboration with UNCED activities, and particularly with CSD and UNEP, will be further developed.

– Collaboration between WHO and NGOs, employers' confederations, trade unions, businesses, industries, environmental groups and, above all, with international professional bodies such as ICOH, IEA and IOHA, will be further developed and strengthened.

Areas of action – national

– Each country should establish a focal point for WHO occupational health programmes.

– Each country should establish a national body to ensure multisectoral collaboration in occupational health and to encourage the participation of other health sectors, i.e., the Ministry of Labour, environmental health groups and relevant professional bodies.

– The establishment of a national network of actors in occupational health is recommended and should be supported by the WHO Collaborating Centres with information, training, education and, if necessary, service. The WHO Collaborating Centres in Occupational Health have a central role in the development of occupational health and safety at both national and international levels.

– Collaboration between occupational health bodies and representatives of the national scientific community and training and education institutions, should be encouraged.

– Tripartite collaboration between government, employers and trade unions in the implementation of occupational health activities should be ensured by the establishment of formal links with these bodies.

– Collaboration with national NGOs and professional bodies is envisaged.

– Collaboration should be encouraged with extension and promotion organizations and with industrial and trade associations.

PARTNERS FOR THE IMPLEMENTATION OF THE GLOBAL STRATEGY

The implementation of the Global Strategy needs a widespread collaborative network to translate policy objectives into practical action. WHO/OCH has prepared a Plan of Action in close collaboration with the Regional Offices. Consideration will be given to cost-effectiveness and optimal impact.

Other international organizations relevant in the field of occupational health will be invited to contribute to implementation of the objectives of the Global Strategy. For this, systematic dissemination of information, using modern electronic media will be strengthened.

Further activation of the Network of the WHO Collaborating Centres is a mechanism whereby the Collaborating Centres direct their activities to support the work of WHO/OCH. The network of WHO Collaborating Centres has committed itself to providing support in technical and scientific activities of workers' health programme. Effective and productive networking can best be built on collaboration established on the basis of genuine interest of institutions and experts. Conducting joint research projects, carrying out training activities, or making the network fully operative requires collaboration and good coordination. The Planning Group and WHO/OCH are therefore expected to take a strong leadership role in proposing programme priorities and facilitating agreement on the division of work among the Collaborating Centres.

Partner organizations at different levels

UN – Global and Regional:	WHO, ILO, UNEP, UNDP, UNIDO, IAEA, IPCS
NGOs – Global:	ICOH and its 27 Scientific Committees, IOHA, IEA, IAAMRH
NGOs – Regional:	AOHA, PAOHA, LAOHA, EOHA
Intergovernmental Organizations:	EU and EF, OECD, Nordic Council, NAFTA
National Level:	National Structure – Ministry of Health, Ministry of Labour, Social Insurance, National Associations, WHO Collaborating Centres, Research Institutions, Universtities, etc.

Global Network of the WHO Collaborating Centres in Occupational Health (55 Centres in 35 countries)

The common contribution of each Collaborating Centre in implementation of the WHO Global Strategy for Occupational Health for All is along fives lines:

1) Formulation of national policy and strategy.

2) International activities, including convening of international conferences, symposia, training courses in occupational health.

3) Regional activities, comprising the organization of regional conferences, symposia, training courses in occupational health.

4) Development and implementation of national programmes on occupational health and safety.

5) Research, training and education.

Table. Implementation of the WHO global strategy for occupational health for All

(Draft) **Plan of Action**

Categorized by the Strategy objectives at the international level

Strategy Objective 1: Strengthening of International and National Policies for Health at Work and Development of Policy Tools

Activities accomplished by WHO/OCH under the Eight General Programme of Work 1990–1995	Continuing and planned activities under the Ninth General Programme of Work, 1995–2001	Inter-related Strategy objectives	Programmes Office	WHO cross-programme links	Other International Organizations
(1)	(2)	(3)	(4)	(5)	(6)
Building up a Global Network of the WHO Collaborating Centres in Occupational Health (52 Centres in 35 countries).	Development and adoption of the WHO Global Strategy for Occupational Health for All		OCH and ROs	EHG, PCS, HEP, AHE, RHB	ILO, UNDP, ICOH, IEA, IOHA
Establishment of the Planning Group of the WHO Collaborating Centres in Occupational Health:	Development by the 2nd Meeting of the WHO Collaborating Centres.				
Directory of the WHO Collaborating Centres in Occupational Health (two editions).	Adoption by EB.97, Resolution EB97.R6 (January 1996).				
Establishment of the Newsletter of the WHO Collaborating Centres in Occupational Health.	Adoption by WHA (May 1996).				
Adoption of the Declaration for Occupational Health for All (printed in six languages).	Strengthening the mechanism for networking, including use of the INTERNET.				
	Establishment of the WHO/OCH new series of publications "Occupational Health for All".	5, 8, 9	OCH Planning Group, OCH, CCs	EHG, PUB, PCS, HEP, EHG	CIS/ILO, ICOH, ILO ILO/ICOH IEA, IOHA
	Short version for policy, decision-makers and mass media for better understanding (Oct. 1996); with special attention to needs of developing countries and countries in transition.				

Table (contd)

Strategy Objective 1: Strengthening of International and National Policies for Health at Work and Development of Policy Tools

(1)	(2)	(3)	(4)	(5)	(6)
	Presentation of the WHO Global Strategy for Occupational Health for All at global, regional and national fora (World Congress, Madrid (1996); ICOH Congress, Stockholm, 1996; International Conferences, Symposia, etc.).		OCH	HEP, PCS, EHG,	
	Third Meeting of the WHO Collaborating Centres to discuss Implementation of the WHO Global Strategy at national and international levels (April 1997).		OCH	HEP, EHG, PCS, AHE, INF	
	Mobilization of Resources (Meeting of NGOs, Private Industry, IGOs, Foundations, National Agencies for International Development, Geneva 1997).		OCH		ILO, ICOH, IEA, IOHA
	Directory of the WHO CCs in OCH, publication of 3rd edition (1997).				
	Development of Guidelines on National Policy and Strategy Formulation and National Programmes on Occupational Health (1997).		OCH	CCs,	ILO,
	Establishment of Criteria for Monitoring and Evaluating the Strategy Implementation		OCH	CCs, EHG, PCS	ILO, ICOH, IEA, IOHA
	Interagency Meeting on Coordination of Occupational Health Programmes at interna		OCH	CCs, EHG, PCS	ILO, ICOH, IEA, IOHA
	tional level (jointly with ILO).		OCH/ILO	CCs HEP EHG, PCS, RHB, INF	UNEP, UNDP, CCs, etc.
	Intergovernmental Forum on Labour and Health (ILO/WHO, 1999).		OCH		

Strategy Objective 2: Developing Healthy Work Environments					
ILO/WHO Committee on Occupational Health (11th Session).	Joint ILO/WHO Programme on Global Elimination of Silicosis (1996–2010).	3, 4, 6	OCH	EP, RHB	
ILO/WHO Committee on the Health of Seafarers (7th Session).	Occupational Hygiene in Europe – Ensuring Effective Services (OCH/EURO), 1997.	3, 4, 5	OCH, EURO		
ILO/WHO Committee on Occupational Health (12th Session).	National Legislation on Occupational Health (selected models), 1998.	3, 4,	OCH		
Strategy Objective 3: Development of Healthy Work Practices and Promotion of Health at Work					
Guiding Principles on Drug and Worldwide Application in Maritime Industries.	Contribution to HEP Global Conference on Moving Health Promotion to the 21st Century.	1	OCH, CCs	HEP	ILO, ICOH
The Interaction of Smoking and Workplace Hazards – Risks to Health.	HIV/AIDS Prevention in Work Settings (1998–1999). Healthy Lifestyles for Working People (1998–1999).		OCH	DSA	ILO, ICOH, IOHA
Health Promotion at the Worksite – A Brief Survey of Large Organizations in Europe (EURO).	Healthy Company Concept (1997).		OCH	HEP	
Health Promotion in the Workplace: Alcohol and Drug Abuse, TRS No. 833.			OCH	HEP	
Aging and Working Capacity, TRS No. 835.					
The Paths to Productive Aging – Health in the Workplace (International Symposium).					
Worksite Health Promotion: How to go about it (EURO publication).			MNH	OCH	

Table (contd)

(1)	(2)	(3)	(4)	(5)	(6)
Strategy Objective 4: Strengthening of Occupational Health Services					
Occupational Health Services. An Overview (EURO Publication).	Occupational Health Services Infrastructure Covering all the Working Population (1997 – 1998).				
Occupational Health Services in Countries with Transitional Economies.	Joint ILO/WHO Committee on Occupational Health (1998).		OCH		ILO, ICOH
Health Protection and Health Promotion in Small-scale Enterprises.	Enforcement Mechanisms for Compliance with National Occupational Health and Safety Standards (selected models, 1999).				
Workshop on Health Screening and Surveillance of Workers Exposed to Mineral Dusts, Viet Nam.	Health Screening and Surveillance of Workers Exposed to Mineral Dusts (WHO Publication, 1996).	7	OCH	PCS, CCs	ILO
Strategy Objective 5: Establishment of Support Services for Occupational Health					
Health, Safety and Ergonomic Aspects in the Use of Chemicals in Agriculture and Forestry (an International Symposium).	Hazard Prevention and Control in the Work Environment – Airborne Contaminants (1988).	4, 6, 8	OCH, CCs	PCS	ILO, IOHA
International Symposium on Occupational Health Research and Practice Approaches in Small-scale Enterprises.	Hazard Prevention and Control in the Work Environment – Biohazards (1988).	4, 6, 8	OCH, CCs	PCS	ILO, IOHA
	Quality Assurance: Guidelines on Methodology for Evaluation of Occupational Hazards (1997 – 1998).	4, 6, 8	OCH, CCs	PCS	ILO, IOHA
From Research to Prevention. Managing Occupational and Environmental Hazards (International Symposium).	Ergonomics in Occupational Health (1999 – 2000).	4, 6, 8	OCH, CCs	EHG, AHE, RHB	ILO, IOHA

	Monitoring of the Work Environment: Basic Principles and Approaches Related to the Type of Occupational Hazard (1998–1999).	4, 6, 8	OCH, CCs	PCS	ILO, IOHA

Strategy Objective 6: Development of Occupational Health Standards Based on Scientific Risk Assessment

Control Technology in the Formulation and Packing of Pesticides.	Evaluation and Control of Noise Exposure in the Work Environment (1996–1997).	4, 5, 8	OCH, CCs	EHG	
Occupational Exposure Limits for Asbestos. Health Hazards of Glycol Ethers (International Symposium).	Fundamental Principles for the Prevention and Control of Occupational Hazards at the Workplace: physical hazards; chemical hazards, and dusts; biological hazards, ergonomic factors (1996–2001).	4, 5, 8	OCH, CCs		
Work with Display Units (International Conference).	Evaluation of Exposure to Airborne Particles in the Work Environment (2nd edition), 1988.	4, 5, 8	OCH, CCs		
Human Health and Environment: Mechanism of Toxicity and Biomarkers (International Symposium).	Quality Assurance and Proficiency Testing in the Evaluation of Airborne Fibres (1996–1999).		OCH, CCs	PCS	ILO, ICOH
	Biological Monitoring of Chemical Exposure in the Workplace, Volume 1 (1996–1997).	4, 6, 8	OCH, CCs	PCS	ILO, ICOH
	Biological Monitoring of Chemical Exposure in the Workplace, Volume 2 (1996–1997).	4, 6, 8	OCH, CCs	PCS	ILO, ICOH
	Ergonomic Requirements for Office Work With Visual Display Terminals (VDTs) – International Standard ISO/DIS 9241-11	6	ISO		ICOH, IEA

Table (contd)

Strategy Objective 7: Development of Human Resources for Occupational Health

(1)	(2)	(3)	(4)	(5)	(6)
Training in Occupational Health (International Conference organized by CC and co-sponsored by WHO).	Guidelines on Training of Occupational Health Professionals (1997–1998).	9, 10	OCH, CCs		
Occupational Hygiene in Europe – Development of the Profession.	Training, Research Promotion and Information Exchange through international activities, largely delegated to Collaborating Centres in Occupational Health.	9, 10	OCH, CCs		
Training Materials: Guidelines on Specific Occupational Hygiene Subjects.	Multilateral and bilateral collaboration within the Global Network of the WHO Collaborating Centres in Occupational Health (1996–2001).	9, 10	OCH, CCs		
Support national and international training courses on occupational health.					
Prevention and Control Exchange (PACE) – A Document for Decision-Makers (document prepared and already widely circulated).	Prevention and Control Exchange (PACE). Special project using the INTERNET, which includes the following activities:	2, 9, 10	OCH, PI		ILO, IOHA, ICOH
Video on "Simple Control Measures at Work" (with Swedish Institute).	a) PACE – Directory of Resources in the Field of Hazard Prevention and Control in the Work Environment (to be published, as well as disseminated via Internet). b) Booklet with Case Studies on Occupational Hazard Control Solutions for Small Industries. c) Module on Hazard Prevention and Control in the Work Environment – Airborne Contaminants: basic document (manual), one video. d) Applied research on: (1) Control Solutions for Occupational Hazards, applicable to small-				

	-scale enterprises; (2) Substitution of Substance Materials, utilized in selected work processes; (3) Promotion of the "cleaner production" approach. e) Two videos, utilizing the visualization technique, respectively on General Controls (to illustrate the application on specific control measures), and Work Practices. f) Module on Recognition of Occupational Hazards: basic documents and one video. g) Pilot Course with participants from a number of countries, sharing a common language (e.g., selected Latin American countries).		
	Human Resources Development: A National Framework for Capacity-Building in Environmental and Occupational Health.	OCH, EHG	ILO, ICOH, IEA, IOHA

Strategy Objective 8: Establishment of Registration and Data Systems, Development of Information Services for Experts, Effective Transmission of Data, and Raising of Public Awareness through Public Health Information

Early Detection of Occupational Diseases.	ICD-10 and Occupational Diseases (1988–2001).		
Epidemiology of Occupational Health.	Interntionally Accepted Diagnostic Criteria for Occupational Diseases (1998–2001).		ILO, ICOH, IIAs
New Epidemics in Occupational Health (International Symposium).	Updated List of Occupational Diseases (1999–2000).	OCH, ILO	
International Directory of Databases and Data Banks on Occupational Health (2nd edition).	Health Screening and Surveillance of Mineral Dust Exposed Workers (1996).	OCH	ILO, ICOH, IIAs

Table (contd)

Strategy Objective 8: Establishment of Registration and Data Systems, Development of Information Services for Experts, Effective Transmission of Data, and Raising of Public Awareness through Public Health Information					
(1)	(2)	(3)	(4)	(5)	(6)
	Strengthening of Health Surveillance Systems for building National Statistics in Occupational Health; guidelines on notification and reporting system (1998–2001).		OCH, CCs		
	National Information Systems in Occupational Health; model(s) to be developed (1999–2001).		OCH, CCs		ILO, ICOH, IOHA
	International Directory of Databases and Data Banks on Occupational Health (3rd and 4th editions, 1998–2001).		OCH, ICOH		CIS/ILO, ICOH
	Promotion of research in areas of particular importance, such as risk assessment and development of occupational health standards.		OCH, PG	PCS	ILO, ICOH
Strategy Objective 9: Strengthening of Research					
Research has been promoted through international activities of the WHO Collaborating Centres in Occupational Health, and international activities cosponsored aby WHO/OCH:	Promotion of research through the Global Network of the WHO Collaborating Centres (52 Centres in 35 countries).		OCH, PG	HEP, PCS, RHB	ILO, ICOH, IOHA
– International Symposium on Work-Related Diseases Prevention and Health Promotion, Linz, Austria (27–30 October 1992).	Delegation of research activities, areas of new knowledge development to the WHO Collaborating Centres.		OCH, PG	HEP, PCS, EHG PCS	ILO, ICOH

– First Pan-African Conference on Occupational Health, Lusaka, Zambia (15–20 November 1992).	Promotion of Research through the identification of areas for research at international conferences, symposia, congresses.	OCH, PG	ILO, ICOH
– The XII Joint CIGR/IA AMRH/IUFRO International Symposium on Health and Ergonomics Aspects of Safe Use of Chemicals in Agriculture, Kiev, Ukraine (7–11 June 1993).	Encourage countries to establish and strengthen national centres on occupational health.	OCH, PG	ILO, ICOH
– Second International Symposium on Silica, Silicosis and Cancer (WHO/OCH was involved in organizing the symposium), California, USA (28–30 October 1993).	To promote establishment of national research programme through national centres on occupational health.	OCH, PG	ILO, ICOH
– International Symposium on Occupational Health Services for Small Industries, Seoul, Rep. Korea (4–6 November 1993).			
– International Symposium on Health Hazards of Glycol Ethers, Nancy, France (19–21 April 1994).			
– International Conference on Education and Training in Occupational Health, Amsterdam, (24–28 April 1994).			
– International Symposium on New Epidemics in Occupational Health (co-organized), Helsinki (16–19 May 1994).			

Strategy Objective 9: Strengthening of Research

– International Symposium on Occupational Exposure Limits to Electromagnetic Fields (0–300 GHz) (co-organized), Stockholm (22–23 September 1994).			
– International Symposium on Human Health and Environment: Mechanisms of Toxicity and Biomarkers to Assess Adverse Effects of Chemicals, Salsomaggiore, Parma, Italy (25–30 September 1994).			

Table (contd)

(1)	(2)	(3)	(4)	(5)	(6)
Strategy Objective 9: Strengthening of Research					
– Fourth International Scientific Conference on Work with Visual Display Units, Milano, Italy (2–5 October 1994). – 14th Asian Conference on Occupational Health, Beijing (17–19 October 1994). – International Symposium "From Research to Prevention", Helsinki (20–23 March 1995). – International Symposium on Occupational Health Research and Practical Approaches in Small-scale Enterprises, Pattaya, Thailand (1–4 August 1995).					
Strategy Objective 10: Development of Collaboration in Occupational Health and with other Activities and Services					
Global Network of the WHO Collaborating Centres in Occupational Health has been established.	Strengthening collaboration with the WHO programmes concerned.	OCH, PG	HEP, EHG, PCS	ICOH, IOHA	
Mechanism of networking has been developed and implemented.	Further develop the Network of the WHO Collaborating Centres.	OCH		ICOH, IOHA	
Directory of the WHO Collaborating Centres in Occupational Health has been printed.	Inclusion of the WHO Global Strategy Implementation in the terms of reference of each collaborating centre.	OCH, PG			

Promotion of the WHO Global Strategy Implementation as one of the major objectives of IGOs and NGOs:

- Commission of EU
- NAFTA
- OECD
- ICOH (31 Scientific Committees)
- IOHA
- IEA
- ICNIRP
- IAAMRH
- Trade Union
- Others concerned

Strengthening collaboration with UN agencies, such as ILO, UNEP, UNDP, IAEA, UNIDO.