

# *The Healthy Route to a Sustainable World*

*Health,  
Environment  
and Sustainable  
Development*



World Health  
Organization



United Nations  
Development  
Programme

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*WHO/ EOS/ 95.21*

*Distr.: General*

*Origin.: English*

# The Healthy Route to a Sustainable World

**Health, Environment and Sustainable Development**



*World Health Organization*  
*Geneva*  
*Switzerland*

# HEALTH, WEALTH AND A CLEAN ENVIRONMENT

## The Rio agenda for sustainable development

The Earth Summit in Rio de Janeiro in June 1992\* heralded a wholly new approach to the consideration of health and environmental issues in national planning processes. By adopting *Agenda 21* as the route to sustainable development in the 21st Century, the world's leaders recognized the prime importance of investing in improvements to people's health and their living environment, *as a prerequisite* for sustainable economic growth.

For decades, politicians and national planners have regarded health and environmental improvement programmes as social imperatives. They would be priorities, it was argued, once sustained economic growth generated the resources to afford them.

The result has been low investment, deteriorating environments and shameful levels of death and disease in many so-called *developing countries*. The economic benefits of good health and environmental quality were simply not recognized.

Scientists have been warning for many years that an unhealthy population and a damaged environment hinder progress towards development goals. In the preparations for Rio, the message became more urgent, as it became apparent that growth was already being constrained by water shortages affecting agriculture and industry, by an increasing number of emergencies caused or aggravated by crowded and squalid conditions in peri-urban settlements, and by the inability to cope with mountains of domestic and industrial waste.

As a result, health concerns and their relation to environmental degradation and economic development are well represented in *Agenda 21*. As countries formulate national plans for sustainable development, they need advocacy and guidance to ensure that past lessons are learnt and future investments in health and environment improvements are judged on their catalytic contribution to economic development as well as for the social benefits they bring.

The problem is that, just as health and environmental investments have been undervalued, so too have the ministries or departments responsible for them.

Environment and health departments typically suffer from low budgets, inadequate and poorly motivated staff and little influence in the corridors of power. *Agenda 21*, including the UNDP-managed *Capacity 21*, provides an excellent opportunity to change that.

*Capacity 21* is a novel catalytic initiative that assists developing countries to build their capacity to integrate the principles of *Agenda 21* into national development. It stresses multisectoral approaches that are nationally developed and

***"Action items under Agenda 21 must address the primary health needs of the world's population, since they are integral to the achievement of the goals of sustainable development and primary environmental care"***

*Agenda 21, Chapter 6: Protection and Promotion of Human Health*

executed, the involvement of all members of society, and the creation of a body of experience and expertise in capacity building and sustainable development.

Health professionals have to seize the initiative, press for the programmes and the resources they need, join forces with their counterparts in the environmental sector, and establish health-and-environment concerns as a prime element in sustainable development programmes.

The World Health Organization is providing support in a number of ways to governments seeking to incorporate health-and-environment initiatives into their planning processes. In Europe and Latin America, for example, major Ministerial Conferences have helped to shape both regional and country initiatives to create Environmental Health Action Plans. In cooperation with UNDP's *Capacity 21* initiative, WHO support has been put to use in nine countries so far, and is being extended to others.

In this booklet, we outline the overwhelming case for integration of health-and-environment programmes into planning for sustainable development and highlight some of the ways in which such integration can be achieved.

\* *The United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, June 1992.*

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# THEY MAKE YOU SICK

## Environmental threats to health and development

Deteriorating environmental conditions affect everyone. For some, the sight and smell of polluted rivers or rotting uncollected garbage are just distasteful reminders of neglected investment in environmental improvement. But, for many millions of people in Third World cities and villages, already suffering badly from poverty and inadequate shelter, environmental degradation is literally a life-or-death issue. Working lives are being shortened by crippling diseases; women and children are being made chronically ill by their squalid and deprived living conditions; and industrial "progress" is multiplying the risks of poisonings, accidents and exposure to cancer-inducing substances. Here are some of the preventable environmental threats to human health.



*In this slum area, wastewater is in contact with water used for drinking and washing.*

### Drinking water and sanitation

Lack of a supply of safe water and adequate means of sanitation is blamed, at least in part, for as much as 80% of all disease in developing countries. It is a deplorable fact that, even after major efforts in the 1980s and 1990s, well over a billion people are still without these basic human needs. Contaminated drinking water is a prime cause of diarrhoeal disease – a major killer of infants and young children. It also costs many millions of working days each year for adults and massive expenditure on health care. Cholera epidemics, frequently also transmitted by unsafe drinking water, are on the increase, aggravated by the rapidly growing populations in urban slum settlements. Great strides have been made in the last ten years in developing low-cost solutions and sustainable community-management approaches, so governments have all the tools they need to implement cost-effective programmes for improved water supplies and sanitation facilities, benefiting health, the environment and the national economy.



*Dumping of nightsoil into public watercourses is a common source of pollution*

### Water pollution

Polluted rivers and groundwater cause direct health threats when they are used as drinking water sources (official or unofficial), for bathing or washing, for irrigation of edible crops, or for food processing. As well as the biological contamination from untreated human waste, industrial discharges and agricultural runoff add toxic chemicals, pesticides and fertilizers, exposing water users to acute and chronic health risks. Less than 2% of the domestic and industrial wastewater generated in developing countries receives any kind of treatment. The rest ruins the rivers or groundwater as water resources, poisoning populations, aggravating water scarcity and throttling back industrialization. **Coastal pollution** is a linked problem. Caused both by discharges from polluted rivers and by sewer outfalls too close to shore, the chemical and biological contamination causes a variety of diseases in swimmers and too often enters the food chain through fish and shellfish caught in the coastal waters.

### Stormwater drainage

Poor surface water drainage in urban areas leads to stagnant pools where mosquitoes and other disease-carrying vectors breed. The prevalence of diseases such as malaria and schistosomiasis in many towns and cities is partly a result of inadequate drainage. Badly maintained open drains often become substitutes for unavailable toilets, latrines or waste disposal facilities, with an all too obvious threat to health and the environment. Other threats arising from bad drainage include flooding and landslides destroying homes built on marginal land.



*Open drains pose a major threat to child health*

### Solid waste

An escalating problem in expanding Third World cities is the disposal of literally mountains of garbage and industrial waste. Uncollected refuse and unsanitary disposal sites are the perfect breeding grounds for disease-carrying insects and rodents. The problem is compounded when inadequate waste management allows indiscriminate mixing of household and commercial refuse with industrial and medical wastes. Toxic and biomedical wastes significantly increase the life-threatening risks, particularly for the many urban poor whose means of survival is scavenging on the festering dumps. Open burning of waste is a tempting solution (both for the authorities and for the affected public), but involves added risks of chemical poisoning, respiratory diseases, road accidents and property fires. Industries, hospitals and health centres must be properly regulated, to ensure the safe disposal of hazardous wastes, to prevent contamination of water, food, air and soil and to reduce the health dangers from open landfill sites. The important principle of "reduce, reuse and recycle" has to permeate thinking of industry, commerce and individuals.



*Literally a stream of garbage flows from this dump site.*

### Air pollution

More than one-and-a-half billion people live in urban areas with dangerous levels of air pollution and the situation is getting worse as cities grow and more and more vehicles, industries, homes and power stations contribute to the polluting load. Some of the highest air pollution levels are in the developing countries, including seven of the ten worst cities for sulphur dioxide. Urban air pollution brings with it acute and chronic lung diseases, heart disease, lung cancers and lead-induced neurological damage in children. The effects are even more severe in tropical climates and where sufferers are also exposed to other infectious agents.

**Indoor air pollution** is a major threat to health for some 700 million people worldwide. Caused by the burning of coal or biomass for cooking and heating, respiratory disease and cardiovascular ailments exact a terrible toll among residents in rural and peri-urban areas. Low quality fuels, inefficient stoves and poor ventilation mean high levels of air pollutants inside the home, at peak times many times greater than outdoor air pollution levels. The victims are mainly women, who are largely responsible for fuel and cooking, and infants close to their mothers while they cook.



*Chimneyless fireplaces are a widespread health risk.*



*Crowded makeshift housing helps to spread communicable diseases*

### **Shelter**

Unmet housing needs affect the health of about a third of urban residents in developing countries. Primary causes include insecure residential tenure or inadequate, overcrowded shelter that lacks basic sanitation, ventilation and other basic health protection. Direct health threats come from exposure to disease pathogens and pollutants. Residents of low-income peri-urban settlements are also at higher risk of suffering from drug abuse, violence and accidents, and the mental strain of overcrowding, noise and lack of privacy leads to increased psychological and social stress.



*Street vendors can be a source of food contamination*

### **Food contamination**

Access to nutritionally adequate and safe food is every individual's right. Yet, hundreds of millions of people suffer from diseases caused by contaminated food. Foodborne pathogens, such as bacteria, viruses and parasites, contribute heavily to the 1,400 million episodes of diarrhoeal disease occurring every year in children under the age of five. Chemical contamination of food, from agrochemicals or soils and pastures polluted by toxic metals and PCBs, is also a serious public health problem. Contamination of all kinds can occur at any stage of the food chain: during primary production, transport, storage, handling and preparation. To control contamination and prevent the growth and survival of pathogens, it is crucial to have in place precautions both in the home and wherever food is prepared for consumption (e.g. restaurants, street food vendors). Precautions are particularly important when food is for infants and young children. WHO has issued golden rules for this purpose.



*Cottage industries are important employers, but can also involve unsafe practices*

### **Occupational hazards**

About 100 million acute injuries and 200,000 deaths are recorded every year as a result of exposure to physical or chemical hazards in the workplace. These are over and above millions of cases of noise-induced hearing loss, chronic musculo-skeletal injuries, infections and chronic diseases from exposure to dust, metals, solvents and other chemicals. Agricultural workers are at risk from machinery accidents, chemical poisoning, animal-borne infections and exposure to climatic conditions, organic dusts and diseases such as schistosomiasis and malaria associated with irrigation canals and distribution systems. Industrial accident hazards include explosions and fire and the release of toxic gases or heavily contaminated process waters. The Bhopal incident in India in 1984 grabbed world headlines, but for every such major incident, there are hundreds of thousands of less size but with significant health impact.

### Chemical hazards

The number of chemicals in use by industry, agriculture and the medical profession is rising faster than measures to control their misuse. Dangers to the public at large or to workers involved in production or handling are often quite severe. Exposure to chemicals can cause effects ranging from acute intoxication to birth defects and cancer. Dangerous chemicals are used as fertilizers, pesticides, industrial solvents, food additives, rocket fuels, medicines, cosmetics, and in a wide range of other manufacturing processes. Tight safeguards are needed to protect workers and prevent public exposure.



*Inappropriate storage of pesticides can be a serious health hazard.*

### Radiation and other physical hazards

Overexposure to ionizing radiation can have serious effects, including cancers, birth deformities and mental anguish. Use of radioactive isotopes in medical facilities and industrial installations means possible hazards during production, transport, storage, use and waste disposal. Nuclear power generation raises the spectre of danger from a nuclear accident and means that even countries or regions far from nuclear power stations need effective radiation protection programmes.



*A view of the damaged Chernobyl nuclear power station*

*Noise* is another physical hazard of widespread concern. Millions of industrial employees lose their hearing due to noise at work, while even more people in the community are affected by loss of sleep and stress due to noise from traffic and other sources. *Electric and magnetic fields* may also have serious health impacts and this is an area requiring more research.

### Development hazards

Economic development contributes to improved health, but ill-considered development can also add to health risks. Examples include the creation of breeding grounds for schistosomiasis and malaria vectors in reservoirs or irrigation schemes, injudicious siting of industries with toxic effluents near population centres or strategic water resources and transportation schemes which increase traffic density and consequent air pollution and accidents.



An assessment of potential environmental health impacts at the planning stage provides the information needed to minimize adverse health impacts. Unfortunately, these preliminary studies remain the exception rather than the rule.

*Does the concept of "growth" need to be re-examined?*

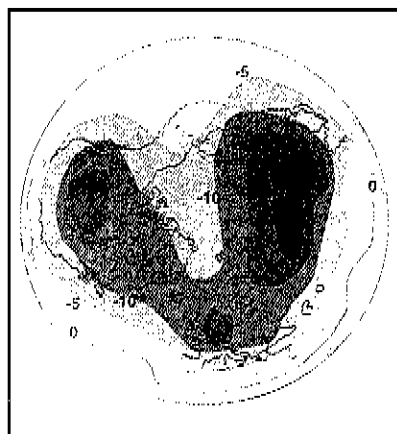


*Informal settlements on marginal land are highly susceptible to landslides and other disasters.*

### Disaster mitigation

In too many countries there is still not enough awareness of the need to prepare for and mitigate disasters (floods, droughts, explosions, major leaks, earthquakes, etc), or of the importance of incorporating health and environment concerns in disaster mitigation programmes. Industrial and agricultural development is going ahead without the precautions that would prevent environmental and health hazards if an accident or disaster occurred. In other instances, no assessments are being made of community vulnerability to such hazards. Often no local or national plan of action exists for a

coordinated approach to relief and rehabilitation in the event of a disaster affecting environmental health and safety. The result is unnecessary death, disease and, all too often, ecological refugees like those fleeing cyclones and floods in countries on the Gulf of Bengal or crop failures due to prolonged droughts in Sub-Saharan Africa.



*The ozone "hole" means an increase in ultraviolet radiation*

### Global environmental change

In recent years, much attention has been given to climate change and ozone-layer depletion, both global effects of continued industrial and economic development. If climate change brings the expected warmer world, we can anticipate an increase in heat-wave mortality, a spread of tropical diseases to new areas and flooding of coastal areas displacing millions of people. All countries can take precautionary measures, directed both at the root causes of climate change and at the anticipated local health impacts. The chemicals that cause ozone-layer depletion and the associated increase in ultraviolet radiation from the sun have been brought under some control by international agreements, but enforcement at national level is essential and, even then, an increase in health-damaging ultraviolet radiation in sunlight cannot be prevented.

# THE UNCED CHALLENGE

## Bringing health to the fore in development planning

Agenda 21 presents a golden opportunity for health authorities to strengthen *their influence* in national planning and to reverse the trend of environmentally damaging and health-threatening development in so many expanding cities. It is an opportunity that must not be missed. Inaction will mean that health-and-environment issues remain sidelined and that health authorities remain under-resourced. Action now to form partnerships with development agencies, planners and financiers will mean that all partners benefit. If it works, the biggest beneficiaries will be those in greatest need – the underserved poor in urban fringe settlements and rural communities. How then can health authorities ensure that their specialist expertise is recognized as a valuable element in Agenda 21 programmes?

### 1. Learn the rules of the game

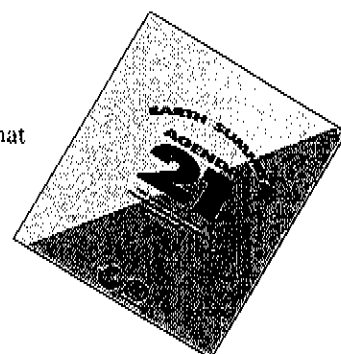
Agenda 21 represents an international consensus on actions needed to bring about sustainable development. Its endorsement by so many world leaders in Rio means that national governments and external support agencies are committed to support programmes based on its principles. For health agencies seeking to maximize health-and-environment components in these programmes, a sound working knowledge of Agenda 21 is essential.

Chapter 6 of Agenda 21 is the principal health chapter, and all health professionals should be familiar with that Chapter's detailed recommendations for protecting and promoting human health. There are many other health-and-environment references in Agenda 21, which demand the involvement of health specialists from the start in programmes related to housing, industry, agriculture, energy and related institutional, economic and social programmes. WHO has prepared a comprehensive listing of excerpts from Agenda 21 related to health\*, providing would-be promoters of the health-and-environment cause with a powerful tool for lobbying in the corridors of power.

Familiarity with the issues linking health, environment and sustainable development will enable health professionals to become more helpful and more influential in the various intersectoral committees formed to implement Agenda 21 action programmes. With specific reference to environmental health, Agenda 21 provides endorsement for new approaches involving four key elements:

- identification and assessment of health hazards associated with environment and development
- development of an environmental health policy incorporating principles and strategies for all sectors responsible for development – e.g. housing, industry, local government, environment, agriculture, energy, . .

\* Available from: Division of Operational Support in Environmental Health, World Health Organization, 1211 Geneva 27, Switzerland.



*Agenda 21: the sustainable development blueprint for the 21st Century.*

- communication and advocacy of this policy to all levels of society – government, communities, private sector organizations and the public at large
- a participatory approach to implementing health and environment programmes.

The following two-part table indicates the type of activities health agencies can expect to undertake in promoting and supporting sustainable development programmes with a worthwhile health-and-environment perspective.

<i>Agenda 21 Programme Element</i>	<i>Considerations for health authorities</i>
<b>Hazard identification and assessment</b>	<ul style="list-style-type: none"> <li>• As a basis for the MoH advocating a health policy for each sector, assessments are needed which assign an appropriate proportion of the health burden to activities in those sectors.</li> <li>• In most countries, water authorities will monitor water quality, environment department specialists will monitor air quality, and so on. The health authority's task is to link the environmental indicators with health status, collaborating closely with the other agencies.</li> <li>• To keep decision-makers and the public informed about health trends, including the preventable component of the disease burden, continual epidemiological surveillance and monitoring of environment-related diseases have to be carried out.</li> <li>• Research is needed at national and local level, based on the health priorities of the country, to identify the specific mechanisms causing environmental health impacts and the most effective means of preventing those impacts.</li> </ul>
<b>Health policy development</b>	<p>It is not realistic to expect that other sectors will have the knowledge or expertise to develop sectoral health policies. Health agencies therefore need to collaborate with all other agencies whose activities impact on environmental health to assist in the development of sectoral policies and to prepare an overall environmental health policy incorporating them. In this regard, it is especially important to create mechanisms which support public participation in policy development. Areas to be addressed include housing, environment, water resources, agriculture, industry, transportation, schools, etc. In addition to health protection, sectoral policies need to take advantage of opportunities that, for example, improved housing can bring (e.g. raised health awareness, improved primary health care services, neighbourhood safety and injury prevention).</p>
<b>Information for decision making</b>	<p>Efficient environmental health programmes depend on convenient access to information about a large variety of hazards, ranging from biological hazards in food and water, to chemical hazards such as pesticides, and the different physical hazards. A network of libraries and documentation centres, with core collections of priority information and access to international information sources, is a vital national asset.</p>

<i>Agenda 21 Programme Element</i>	<i>Considerations for health authorities</i>
<b>Communication and advocacy</b>	For environmental health policy to be accepted and put into practice, it must first be understood by those responsible for its implementation and by the intended beneficiaries. The health sector needs to undertake educational and awareness raising programmes targeted at government authorities and workers, NGOs, community groups, schools and private sector organizations.
<b>Human resources development</b>	A complement of fully trained staff is the most important basis of effective programme development and implementation. Nationally, there is a need for a multidisciplinary staff of engineers, health professionals, scientists and information/communication experts. At local level, the best mechanism is based on small teams using primary health care principles. These need to be backed by broader expertise and more resources at provincial level. Human resources development planning is a high priority and needs to include systematic assessment of the type of professional staff required, the knowledge and experience they need, and their education and training.
<b>Programme implementation</b>	<p>In fostering activities to promote and protect human health, agencies need to:</p> <ul style="list-style-type: none"> <li>• Support (in some cases, manage) programmes to provide basic environmental health services, such as water supply and sanitation, food safety, solid wastes, . . .</li> <li>• Support and/or manage environmental control programmes, including those assigned to other ministries, those initiated through intersectoral mechanisms, and those involving public-private networks of community groups.</li> <li>• Train staff to identify, prevent and control environmental health hazards. Trainees include public health and medical staff and personnel in other sectors such as industry, housing and community development, at national and local level.</li> <li>• Develop and implement interagency emergency response capabilities for natural disasters and accidents, including capabilities for medical treatment of victims.</li> <li>• Develop collaboratively environmental health legislation, norms and standards derived from human health perspectives, providing scientific and technical information, advice and assistance in drafting and reviewing proposals.</li> <li>• Promote and participate in environmental health impact assessments as integral elements of socioeconomic development and planning, promoting grass-roots capabilities for social development and environmental improvement.</li> </ul>

## **2. Join the team**

Study of Agenda 21 and the WHO briefing document on its health-and-environment implications will help to generate a checklist of key issues. Informed agency staff then have the basis for a review of post-UNCED activities in their country. A critical aspect is the extent to which health authorities are involved in planning and implementation of sustainable development programmes.

The aim should be to ensure an effective health-sector voice in all committees and other mechanisms set up to direct or oversee government progress towards sustainable development. For example:

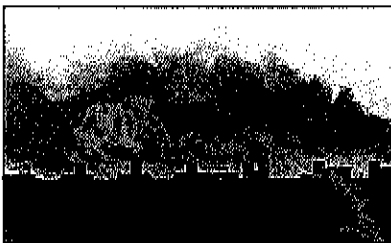
### **• Intersectoral committees for environment and development**



*Intersectoral committees provide an important platform for health agencies*

Lots of countries have established intersectoral committees for follow-up on Agenda 21. It is in these fora, including the task forces and working groups set up to address specific issues, that the informed health professional can exert a significant influence. By anchoring back advice on the causal links between health status and environmental conditions to the appropriate sections of Agenda 21, health agencies gain an added authority for their advocacy. It is more than just repeating the message "Don't forget health!" Rio has provided the economic and environmental arguments to strengthen the case for investment in health protection and improvement measures.

### **• Alliances with environment professionals**



*Air pollution is a prime example of the need for development planning to incorporate health concerns*

In most countries, responsibility for health-and-environment concerns such as air and water quality, chemical use and disposal, and so on, rests with specialists in the Environment Ministry. If the health imperatives of Agenda 21 are to be properly reflected in development plans, these specialists will need the expertise and knowledge of health professionals. Health agencies must proffer this advice regularly and seek to establish close working relationships through task forces and joint project appraisal teams. Again, credibility comes from knowledge and authority. It is not enough to be there; you must also have the information and the support to make the guidance helpful and effective.

- Linkages with other ministries

As we have seen, close contacts must not only be maintained with Environment Ministries. Agenda 21 highlights health impacts in projects covering virtually all aspects of development. Advocacy is needed in the planning and implementing departments of Ministries of Planning, Public Works, Energy, Water Resources, Agriculture, Transportation, Local Government, Urban Development, Education, etc. Communication can be achieved by health professionals making available documentation on health aspects of each sector's policy and programmes. More effective is a regular dialogue over development plans and strategies, so that advice can be specifically linked to actual initiatives in a timely and effective way.

- External support

UNCED called on the UN organizations to play an active role in supporting countries in sustainable development planning and implementation of Agenda 21. Bilateral support agencies too are committed to providing support for Agenda 21 initiatives. At country level, it is vital that external support agencies (ESAs) act coherently and consistently, avoiding duplication or conflict. UNDP has a coordinating role, with WHO, UNEP, UNICEF and the World Bank actively involved in the health-and-environment area. The Ministry of Health needs to establish regular contact with these and other relevant ESAs, providing guidance on local application of health-and-environment principles.

- Keep in training

To fulfil the challenging role of authoritative health advocacy, health agencies are going to need strong teams of well-informed professionals with a sound working knowledge of the health aspects of Agenda 21. They will also need to develop local guidelines on appropriate adaptation of Agenda 21 principles to suit national or regional conditions. That means recruitment, training and career development programmes geared to the new development agenda. Capacity building is a crucial element in Agenda 21 and UNDP's special *Capacity 21* programme can provide financial and technical support for capacity-building initiatives. In the health field, it is important that agencies acquire skills in appraising economic planning strategies from the health viewpoint and have the capacity to evaluate the economic implications of mitigating measures and hazard control.



*Health professionals need to keep up to date with developments in technology and economics*

### **3. Make your voice count**

The preparatory work involved in becoming well-versed in the implications of Agenda 21 should pay off as health professionals become respected members of committees and planning groups. The aim then is to use that respect and authority to influence sustainable development programmes in a positive way.

Measures to incorporate health-and-environment initiatives into national programmes vary from country to country, depending on the planning mechanisms, the current status of the sustainable development programme, and the way in which planning responsibilities are divided. It is helpful, for instance, to have a health-and-environment action plan incorporated in the national development plan. Preparation of such a plan is a major undertaking and, before it is initiated and during its preparation, every effort should be made to ensure that it will be an element of the national plan. That requires groundwork by the MoH, using all the Agenda 21 arguments.

In many cases, it is more important to have health-and-environment activities permeating the plans of other sector ministries than it is to have a separate health-and-environment action plan. The aim should be to establish a continuous involvement for health advisers in the planning and implementation of sector programmes, recognizing that health protection and improvement is not a one-time task but a continuing one. The prevention-oriented public health officer will find health opportunities in the development activities of many different sectors.

Industrial development with workplace health programmes, for example, provides the opportunity to address a great many health issues of importance to workers, such as accidents or poisonings. Reforms of local government provide the opportunity to implement *healthy neighbourhood* programmes in which the total environment is taken into consideration and all sections of the community become involved in addressing health issues. There are many more examples, and more will emerge once the presence of health-and-environment specialists in project management groups becomes common practice.

# PUTTING CAPACITY 21 TO WORK

## Making the most of the UN's capacity building support

The drafters of Agenda 21 recognized that, in many countries seeking to implement action programmes, institutional frameworks needed to be strengthened and professional staff trained in new skills and approaches. Evolving trends towards decentralization, tightening legislation and increased involvement of NGOs, all need to be taken into account in new institutional arrangements. UNDP was charged with the task of mobilizing funding and collaborating with other appropriate UN agencies to support developing countries with capacity building. Since 1993, WHO has been cooperating with the resulting UNDP initiative *Capacity 21*. The joint WHO/UNDP activity has provided support for programmes designed to raise the profile of health-and-environment issues in national planning in nine countries. It is being coordinated with Capacity 21 national programmes, which are underway in several of the countries listed below.

### BARBADOS: Providing a platform for Agenda 21 Action Plan

A national technical working team, supported by national and international consultants undertook a detailed assessment of the health-and-environment planning situation in this small island state. Led by the MoH and with support from PAHO and WHO, the team prepared a report on *The Integration of Health and Environment Issues in National Planning for Sustainable Development in Barbados*.

Its recommendations for capacity-building needs and priority activities was finalized through a national seminar with governmental and non-governmental participation. The outcome is a broadly endorsed health-and-environment plan ready for incorporation in the national plan for sustainable development, which is scheduled for preparation in the near future.

### GHANA: Priorities identified as ministries join forces

A study assisted by external consultants included in-depth consultations with all the major ministries, Ghana's National Advisory Committee on Agenda 21 and relevant UN agencies. Several large meetings were held to present and discuss findings.

Following an analysis of health-and-environment responsibilities in three key ministries (Ministry of Health, Ministry of Environment, Science & Technology, and Ministry of Local Government), a recommendation was made that a *Health, Environment and Development Unit* should be established in the MoH. Consultations have been initiated among the three ministries to discuss and clarify responsibilities and to promote cooperation.

Among the priority health-and-environment issues identified were:

- increasing prevalence of schistosomiasis associated with large-dam construction
- water quality and sanitation problems leading to serious health impacts
- inadequacies in occupational safety and health.

Government reforms in Ghana already include decentralization of authority to the district and local level, and this is expected to facilitate intersectoral action for health. As part of MoH's changing role, highly relevant capacity-building initiatives are:

- improved information management to ensure that it can effectively contribute to policy development in other sectors
- an increased capacity to link health status, environmental conditions and policy
- issue-based intersectoral links, especially with food and agriculture, water and sanitation, industry and mining, energy, tourism and human settlements and contributions to health-and-environment policies for these other sectors.

## **GUATEMALA: A National Environmental Health Plan**

Under the leadership of the Ministry of Health and with the support of PAHO/WHO and UNDP, a Working Team was established, which included experts from the MoH, the National Commission for the Environment and the National Secretariat for Planning. The aim of the initiative was to develop a national plan on environmental health addressing the health-and-environment aspects of all sectoral development plans. A national consulting firm and an international consultant assisted in the preparation of the plan.

A broadly based national meeting was held in which participants from all relevant sectors, including NGOs, reviewed and approved the *National Plan for Environmental Health and Sustainable Development*. It is expected that the plan, and the accompanying *Institutional Analysis of the national Sectors Associated with Health and the Environment*, will lead to basic improvements in legislation and regulations and a more effective and independent institutional structure for dealing with health-and-environment issues. The plan is also being seen as a catalyst for elaboration of a National Plan for Sustainable Development.

## **JORDAN: Consolidating intersectoral approaches**

Jordan had prepared a national environment strategy prior to UNCED and set up an interministerial committee for follow-up after Rio. As part of that process, the MoH had established an intersectoral working group to prepare a national action plan for health and environment.

The WHO/UNDP initiative sought to provide information on health-and-environment aspects of the existing national environment strategy and development plans in other sectors. In that way proposals could be made for strengthening the health linkages. A second objective was to bring more intersectoral considerations into the MoH's own plans. In addition, the project sought to identify priority capacity building needs for promoting health and environment.

The study team included staff from MoH and the High Council for Science and Technology. It was assisted on an *ad hoc* basis by staff from the Ministries of Energy, Mining, Industry, Agriculture and Water Resources. Three major outputs were:

- a consolidated report on health-and-environment implications of planned development in Jordan, including measures to mitigate negative impacts
- an action plan for health and environment fully consistent with Agenda 21, to be implemented by the MoH

- three project proposals designed to contribute to capacity building for health-and-environment planning and implementation.

## **LITHUANIA: Building on decentralization**

As a newly independent republic, Lithuania has embarked on a policy of decentralized planning and a market economy with minimal government controls. There was therefore no opportunity to integrate health-and-environment concerns into economic development policies at the *national* level. On the other hand, each sector was actively producing its own development plan and preparing proposals for future legislation.

The programme was carried out as a joint venture between high-level representatives of the MoH and the Environmental Protection Department. The Government demonstrated a growing sensitization to health-and-environment issues. Its achievements included:

- The MoH agreed to make environmental health into a separate thematic working group under the HRMG, to review environmental health systems and suggest improvements.
- Initiation of a Public Investment Programme (PIP) under the Ministry of Economics to guide major capital investment decisions on the basis of Lithuania's "Trinity" priorities: Energy, Transport and Environment.
- Lifting the Environmental Protection Department to the level of a Ministry, with responsibilities to the President, as part of an Environmental "umbrella" Law. The new Ministry has established close working relations with the PIP.

## **NEPAL: Adding a health perspective to the Action Plan**

The support project has had a significant impact on the Nepal Environmental Policy and Action Plan (NEPAP), which was under preparation through the National Planning Commission and the newly established Environmental Protection Council (EPC). Early drafts addressed environmental and pollution issues of relevance to health, but did not include a specific public health component.

The project corrected this omission through the *Nepal Environmental Health Initiative* (NEHI). The EPC served as the focal point, with the Ministry of Housing and Physical Planning taking a lead role in development of the initiative and the MoH also closely involved. The NEHI team included local consultants supported by WHO staff and national and regional experts to develop specific areas. The outcome was:

- An assessment of the extent to which health-and-environment issues were incorporated in national planning for sustainable development
- A comprehensive strategy for health and environment covering priority areas
- A recommended plan of action with particular reference to capacity building.

Most of the key programme areas and objectives of the NEHI have been reflected in the final version of the NEPAP. Activities in areas such as drinking water, air pollution and urban health were initiated immediately using the 2% WHO budget allocation for countries in greatest need.

## **PHILIPPINES: Assessing strategy implementation**

The Philippines Government has a major Agenda 21 implementation programme which incorporates health-and-environment issues and includes an Inter-agency Committee on Environmental Health. The WHO/UNDP initiative therefore focused on implementation and on the capacities of the institutions involved.

A local consulting firm reviewed three major development projects, working closely with the Philippine Council for Sustainable Development, the Inter-agency Committee and the sector ministries and departments involved (energy, agriculture and industry). The conclusions were that health-and-environment had been considered, though there were some shortcomings. Recommendations included strengthening of legal instruments, capacity building at regional and local levels and improved environmental impact assessments.

## **SRI LANKA: Starting at the beginning**

There is no specific UNCED follow-up in Sri Lanka and the national Environment Action plan does not cover health issues. The WHO/UNDP initiative therefore started with a clean sheet, seeking to assist the MoH and Ministry of Environment to initiate intersectoral links. The aim is to prepare a situation analysis report, to organize an intersectoral participatory workshop, and to draft a national action plan for health and the environment. This will be followed by a high-level intersectoral meeting to finalize the action plan.

The situation analysis has reviewed policies, programmes and project documents, identified possible cooperation mechanisms, assessed MoH's capacities for addressing health-and-environment concerns and identified priority actions. Work is continuing.

## **VIETNAM: Enhancing local planning capabilities**

Vietnam has a National Plan for Environment and Sustainable Development and several sectoral plans. Health-and-environment concerns are covered in a 1994 law on environmental protection, but decision-making mechanisms and intersectoral cooperation were thought to be weak.

The WHO/UNDP initiative focused on enhancement of the capacity to integrate health-and-environment issues in sustainable development plans, with priority given to achieving improvements first at provincial or local level. National focal points for the two-phase project are the MoH and the Ministry of Science, Technology and Environment. In the three local areas – Haiphong, Dong Hoi and Vung Tau – the focal point agencies are the health and environment services.

Phase 1 includes prioritizing of health-and-environment issues, demonstration of the feasibility of integration, and development of information management systems. In Phase 2, a multisector task force will be assigned priority issues, national information networks will be strengthened, a national strategy will be developed for strengthening consideration of health-and-environment issues, and there will be a delineation of research and human resources needs to support sustainable development planning.

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