

Chapter 7

Conclusions

At the time of the Earth Summit in 1992, the WHO Commission on Health and Environment presented an assessment of the relationship between health and environment, in the context of development. The Commission's report was a major contribution to UNCED and brought health towards the top of the environment and development agenda. The Rio Declaration's first principle affirms that human beings are entitled to a healthy life.

Five years is a short time to report on progress in such a complex field as health and environment, but the Special Session of the UN General Assembly presented an opportunity for reassessing the available information on health-and-environment linkages and analysing this information from the point of view of sustainable development.

The major health problems due to environmental hazards remain, but progress can be seen in awareness raising, policy and planning at various levels, and concrete action, particularly action at the local level. Health indicators in some countries have improved, mainly due to economic development. However, the benefits of development are not equitably distributed; absolute poverty is still on the increase globally, and it is the poor who are most vulnerable to health-and-environment hazards.

This reassessment includes recent quantitative information on the global and regional burdens of disease and gives estimates of the impacts of major environmental hazards on specific health conditions.

It is becoming increasingly clear that the environmental factors that most affect health are in turn linked to underlying pressures on the environment. These pressures are determined by driving forces such as population growth, inequitable resource distribution, consumption patterns, technological development and components of economic development. Since these pressures and subsequent health hazards are associated with the activities of several sectors, effective action to protect health will require coordination and collaboration between these sectors.

In brief, a new perspective on health has emerged whereby health is seen as an essential component of sustainable development, which in turn depends on concerted action by all sectors of society. The 21st Century calls for a new health system which is partnership-oriented, population health-based, and proactive rather than reactive. The health sector must be a guide and partner in these actions so that health concerns are represented appropriately at all stages of implementation.

A number of major conclusions emerge from the assessments made in this book. They are not listed here in order of priority because each of them is of major importance at global level, and the specific concerns at the local and national levels vary.

- Environmental quality is an important direct and indirect determinant of human health. Deteriorating environmental conditions are a major contributory factor to poor

health and poor quality of life, and hinder sustainable development.

- Most detrimental environmental impacts on health are related to poverty which itself stems from lack of economic development and inequitable distribution of economic benefits. However, economic development without due concern for health and environment often creates major health risks.
- Populations in the least developed countries are most at risk from “traditional” environmental health hazards, which constitute the largest environmental proportion of the global disease burden. They include lack of water supply and sanitation, poor housing and shelter, unsafe food and high prevalence of disease vectors.
- The populations of developing countries that are undergoing rapid industrialization tend to be at risk both from the “traditional” environmental health hazards and from “modern” hazards such as air and water pollution, hazardous waste, unsafe use of chemicals including pesticides, workplace hazards and traffic accidents.
- Major challenges to sustainable development are posed by mismanagement of natural resources, excessive waste production and associated environmental conditions that affect health.
 - Wasteful consumption and production patterns in the more affluent countries result in environmental disruption, and counteract efforts to ensure more equitable access to and sustainable use of natural resources.
- Growing populations in many countries, combined with the unmet basic needs of the poor, create major challenges with respect to the attainment of sustainable development.
- A disproportionate number of the poor are women. Their poverty, in combination with their traditional social roles, puts them at increased risk for certain environmental hazards.
- Impoverished populations living in rural and peri-urban areas are at greatest risk from degraded environmental conditions. The cumulative effects of inadequate and hazardous shelter, overcrowding, lack of water supply and sanitation, unsafe food, air and water pollution, and high accident rates, impact heavily on the health of these vulnerable groups.
 - The number of urban poor is growing rapidly; estimates suggest that in the year 2000 it will have risen to at least 1000 million. On average, 50% of the urban population in developing countries lives in conditions of extreme deprivation. In some cities, the figure may be even higher .
- Within cities, mortality and morbidity rates are higher among people in low-income settlements — due to poor housing, high population density, pollution, lack of basic services and inadequate social amenities — than among people in more affluent areas.
- In rural areas, the main environmental health problems consist of the traditional hazards caused by water and sanitation deficiencies, poor indoor air quality and disease vectors. To these may be added the

- increasing risk of exposure to modern hazards such as those created by unsafe use of chemicals in agriculture.
- Lack of economic development in rural areas, and out-migration of males, frequently leave women in difficult economic and environmental conditions.
 - Poor environmental quality is directly responsible for around 25% of all preventable ill-health in the world today, with diarrhoeal diseases and acute respiratory infections (ARI) heading the list. Other diseases such as malaria, schistosomiasis, other vector-borne diseases, chronic respiratory diseases and childhood infections are also strongly influenced by adverse environmental conditions, as are injuries.
 - On average, the individual burden of diarrhoeal diseases and ARI is about 100 times greater in the least developed countries than in developed countries. These diseases are particularly serious among children.
 - Vector-borne diseases are closely linked to geographic and climatic conditions, and constitute the largest share of the disease burden of certain tropical countries.
 - Unintentional injuries, chronic respiratory diseases and cancers are the most serious environmentally-related health problems affecting adults.
 - The workplace is one of the most hazardous environments, with 125 million injured each year in the formal sector; workers in the informal sector may experience even greater health risks.
 - In today's world, it is children's health that is most damaged by poor environmental quality. As much as two-thirds of all preventable ill health due to environmental conditions occurs among children.
 - Deaths due to environmentally-related childhood diseases could be virtually eliminated by a combination of environmental improvements, immunization and proper health care.
 - Environmental improvements are crucial to significant and long-term reduction in the morbidity of these diseases.
 - In parallel with industrial development, particular problems for children's health have come to the fore, such as exposure to lead and other hazardous chemicals, which affect children's mental and physical development.
 - Environmental improvements create health benefits for both adults and children, thus doubly benefiting children.
 - Lack of basic sanitation, poor water supply and poor food safety contribute greatly to diarrhoeal disease mortality and morbidity. Curative measures have brought the number of deaths from diarrhoeal diseases down, but action that deals with the root causes of these diseases continues to be lacking.
 - From 1990 to 1994 the number of people without sanitation increased by nearly 300 million, and in 1994 totalled 2900 million for developing countries; this figure is projected to increase to 3300 million by the year 2000.

- From 1990 to 1994 nearly 800 million people gained access to safe water supplies. Due to population growth, however, the number of unserved decreased only from 1600 million in 1990 to 1100 million in 1994.
- In both cases, it is rural populations who are worse off. In 1994 sanitation coverage in rural areas was a mere 18%, whereas it was 63% in urban areas. Likewise, access to water amounted to 70% coverage in rural areas, but to 82% in urban areas.
- The reported incidence of foodborne diarrhoeal diseases is increasing in both developed and developing countries.
- Programmes to improve sanitation and related hygiene behaviours continue to receive very low priority and to be allocated few resources. A major change in the understanding of the importance of these issues is urgently required.
- Air pollution figures prominently as a contributor to a number of diseases (ARI, chronic respiratory diseases, cardiovascular diseases and cancer) and to a lowering of the quality of life in general.
 - By far the highest exposures to air pollution occur indoors in developing countries, where biomass and coal are used for cooking and heating, causing millions of cases of ARI and chronic respiratory disease. As many as 1000 million people, mostly women and children, are severely exposed.
 - Urban air pollution, while declining somewhat in most developed countries, is increasing in many developing country cities, particularly with respect to suspended particulate matter, sulfur dioxide, nitrogen dioxide, hydrocarbons and ozone.
- An estimated 3 million premature deaths, mainly from acute and chronic respiratory infections, are attributed to exposure to air pollution on a global basis. Of these deaths, 2.8 million are due to indoor air pollution exposures, primarily in developing countries.
- There is every indication that urban air pollution will continue to increase in developing countries due to population growth, urbanization, and increases in motor vehicle traffic, and in industrial and energy production.
- The occurrence of the major vector-borne diseases is closely related to naturally existing environmental conditions. In addition, the incidence, severity and distribution of vector-borne diseases are affected substantially by human activities such as water and agricultural developments, and by urbanization.
 - Malaria is a major disease transmitted by mosquitos, the habitat of which is closely linked to climatic and environmental conditions. Over 500 million people are affected by malaria, in over 90 countries. The problem is increasing, due at least in part, to land degradation, deforestation, the expansion of agriculture and mining into new areas, and urbanization. The high rate of malaria in the countries affected is in itself a major impediment to economic development.

- Schistosomiasis is another tropical disease which is strongly related to environmental conditions. Spread via a parasite in freshwater snails, it infects more than 200 million people.
- Other major vector-borne diseases, each affecting more than 10 million people and particularly influenced by environmental conditions, such as water, sanitation and housing, include lymphatic filariasis, dengue fever, leishmaniasis and Chagas disease.
- Hazardous chemicals and various forms of hazardous waste, including healthcare wastes, are growing health-and-environment concerns. Lack of detailed quantitative information on the production and disposal of such waste, and on the resulting health risks, severely hampers efforts to control this problem.
 - Hundreds of new chemicals are developed each year, but assessment of their possible long-term risks to health is not keeping pace with this rate of development.
 - Evidence is mounting that in developed countries the human exposures and health risks arising from existing hazardous chemicals (such as lead, cadmium, mercury, DDT and polychlorinated biphenyls) have been brought under control, but that this is not the case in developing countries. Of particular concern are exposures to lead and persistent organic pollutants.
 - The degree to which healthcare waste is safely handled is not known, but there is reason to believe that it is frequently inadequately treated.
- Global environmental change has great implications for health, particularly that of the poor. Marginalized population groups are again at greatest risk, as their ability to adapt is limited due to lack of resources.
 - The potential future health impact of global climate change includes changes in the distribution of infectious and vector-borne diseases, increased heat-related illness, and injuries and diseases due to sea level rise and extreme weather disasters. In addition, dislocation and loss of livelihood may indirectly cause major health problems.
 - The increase in the amount of solar ultraviolet radiation reaching Earth's surface is the result of damage to the stratospheric ozone layer caused by the atmospheric release of chlorofluorocarbons and other chemicals. Anticipated health impacts include increased risk of cataracts and skin cancer, and, potentially, damage to the immune system.
 - The major pollutants that damage the ozone layer appear to be under control, but it appears unlikely that developed countries will in the near future be able to reduce greenhouse gas emissions to levels considerably below current levels.
 - Although not yet causing a significant portion of global ill health, apparent environmental links with the deadly emerging/re-emerging infectious diseases have created an urgent need to monitor and improve environmental conditions.
- There are some promising signs — not yet in terms of environmental

improvement, but rather in the national development of policies and infrastructure to address the problems described here. However, the lack of financial and human resources is a major deterrent to progress.

- Health-and-environment concerns are being incorporated in sustainable development planning in numerous countries. Many countries on all continents have now developed intersectoral health-and-environment plans or are in the process of doing so.
- Community-driven *Local Agenda 21* and *Healthy Cities/Villages/Islands* initiatives are growing in number worldwide.
- Local government and non-governmental organizations are emerging as major development forces and key players in health and environment.
- New effective international mechanisms for collaboration to ensure protection from hazardous chemicals have been developed.
- The development and application of cleaner technologies in

industry are being given increased priority.

- The health sector has an essential advocacy role to play in highlighting the links between health, environment and sustainable development when future policies are developed and actions planned. A much stronger partnership between the health sector and other sectors is required for successful reduction of health threats arising from poor environmental conditions. Renewal of the WHO Health-for-All Policy for the 21st Century, which is currently in progress, provides guidance for the way ahead.
- Intersectoral action needs to be facilitated through new approaches to legislation, budgeting and human resources development.
- Improved information on health-and-environment linkages is required at all levels to support policy development, priority-setting and decision-making for action.
- Actions for health are required at all levels: local, provincial, national and global. □