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## ENVIRONMENTAL HEALTH: A STRATEGY FOR THE AFRICAN REGION

### EXECUTIVE SUMMARY

1. In spite of the commendable efforts of many governments and external support agencies for many decades, in the year 2000, some 276 million people in Africa still lacked access to safe water supply while 284 million were without adequate sanitation (AFR/WSH/00.3). The pollution of scarce water sources, the contamination of soils by industrial, municipal and agricultural wastes containing toxic and hazardous chemicals and the rampant spread of disease vectors have rendered water treatment and vector control very costly.
2. It is also becoming increasingly evident that the future of health in the entire world, and in Africa in particular, will be determined by the environment. While other regions are faced with problems of one era, Africa is confronted by the combined problems of pre-industrial, industrial and post-industrial eras. Countries need to prepare themselves to face these challenges or else they will be overwhelmed by a future that they can plan for using the resources at their disposal.
3. The strategy on environment and health therefore aims to stimulate the development of environmental health policies in the health sector. These policies should enable the health sector within countries to inform the policies of the other social sectors in order to make them health sensitive. The strategy should also enable the health sector to improve the knowledge and awareness of communities about the relationship between the environment and health. It is important for communities to make informed choices so as to improve their health status and quality of life and contribute to sustainable development.
4. The Regional Committee is invited to examine and adopt the proposed strategy to contribute to the creation of an enabling environment for sustainable environmental health services for the benefit of the populations of the Region.

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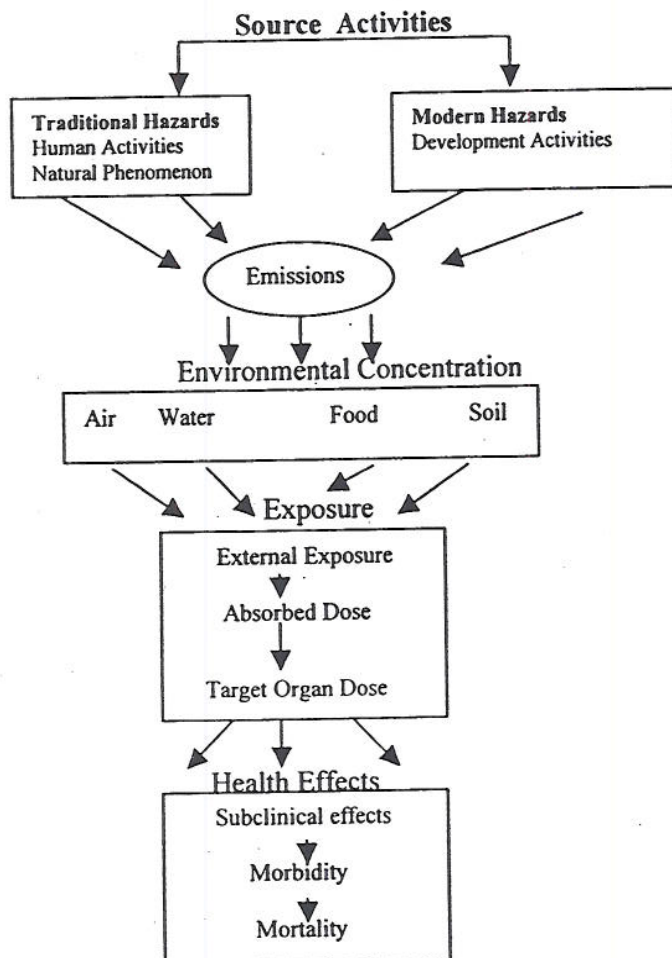
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## INTRODUCTION

1. In spite of the commendable efforts of many governments and external support agencies over many decades, in the year 2000, some 276 million people in Africa still lacked access to safe water supply while 284 million were without adequate sanitation (AFR/WSH/00.3). The pollution of scarce water sources, the contamination of soils by industrial, municipal and agricultural wastes containing toxic and hazardous chemicals and the rampant spread of disease vectors have rendered water treatment and vector control very costly.
2. It is widely noted that the contribution and benefits of the environment to other determinants of health are not well understood by policy makers and planners. This is reflected in the low level of resources allocated for the maintenance of an enabling environment to support life and health. The diseases that burden communities, in particular deprived communities and rural and urban fringe communities in Africa, are mainly due to environmental conditions that can be avoided. The situation of deprived communities is worsened by poor environmental conditions that could easily be managed by environmental health services.
3. It is therefore *crucial* to differentiate between environment and health and environmental health. *Environmental health comprises those factors of human health, including quality of life, that are determined by physical, chemical, biological, social and psychosocial factors in the environment (WHO/EH/98.9).* It also refers to the theory and practice of assessing, correcting and preventing those factors in the environment that can adversely affect the health of present and future generations. Thus, environmental health services can be defined as those services implementing environmental health policies through monitoring and control activities.
4. Environment and health refers to the interface between the environment on one side and health on the other. To explain this further, *the ability to link health and environmental data, and thereby to understand relationships between levels of exposure and health outcomes, is vital in attempts to control exposures and protect health. This capability is particularly important in countries in which issues of environmental pollution have traditionally taken second place to demands of economic development (WHO/EHG/95.26).* Environment and health mainly deals with risk assessment and management of this interface (see conceptual framework at individual level, Figure 1).
5. It is becoming increasingly evident that the future of health, particularly in Africa, will be determined by the environment. While other regions are faced with problems of one era, Africa is confronted by the combined problems of the pre-industrial era, of industrialization and of the twenty-first century. Countries need to prepare themselves to address these challenges or else they will be overwhelmed by a future that they can plan for using the resources at their disposal.
6. The *Environment and Health* strategy aims to stimulate the development of environmental health policies in the health sector. These policies should enable the health sector within countries to inform the policies of the other social sectors in order to make them health sensitive. The strategy should also enable the health sector to improve the knowledge and awareness of communities about the relationship between the environment and health. It is important for communities to make informed choices so as to improve their health status and quality of life and contribute to sustainable development.

Figure 1: The environmental health hazards pathways: conceptual framework at the individual level



Source: WHO/EHG/95.26, page 8

7. In order to address the above-mentioned problems, it is necessary to adopt an institutional arrangement to support the political commitment made by countries in the New Partnership for Africa's Development (NEPAD) and by ministers of health through various regional efforts to ensure healthy and safe environments for their people. The regional strategy aims to strengthen preventive and health promotion measures in all countries of the Region.

#### SITUATION ANALYSIS

8. In Africa, water-related diseases such as malaria, schistosomiasis and river blindness are some of the causes of high morbidity which impact negatively on the economy and the health sector. Infectious diseases linked to poor environmental conditions kill one out of every five children in Africa. Diarrhoea and acute respiratory infections are two of the major killers of children and under-fives. Cholera is



endemic in at least a dozen of the countries in the Region. In 1999, a total of 187,775 cases of cholera with 7,831 deaths were reported, representing a case fatality rate of 4% (WHO/EH 98.7).

9. Occupational injuries and diseases play an important role in developing countries where 70% of the working population of the world lives. By affecting the health of the working population, occupational injuries and diseases have profound effects on work productivity and on the economic and social well-being of workers, their families and dependants, thus triggering a cycle of *low capacity, low revenue, low productivity and low consumption* that tend to trap societies into poverty.
10. Globally, chemical substances have brought about improvements in the lives and health of nations. Every year, more than a hundred new chemical substances enter the market even though the toxicology of a number of these chemical substances is not fully known. In the African Region, these chemical substances are used mainly in agriculture and in some cottage industries, with little or no understanding of their immediate and long-term effects. Chemical substances have cumulative effects in the body. They can cause both acute and chronic conditions resulting in very serious complications and death.
11. It is common occurrence for women workers to carry their babies with them while working in the fields, thus exposing themselves and the babies to these chemical substances. WHO has developed a strategy, *The Health Sector and Chemical Safety in the 21st Century* (Cape Town, July 2001), for addressing chemical substances within the health sector that will act as a guide to countries.
12. Apart from exposure to chemical substances, there are periodic oil spillages and leakages in some countries in Africa which further pollute the soil and water. These oil spillages and leakages sometimes cause fires and thus contribute to air pollution. Of particular interest are additives in petrol, particularly lead, which easily gains entry into the body through various ways. Lead limits the ability of children to learn, thereby triggering a cycle of illiteracy which subsequently leads to poverty.
13. Pollution of indoor air results in various respiratory and other noncommunicable diseases in the world. In Africa, the situation is further aggravated by overcrowding, poorly ventilated houses, use of biomass and kerosene for space heating and lighting, lack of information on the use of chemical substances, old and derelict motor vehicles and motor cycles. This has resulted in an increased disease burden within the populations. It also affects productivity, thus perpetuating the cycle of poverty. Children under the age of five from high indoor air polluted localities are likely to suffer more from upper respiratory problems than those from less polluted localities. They are also more likely to underachieve in school compared to those from improved areas. This limits their ability and chances in life.
14. The effects of activities such as the burning of fossil fuel and use of chemical substances have contributed to the depletion of the ozone layer, thereby creating conditions favourable to the resurgence of diseases such as malaria, dengue fever and cholera.
15. The spread of unplanned, poorly constructed urban settlements in African cities and towns, often in unsuitable locations, not only impacts negatively on health but also undermines good values. These settlements put pressure on the environment and the existing infrastructure and hence overload the system and threaten the health of the people, particularly that of children. More often, governments will respond by providing water without improving waste control and sanitation though both are inseparable. It is a



known fact that the quality of potable water provided in areas where sanitation is lacking or low will be affected.

16. The management of both solid and liquid waste is far from satisfactory in the African Region. The result is visible heaps of rubbish in uncontrolled dumping sites which attract salvaging, vermin and disease vectors. This is due to lack of planning and implementation of waste disposal measures. Communities settle on unsuitable land that might have been used as dumping sites of general waste and are thus exposed to potent gases and explosion from built-up gases. Waste, when not properly managed, will directly or indirectly negatively affect the environment and health. Waste from health care activities in particular poses a special risk to the people of the Region and thus calls for undivided urgent attention. Yet, properly managed waste can create employment and alleviate poverty. If waste is carefully recycled, re-used and reclaimed, very little of it will be disposed of, which will save on space so desperately needed for other activities.

17. The safety and quality of food in its various forms is therefore affected by many of the unsafe conditions created. Its ability to support life is then greatly compromised. In fact, food then becomes dangerous to health and life. The way food is produced, stored, transported and handled as a commercial product is therefore very important as it determines the benefits that it may bring to people. Particular attention must therefore be paid to the handling of food and foodstuffs to ensure their safety and quality. WHO treats food safety and hygiene as a separate very important aspect that needs a strategy of its own.

18. To ensure that determinants of success accompany such a strategy, there are three possible scenarios of environmental health development in the Region for 2020. The purpose of the scenario approach is to guide decision making and to build a certain capability for anticipating events.

- **Status quo** – This scenario assumes little or no change in the Region. Besides the occasional success stories, environmental health considerations will continue to receive the scant attention and resources they now get. The explosive growth of peri-urban slums will continue unabated. In line with standard demographic projections, environmental health issues will become a serious problem in the urban areas of the Region, where most of the population will reside by 2020. Air pollution, unsafe water and food, poor housing and occupational health problems will continue to take a heavy toll on African populations.
- **Catastrophe** – The combination of rapid population growth, increasing poverty, natural resource depletion and extensive environmental pollution will simply overwhelm decision-makers. Consequently, they will operate in a state of denial of the issues being faced. Their interventions will focus on the privileged few at the expense of the majority. The sheer magnitude of the problem confronted will put them in a state of inaction and poor environmental health conditions will be considered as normal. It is only when these poor environmental health conditions have a direct impact on the lives of the privileged few that action will be taken to address the problem.
- **The new age** – Under this scenario, increased public participation in environmental health efforts, coupled with strengthened capacity, heightened awareness and strong political commitment will combine to drastically improve the environmental health situation of the

continent. Thanks to sustained efforts, environmentally induced diseases (dysentery, cholera, malaria, etc.) will become a thing of the past. Potable water will be made available to all, and low-cost participatory sanitation practices will be institutionalized throughout the continent. In fact, the African success story will be widely disseminated throughout other developing regions of the world. Emerging threats such as air pollution will have been largely controlled due to the adoption of new, appropriate technologies and political stability, as evidenced by the absence of political strife and conflict, will be the norm in most of the continent.

## THE REGIONAL STRATEGY

### Long-term goal

19. By 2020, an enabling environment that promotes health and contributes to sustainable development will have been created and maintained in the Region.

### Objectives

20. The overall goal of this strategy in other words is to influence these environmental conditions to impact on the determinants of health in order to promote positive outcomes for the people and communities, in particular for rural and urban fringe communities. Specific objectives are to support countries:

- (a) to develop their own policies on environmental health by 2010;
- (b) to establish appropriate structures for environmental health services by 2010;
- (c) to improve human resource capacities in environmental health in ministries of health by 2015;  
and
- (d) to foster sector collaboration and partnership.

### Guiding principles

21. Four guiding principles are necessary for the implementation of the environment and health strategy:
- (a) The participation of the people in decision making implies involving all stakeholders in decision making at the local level, particularly in natural resources management. Dialogue, the participation of the people and conflict resolution among stakeholders strengthen the acceptability of and readiness to adopt concepts, projects and programmes, thus rendering interventions more cost effective and more culturally appropriate.
  - (b) The provision of environmental health services to all people means some for all rather than all for some. Equity, that is the absence of systematic potentially remediable differences in one or more aspects of health across the population or population groups defined either socially, economically or demographically, is critical. In the context of least developed countries, equity in access to public health services has become a more important objective from the poverty alleviation perspective.



- (c) A pro-poor focus ensures that the main objective of planning is to benefit poor people. Otherwise the poor will remain peripheral to the planning and development process.
- (d) Inter-sectoral collaboration between various social-sector departments, particularly housing, local government, land, agriculture, transport (roads), environment and water, should ensure integrated planning and implementation.

#### **Priority interventions**

22. In an effort to address the numerous and complex environmental determinants of health, the health sector will have to implement the following priority interventions:

- (a) improve the capacity of institutional structures to respond to challenges;
- (b) coordinate the use of resources to benefit the Region, particularly the poor and deprived population groups;
- (c) bring countries together to share experiences and expertise;
- (d) seek indigenous knowledge and encourage its application where appropriate;
- (e) undertake risk management as one of the basic approaches in environmental health service delivery;
- (f) use proven approaches such as healthy settings, cities, neighbourhoods, markets, etc. – and participatory hygiene and sanitation transformation (PHAST); WHO has developed guidelines on these approaches;
- (g) introduce environment and health as a life-long lesson in educational curricula; and
- (h) support research on the implementation of cost-effective measures that benefit communities.

#### **Roles and responsibilities**

23. To address the issues stated above pertaining to environment, development and health and to ensure that the strategy succeeds, the following roles and responsibilities are assigned to the main stakeholders:

#### **Responsibilities of countries**

24. Ministries of health in countries should take the lead in the development of policies that enable them to address and implement environmental determinants of health. They are therefore expected to create conditions that ensure success, namely adequate resource allocation to environmental health services to enable them to undertake risk management, provide inputs for the development of policies for the other sectors and foster collaboration and community participation.

25. Communities and other social sectors within countries are expected to be involved in the health sector. It is also important for communities to participate in policy development and implementation and in the monitoring and evaluation of projects and programmes.



26. The expertise of the private sector is crucial for policy development and implementation and service delivery. This creates a conducive environment for communities to participate in the private sector, thereby helping to defuse tension between the private sector and communities which may arise from misconceptions.

27. The participation of institutions of higher learning and research helps these institutions to understand the direction developments are taking. In this way, they are able to develop relevant human resources and to initiate and undertake relevant research for priority activities. This also empowers ministries of health and facilitates continuous professional development.

28. Other partners such as the ministries in charge of housing; land; environment; trade and industry; local government; agriculture; transport; mining, water and education have to work closely with the ministry of health in developing policies. It will also benefit the people if the social sectors support initiatives for sector collaboration and include in their development of human resources the culture of integrated planning and implementation. For the education sector in particular, the inclusion of environment and health as part of life-long learning will help to shift the paradigm.

#### **Responsibilities of WHO and partners**

29. The World Health Organization, in collaboration with its partners (UNEP, UNDP, IPCS, World Bank) should assist in the adoption of *Environmental Health: A Strategy for the African Region* by ministers of health of the Region. In addition, WHO will develop guidelines for environmental health policy and norms and standards for use by countries to develop their own policies. WHO will also assist in identifying enhancers and disablers in the development of policies and in improving capacities and capabilities for environmental health service delivery. It will also foster cooperation between countries in the sharing of resources, expertise and experiences and encourage the mobilization of communities to participate in health development programmes. WHO will help to mobilize the private sector to take part in and provide support for environmental health service delivery. In-built monitoring and evaluation mechanisms will be encouraged to enable countries to measure progress in the implementation of their projects and programmes.

#### **Monitoring and evaluation**

30. The following will be used to monitor progress in the achievement of the environment and health goal and objectives:

- (a) development of an environmental health policy by countries and ministries of health;
- (b) development by countries of relevant institutional arrangements to plan and implement policies for addressing environmental and health concerns;
- (c) improvement by countries of human resource capacities in environmental health within their ministries of health;
- (d) development by countries, through the ministries of health, of mechanisms for collaboration with other social sectors and cooperation with partners;

- (e) mobilization of communities to take part in environment and development issues affecting health; and
- (f) development of research capacities and agendas for environmental determinants of health.

## DETERMINANTS OF SUCCESS

31. Determinants of success range from the stewardship role of the government to the use of strategic tools:

- (a) Governments in the Region should commit themselves politically, financially and socially to implementing policies on environmental determinants of health.
- (b) Greater awareness and appreciation by professionals of the linkages between environment, health and sustainable development is fundamental to the adoption and implementation of the strategy for the Region.
- (c) There is a need for a shift from the *status quo* mindset to a multiple alternatives approach to addressing both current and emerging issues and concerns.
- (d) The availability of trained personnel in the African Region to utilize tools such as *Environmental Health Hazard Mapping* and *Environmental Impact Assessment* to better deliver environmental health services is critical.

## CONCLUSION

32. This strategy is an attempt to address the cycle of environment, development and human health issues. It particularly targets the poor and deprived populations. The strategy deliberately uses the primary health care approach, with emphasis on health prevention and promotion, as a primary tool. This approach has been adopted by all countries of the world, including those of the African Region, to ensure maximum health benefits for their countries and people.

33. Sufficient knowledge has been gained and appropriate tools developed to enable the health sector to contribute to health outcomes and sustainable development. Africa has, since the Rio Earth Summit in 1992, developed consensus through various efforts on environment and health for sustainable development. It is time to consolidate those efforts.

34. Environmental factors that contribute to poor health and therefore to poverty have been identified, as have critical factors that help to improve them in order to ensure health gains and enhance the quality of life of the people. Countries themselves, in collaboration with other partners, have to cooperate in dealing with these factors. Communities as partners and beneficiaries will be mobilized to ensure that they take charge of their own health and well-being.



35. Ministries of health in particular are expected to take the lead in the promotion of environmental health because it is the health sector that has to carry the burden resulting from unsafe policies. By ensuring that social policies are sensitive to the health needs of the people and are easily understood and implemented, countries stand a better chance of making improvements not only in health but also in the economy, life expectancy and quality of life years.

36. The fifty-second Regional Committee is therefore invited to examine and adopt the proposed regional strategy to contribute to the creation of an enabling environment for sustainable environmental health services for the benefit of the populations of the Region.