

The Development of Indicators

Chapter 40 of Agenda 21, entitled 'Information for decision making', calls for the development of indicators of sustainable development. In this respect the Commission on Sustainable Development has initiated a series of indicator review and development activities. An indicator's framework and a work programme extending to the year 2000 have been agreed upon. The World Health Organisation is the lead agency for indicators relating to Chapter 6, which deals with the need to protect and promote human health. Much work has been done in this respect to develop environmental health indicators which address the links between health, the environment and development, and which are targeted at a specific policy or management concerns in such a way that effective decision-making is facilitated.

Such indicators can provide a common currency or language for information exchange between the many stakeholders concerned with health, environment and development interactions. They can help to quantify the situation and highlight its significance. They can help to simplify the data and present it in a form directly relevant to the question being addressed. They enable decision makers to be aware of the choices available, and to evaluate and compare the implications of these choices. They can also provide information to the general public, and facilitate external scrutiny of decisions and policies, thus ensuring transparency and accountability.

It is crucial that adequate indicators are developed to help effective planning at the local level. Local authorities are the level of governance closest to the people and have particular responsibilities in respect of being accountable for the decisions that are taken, and in ensuring that local peoples' needs are taken into account in the decision-making process. Local communities, stakeholders groups and schools should participate in developing community-based sustainable development indicators, relevant to their specific problems as part of the development of local agenda 21 plans and action plans for community improvements.

There is normally a chain of events by which development may effect the environment, which may, in turn, affect human health. For example, a wide range of *driving forces* such as urbanisation, population growth, economic growth, and technological development put *pressures* on the environment. These arise as a result of various forms of economic activity engaged in by different sectors, which may give rise to harmful emissions to the environment. The *state* of the environment may, in turn, be adversely affected, which may also impact on people who become exposed in the process. *Exposure* may, in turn, lead to adverse health effects in people, which may vary in type, intensity and magnitude, depending on the nature of the hazard, the level of exposure, the number of people exposed, their inherent vulnerability and susceptibility, and so on. Decision makers may then take various *actions* at different points in the development-environment-health chain.

To facilitate decision-making processes in this respect, indicators can be developed for the various steps in the chain. Environmental health indicators might be developed also for the ways activities in sectors such as housing, transport, industry or agriculture affect health. The indicators most relevant at the local level will be those that deal with the local modifiers of broad processes such as urbanisation and industrial change, as well others may be more specifically related to a particular chemical, physical or microbiological releases to the local environment.

Indicators may be concerned with a particular outcome, or impact of a particular development or event, or they may be more concerned with a particular process, which has been adopted to solve a problem.