

Point of View

Sustainable development is healthy development

Socrates Litsios

Economic growth has brought with it substantial environmental damage. Nature has been abused and little consideration has been given to the consequences, among them the adverse effects on health. Healthy people are vital for local development that is both economically and ecologically sound. The health sector should be actively involved in the movement for sustainable development. What this would require in practice is considered below, with particular reference to the quality of life in regions of tropical forest.

Of even greater importance, perhaps, than the direct effects of the various forms of environmental pollution is the threat posed to human development by the misuse of natural resources. The latter has led to increased poverty and human suffering, including disease, disability and death.

Tropical forests and economic reality

Tropical forests are a rich resource for indigenous peoples, providing a great diversity of foods for humans, the energy used in cooking and heating, construction materials, fodder for animals, and traditional medicines; some of these products are a valuable source of income. Unfortunately, tropical forests have also been at the heart of the transfer of wealth from developing to developed countries, the latter having acquired valuable materials at

prices in no way reflecting their real economic and ecological significance. Costa Rica, for example, has undergone very extensive deforestation, 30% of the country's forests having been cleared, mainly for the creation of relatively unproductive pastures and hill farms. Valuable timber, plants, and species of animals and insects have been lost, and severe soil erosion has occurred (1).

Tropical forests are also important because of the vast volumes of water which they evaporate. Without this effect the rains would stop and the average temperature would rise. Biomass in all its forms helps to sequester water, one of the absolute requirements of living organisms. The destruction of forests contributes to the rise in the concentration of carbon dioxide in the atmosphere. It has been estimated that deforestation in the Amazon Basin is responsible for 1–2% of the annual global production of gases that absorb thermal radiation and can be expected to cause significant climatic changes.

The author is Scientist in the Operational Research Unit, Division of Control of Tropical Diseases, World Health Organization, 1211 Geneva 27, Switzerland.

In the interest of environmental stability it has been argued that the industrialized countries should pay countries with important reserves of tropical forests not to destroy them. This could be done within the framework of environmental resource accounting, which implies a recognition that the environment should no longer be treated as a production factor for which substitutes can be found. In fact there are no substitutes for air, water, soil and wood.

Fragmented development

Disease control in the tropics allowed the expansion of habitable land but this was not accompanied by the establishment of healthy rural settlements characterized by ecological harmony and supported by an adequate social and economic infrastructure. Instead, fragmented development occurred, isolating people from the control of natural resources and forcing them to live off nature in a destructive manner.

The rash exploitation of tropical forests amounts to the mining of a natural resource. Access roads have attracted settlers who have played their part in establishing semi-urban settlements in forest areas. Marginal farmers and others have been attracted by the prospect of acquiring pieces of land. By and large, these incomers have helped to complete the process of forest destruction.

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In localities where the environment is degraded and the people are poverty-stricken and vulnerable from the health standpoint, the outlook for development is bleak. The people exceed or are projected to exceed the carrying capacity of their ecosystems, they

have few prospects of migrating to other areas, and they do not have the means to obtain food and other items produced elsewhere.

Public health and sustainable development

Sustainable development means improving the quality of life while living within the carrying capacities of ecosystems. Carrying capacity varies from region to region and depends on how many people there are and on the quantities of resources they use and waste. Economic growth, as currently understood, cannot continue indefinitely because it would breach the limits of carrying capacity and thereby have catastrophic consequences.

Healthy people are needed to invest their energies in economically profitable and ecologically constructive activities. For 69 families in Paraguay the major impact of malaria was on the maintenance of fields and the care given to crops (2). Families that were particularly badly affected by malaria lost income because crop production fell when agricultural tasks such as weeding could not be properly carried out.

It should be recognized that the main value of tropical forests does not necessarily lie in timber. This was demonstrated in Peru, where a botanical inventory was made of a hectare of forest (3). The resources included edible fruits, marketable timber, rubber, medicinal plants, lianas and several palms of commercial importance; their values were estimated, taking into account the labour investment required. Fruits were valued at almost US\$ 400 a year, rubber at \$22 a year. On the basis that both fruits and latex can be collected every year, the total financial value of these resources was clearly much higher than the current market value of a single year's harvest; the net present value was estimated to be \$6330 a hectare. The harvesting of these products is labour-

intensive and physically demanding, and good health is a prerequisite for success.

The precise nature of health services in tropical forests should be determined by communities in accordance with locally perceived problems and locally available resources. On the other hand it has been estimated that \$40 a year would be a reasonable price to pay for the non-release of carbon contained in a hectare of trees, and this could be made part of a top-down, i.e. North-South, transfer of capital resources that could be invested in health and social services. Investment in people and the environment is likely to be much more rewarding than allowing further deterioration to occur and then struggling to cope with the consequences.

Public health has a role in identifying situations where sustainable development may be hardest to achieve. An improved understanding is needed of how people's health and the condition of the environment are linked, and how both contribute to the quality of life; local health education should embrace these matters. The notion of health vulnerability should be expanded in keeping with the need to examine the situations of people, wherever they live, in a more holistic manner.

The health sector should be involved in the mapping of linkages between health and the environment in the context of economic development programmes. It is desirable to understand how specific health problems are related to specific intermediary factors and conditions of environmental degradation. Epidemiological methods of surveillance should be used which incorporate indicators sensitive to people's needs, as expressed in terms of disparities in health status and impacts on ecological and economic sustainability (4).

The health sector can make a useful contribution to sustainable development by striving to

improve understanding of how deterioration in ecosystems is linked to increased health vulnerability. It should be possible for the role of public health to become better focused and more efficiently developed. The health sector should adopt a more aggressive stance on environmental management and on the development of human settlements where an acceptable quality of life can be achieved.

The tropics should be seen in terms of human development, with public health playing a facilitating role. Sustainable development requires a framework in which economic interests are subordinated to human and ecological considerations. The aim should be to improve the quality of life, with regard to human dignity, the realization of people's potentials, and the achievement of a decent standard of living. This implies radical revision of established practices.

The United Nations Conference on Environment and Development, held in Brazil in 1992, was a step in the right direction, with its commitment to the empowerment of community organizations and people so that they can achieve sustainable livelihoods. The health sector now has an opportunity to work for the full integration of health into a holistic developmental framework. ■

References

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