The United Nations and the Planetary Ecosystem

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I would like to state clearly at the outset that my evaluation of the United Nations' Conference on the Human Environment is made in the context of a radical and strongly held opinion. The opinion is that the sustainable carrying capacity of this planet for man (even if we perpetuate the current gross inequalities) is fewer than three billion persons.

Not all ecologists feel as I do, but the occurrence of such views among ecologists may account, in large part, for their conspicuous absence in the planning and execution of the Stockholm Conference. Questions regarding the ultimate limits of resources, of economic growth, and population, are profoundly disturbing. This is particularly true with respect to the developing nations where there is a not ungrounded fear that environmental concerns may be exploited in the selfish interests of the rich and technologically developed.

To understand the Conference, we should realize that the event itself was less important than the preparations which preceded it. It was in these preparations that the issue of the limitation of the biosphere, and the population issue, were carefully orchestrated out in favour of emphasis on solutions to the gross inequities of current economic and industrial development. The process was set in motion early. The preparatory committees that produced the documents and proposals for discussion and ratification at Stockholm were staffed by economists, bankers, development specialists, and politicians of various sorts. These were experts in certain restricted, though not insignificant, parts of the total human environment, but they were untrained and incompetent where the structure, function, and resilience of the planetary ecosystem were to be examined. To put it bluntly, the Conference was a creature of the world establishment, born and raised in ignorance, if not in error, as to ecological fact and theory. It was assumed without question that there was ecological space in which to manoeuvre. It was also assumed that technology was indefinitely capable of compensating for resource shortages, and for tendencies of the world ecosystem towards collapse.

Though I start with this assessment, I can still find much that is positive in the results of the Stockholm Conference. The output falls into three categories. The first was a statement of principles, the second an action plan, and the third a proposed organization for the implementation of the first two.

The statement of principles was entitled, "Declaration on the Human Environment". Twenty-six points were listed. The first refers to human dignity and freedom, and denigrates racial prejudice, apartheid, and colonialism (social evils in the environment). Two refer to preservation of wildlife and "samples" of "natural" ecosystems (2 and 4). Three refer to renewable and non-renewable resources (3, 5, and 21). The latter are to be used wisely and shared, with the caveat (21) that sovereign nations can do as they damn well please with their resources, providing they don't pollute anyone else while they do it. Four deal with pollution: of ecosystems (6), of seas (7), control through international law (22), and with respect to the planning of human settlements (15).

No fewer than ten of the principles deal with economic and industrial development. Economic development is needed (8) and must be accelerated (9). An economic environment favourable for development must be created (10) and steps should be taken to see that the costs of making such development compatible

with environmental protection are not onerous from the point of view of the developing countries (11). Environmental concerns should not be allowed to interfere with development (12). Planning can reconcile development with environment (14) and should see to it that development is compatible with environmental quality (13). Science and technology should be applied to environmental questions as part of their contribution to development (18), scientific research should be encouraged at minimal cost to the developing countries (20) and no environmental standards should be imposed which would be inappropriate for such developing countries (23).

The matter of development having been disposed of, five topics are covered by a single principle each. Nations are advised to set up appropriate administrative institutions for dealing with the environment (17). Environmental education should be expanded (19). Weapons of mass destruction should be eliminated (26) and nations should see that international organizations do a good job with respect to the environment (25). Item 24 states bluntly that concerns about pollution shall not be allowed to interfere with the exercise of national sovereignty.

One principle (16) does deal with population. It advocates demographic planning (as long as it does not infringe either on individual rights or national sovereignty) where the rate of growth is *inadequate* or *excessive*. Neither stabilization nor reduction of populations is considered.

The Action Plan has six sections dealing, respectively, with human settlements management, natural resources management, general pollution, marine pollution, educational and social aspects, and developing nations. There are 109 points in all.

Items 1 through 18 are under the heading of Human Settlements Management. They deal with the encouragement of cooperation in the planning and improvement of human settlements, the exchange of experts and information, and the centralization and coordination of the United Nations' activities. There are sections on funding, disaster warning and relief, and the amelioration of the problems of malnutrition, noise, and the development of squatter slums.

Items 11 and 12 in this section are the only recommendations in the Action Plan referring specifically to the question of population. Item 11 directs that the preparations for the 1974 World Population Conference include attention to the relationship of population to environment. Item 12 recommends assistance by U.N. agencies to governments requesting aid in the area of family planning, and advocates research "in the field of human reproduction" in order to prevent "the serious consequences of population explosion". I thought it significant that it was "consequences" rather than "explosion" that were to be prevented.

It should be recognized that many of the recommendations under this section will, inevitably, tend to increase the utilization of resources and the extension of public health measures. The objective is to continue and expand the public health revolution. It is the spread of effective public health programs that has dropped death rates drastically and has been primarily responsible for the phenomenal growth of population following World War II. I do not mean to impy here that we should forego efforts to prevent premature death and human suffering but I think it is important that we recognize the full consequences of these efforts.

The Section on National Resources Management encompasses recommendations 19 through 69. The first ten recommendations concentrate on land use in rural areas, agricultural technology, livestock development, and the management of forested lands. The approach throughout these ten recommendations is basically exploitive, tending to increase the human impact on the environment by directing the maximal amount of biological productivity to human use. Minimization of any negative side effects comes as a pious afterthought. This is especially true with respect to forested lands in which the thrust of the recommendations seems to involve the kind of monoculture approach which dominates modern agriculture.

The management of non-human animal life forms is introduced in recommendations 29 (the use of animals as adjuncts to environmental monitoring) and 30 (the assessment of the economic value of wildlife). Recommendation 31 deals with the training of technicians in wildlife "management" (for which I read, "rational exploitation"). Appropriately, attention is given to those species which inhabit international waters and which migrate across international boundaries. Item 33 is one which should receive particular attention from Canadians. This item asked all governments concerned to implement a ten-year moratorium on commercial whaling. Canada voted in favour of this recommendation at the United Nations Conference and has recently moved to close down whaling based on Canadian shores. Canada, however, is a member of the International Whaling Commission. In the meeting of that Commission, following the Stockholm Conference, the Canadian Government representative abstained from voting and thus contributed significantly to blocking the moratorium proposed at Stockholm. Canadians should investigate the apparent duplicity of the Canadian Government in this tragic situation and take strong action (see Searle, G. 1972. Telling Whoppers. Ecologist 2(10): 12-13).

The most extensively developed section under the resource management heading deals with the conservation of "genetic resources" including both "static" resources (seed and gamete banks) and "dynamic" situations (evolving natural communities). The approach is that of a treatment of symptoms (impending decrease in genetic diversity, or extinction of species) rather than search for a cure (control of the competitive impact of human populations growing in the finite planetary ecosystem). Symptomatic treatment is better than nothing, but stores of seeds, gamete banks, and small "natural reserves" set up to maintain genetic resources are poor substitutes for a planetary ecosystem in dynamic and self-sustaining balance. The emphasis throughout this section is on species of agricultural, silvicultural, or medicinal value.

The Action Plan turns next to living marine resources. It deals with fisheries, the laws of the sea, preservation of estuarine breeding grounds of commercial fish stocks, and monitoring of marine fisheries and fish populations. The last area of concern is well taken, yet it is difficult to be optimistic in view of the long and disastrous history of over-exploitation of fish stocks, and the deplorable record of the one major precedent at international control (the International Whaling Commission).

Water management is covered by recommendations 51-55. It is suggested that provision be made for commissions to deal with the management of international river basins, general problems of water use and quality, and the environmental effects of major water management projects.

Items 56-58 are concerned with the effects of extraction and use of fuel and non-fuel minerals. Item 59 deals with the development of energy resources. Energy use is probably the best single measure of the total human impact on the biosphere. The drive of the Action Plan is towards increased availability of energy for human use and therefore towards an increasing human impact on the environment. Appropriately, but probably not intentionally, this item is followed by recommendations which advocate *prior* environmental impact studies in association with the use and development of resources (Items 60-64).

The resources section of the Action Plan concludes with reference to the Man and the Biosphere Programme, meteorological implications of resource development, remote sensing, aid to governments in resource planning, and the stabilization of marginal lands.

The section on General Pollution (recommendations 70-85) begins with advocacy of governmental concern with the effects of human activities on climate. It goes on to recommend that governments use the "best practicable" means of minimizing release of toxic substances, "unless their use is essential to human health or food production." Specific mention is made of heavy metals and organochlorine compounds. The remaining recommendations

promote governmental cooperation in establishing international standards, assessing pollutant sources, pathways and risks, and developing international mechanisms and disseminating technologies for dealing with pollution. The most significant recommendations in this section are those dealing with the establishment of a worldwide monitoring network including remote base-line stations, and others in densely inhabited areas (operation "Earthwatch").

The area of Marine Pollution is especially attractive and appropriate as regards the United Nations since it is concerned particularly with international waters. Recommendations refer to restriction and elimination of ocean dumping, as well as the control of land-based sources of marine pollution. There are very useful suggestions for the compilation of worldwide statistics on the production of potential pollutants of the marine environment. Other sections deal with monitoring, information exchange, rights and responsibilities of coastal states, availability of advice and technological assistance, and training of competent personnel.

The seven recommendations grouped under the heading of Educational, Informational, Social and Cultural Aspects relate to assistance in establishment of monitoring programmes, reporting of such programmes, the development of social and cultural indicators of environmental quality, programmes of education, and the development of citizen and non-governmental participation in environmental affairs. It is in this area of education and publicity that the Conference itself was particularly disappointing to me. My impression was that the media found the Conference of relatively little interest and perhaps anti-climactic. The book by Barbara Ward and Réne Dubos*, which was to serve as the "position statement" for the Conference, was delayed in publication and has been poorly distributed. Here in Canada it is available in hard cover, and was only briefly available in paperback (currently unavailable owing to some kind of squabble over distribution rights). It has only recently become available in the United States and these delays will seriously diminish its impact there and elsewhere.

The final recommendations in this section deal with World Environment Day and with support for various conventions such as the UNESCO Convention on the Protection of the World Natural and Cultural Heritage and the Convention on Conservation of Wetlands of International Importance. The final paragraphs instruct the Secretary-General of the United Nations to keep himself informed on environmental affairs and recommend the establishment of a reference service for environmental information.

The first of the recommendations under the heading, Development and Environment should be required reading for all environmentalists in the developed world. Its emphasis on the training of personnel to incorporate environmental concerns into developmental planning and on promoting within the developing countries the technical and administrative competence for indentifying and dealing with environmental problems reflects deficiencies which we in more fortunate lands tend to ignore. If we encounter frustration in dealing with the effluent in Sudbury, Trail, Calgary, Vancouver, or Toronto, given all the technology and riches at our command, how much more difficult must it be to get action in Korea or Brazil?

I am somewhat less sympathetic with recommendations 103 and 104. These deal with the economic interests of the developing nations in relation to environmental concerns. I do not doubt that there are good grounds for the fear that environmental concerns may be used, "as a pretext for discriminatory trade policies". If this were the total extent of the matter, these recommendations could be wholeheartedly endorsed. On the other side of the coin, however, it seems to me that the developed countries would be fully justified in utilizing trade restrictions as a means of preventing the use of chlorinated hydrocarbons to such an extent that species now endangered by past mistakes should be exterminated because these mistakes are perpetuated, or that even

*Reviewed on page 202.

more serious consequences to the planetary ecosystem as a whole should result. Future environmental insults cannot be justified on the grounds that others have made mistakes in the past. This is not, however, to argue that the rich nations of the world do not have obligations to provide material aid to their less fortunate brothers in the interest of avoiding damage to the common environment.

The final three recommendations enjoin the developed nations to examine the potential for substitution of natural products from the developing lands for polluting high-technology alternatives, to find ways of making environmentally "good" technologies available at low cost, and to continue their development aid, undiminished by environmental concerns, through the second Development Decade.

The last major task of the Stockholm Conference was agreement on an organization to promulgate the Action Plan on the basis of the Principles that were enunciated. This organization will be headquartered at Nairobi and has three components. The first is the Governing Council for Environmental Programmes. Its tasks are to develop the proposals of the Action Plan both within and outside the United Nations system. The task spelled out in most detail is "to maintain under continual review the impact of national and international environmental policies and measures on developing countries". The objective is "to ensure that such programmes and projects shall be compatible *with the development plans and priorities of those countries*" (italics mine). Neither the Governing Council, nor its executive (the Environment Secretariat) is charged with the converse, seeing to it that policies for economic growth and development are compatible with the maintenance of environmental quality and of a self-sustaining world ecosystem!

Provision is made for the establishment of a Secretariat headed by an Executive-Director and operating under the guidance of the Governing Council. One of the major duties of the Secretariat is the maintenance of an Environment Fund to be established by voluntary contributions of member nations, and to be used to finance environmental programmes within the United Nations and in the developing countries. The final organization unit is called the Environmental Coordinating Board to be chaired by the Executive-Director (Canada's Maurice Strong) and to provide coordination among the multiplicity of organizations and programmes which are involved in or affected by the Action Plan.

My conclusion is that one must recognize that the Stockholm Conference was a political rather than a scientific effort. Its main contributions are political, and for many of these we should be grateful. In part, it was what I think of as ecological pornography, a skillfully engineered effort to exploit environmental concerns for other ends. In this case I find these ends laudable, (strengthening of the United Nations and supporting the desperate battle of the third world for economic development). However, I believe that emphasis on these goals prevented any true assessment of the total relationship, present and future, of man and the world ecosystem of which he is a part and by which he is supported. The conference operated throughout on the undemonstrated premise that continuing function of that ecosystem is compatible with indefinitely continued economic growth.

Despite such disabilities, there were many extremely important accomplishments. Foundations were laid for an enormous range of environmental assessments and a worldwide monitoring network. The chauvinistic and self-righteous attitudes of the rich nations received a much-needed jolt. The importance of technical aid and assistance, and the avenues by which these could be developed, were spotlighted. The basis was laid for a United Nations organization in the area of environment which may grow in wisdom and effectiveness, despite its limited and unbalanced origins.

Could the positive accomplishments of the Stockholm Conference have been achieved without shutting the door on consideration of the basic issue of the earth's carrying capacity

for man? Maurice Strong and the other "realists" in the field of international politics said "No". Subordinating ecological realities to political realities was an *uncalculated* risk taken by men innocent of ecological knowledge but expert in politics. Ecologists, equally unsophisticated in political realities, can only wonder whether the approach was necessary, and whether the cost of avoiding the issue was justified. At any rate, the stage is set for a second Conference at some unspecified time in the future and there may perhaps then be opportunity for an effective and more truly ecological assessment of "The Human Environment".