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Developing Countries in the Environmental Crisis

by Udo Ernst Simonis, Berlin*

It is not only the economic gap between "North" and "South" which has dramatically widened: the same is true of the ecological gap. However, because the Earth is one ecological unit, the progressively worsening environmental crisis in the developing countries is of significance for the whole world.

Following the first environmental conference in Stockholm (1972) public opinion has become increasingly sensitive to environmental questions and the population's awareness has increased – this is true not only in the North but also in the South. Since that time, the awareness of the problem has been institutionalised in many countries, and environmental problems are being "dealt with". Thus, while there were only 10 countries in 1972 with an environmental administration, organised in one way or another (i.e. ministries, councils, commissions or other establishments), the figure has risen in the meantime to about 120, of which 80 are developing countries. The concept of "eco-development" as a strategic approach to harmonising development and environmental (protection) goals, has by now managed to find broad acceptance. However, the worldwide economic crisis which set in very soon after the Stockholm conference has greatly complicated the situation.

Whilst experience has meanwhile shown that economic stagnation or slow growth are in and of themselves no cure for the destruction of the environment (as was postulated at the beginning of the 1970s), the conflict between (short-term) economic interests and (long-term) ecological necessity, in both North and South, has not eased at all, but has in fact worsened. Environmental movements at the local, regional and national levels may have increased numerically, but their influence has increased rather less. Moreover, they are confronted with powerful economic sectional interests with one primary argument which they raise time and again, namely the loss of international competitiveness. Conversely, even against the background of a universal increase in unemployment the job potential in active environmental protection has so far at best received only partial recognition, in a small number of countries, a small

number of economic sectors and a small number of environmental spheres.

One commendable exception to the above would appear to be the energy conservation policy which came in the wake of the first oil price shock in 1973 and has brought along with it an easing of the burden on the environment (both the consumption of resources and the emission of pollutants have been reduced). However, this process of energy conservation has not been evenly distributed, whether on a national basis (a problem generally appreciated) or on an international one.

Consequences of the Oil Price Rises

Those hardest hit by the oil price rises of the 1970s have been the oil-importing developing countries, hence the classification of a group of them as the MSACs (most seriously affected countries). All countries differ in the manner and speed with which they have adjusted their energy supply to suit the crucial changes in relative prices within the economy. What they all have in common, though, is the burden on their balance of payments, the worsening of the debt problem, and the threat, in some cases far-reaching, to local ecosystems as a result of the substitution of domestic energy sources for oil and oil products.

There are thus two senses in which the new situation brought negative environmental effects to the oil-importing developing countries: for one, the "second energy crisis amongst the poor" had a devastating effect on forest reserves (primarily through the use of firewood instead of kerosene) and thus on soil fertility and food production; secondly, because of the insufficient adjustment of import structures, the developing balance of payments crisis led to exportable natural resources being overused or more rapidly depleted as part of a bid to stabilise the balance of trade. As a result, the current situation is grim and the prospects for the future offer little encouragement: the

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economic and ecological crises are mutually reinforcing in the developing countries.

If this vicious circle for the developing countries is to be turned into a virtuous circle, the moves necessary include counteracting the prevailing methods of resource utilisation and bringing to a halt the ecological processes of deforestation, soil erosion, desert expansion, climatic change etc. which result from inappropriate industrial and agricultural techniques and from the struggle to raise short-term productivity. Alternative patterns of development which can guarantee ecological endurance and are less costly in social terms are both known to exist and technically possible, even if they are not, or not as yet, realisable in all instances. Whatever problems may exist, however, there is one false conclusion which must at all costs be avoided when any assessment is made of the existing environmental crisis in the developing countries: that the way out of the current crisis can possibly disregard the natural environment. The general strategic discussion could be summed up as follows: the potential must be determined for ecologically sustainable, socially desirable and economically productive ways of using resources and these must be given concrete support in practice.

Common Interests

The Second Report of the Brandt Commission identifies the urgent need to arrest the further deterioration in the quality of the environment as one of the "common interests" between North and South. The Report's comments on this include the following: "Growing pressure on land, increasing use of chemicals, desertification and deforestation are reducing the productivity of soils in many parts of the world. The removal of forest cover, incautious use of chemicals and fertilisers, and soil erosion are destroying the soils and agricultural potential of scarce land resources and causing severe environmental damage... We emphasise the need for resources to halt and reverse these processes of ecological degradation, which now assume emergency proportions."¹

Other reports, too, which have appeared relatively recently² show that awareness of the interdependence between ecology and economy has increased. They have helped to clarify the two aspects of this interdependence: there are certain areas where, on the one hand, all concerned could derive advantages from international cooperation ("positive sum games"); on the other, all would have to suffer disadvantages ("negative sum games") if improved cooperation should fail to be established. A number of these problem areas will be examined below.

One observation can be made at the outset: the types of environmental problem discussed here occur, at least primarily, in the South, and many people in the North regard (or regarded) them as no more than "distant problems of the South". Conversely, many in the South feel that the problems have been brought about by the North (and transferred via technologies, institutions and interests). As yet, the awareness that these might in fact represent common problems for which commonly acceptable solutions have to be found has not been especially strong, but it does exist, and is finding increasing expression: the ecological question is becoming, or will become, part and parcel of the "North-South dialogue".

Decline in the Diversity of Species

Approximately 25,000 species of plants and over 1,000 of animals can now be classed as under threat of extinction; during the current or the next decade, one in ten of all terrestrial species could die out. The extinction of species on this scale is unprecedented in the history of mankind.

About two-thirds of all terrestrial species, including the majority of endangered species, are to be found in the developing countries; the tropical rain forests alone are the habitat for about 40 % of all species.

¹ W. Brandt (ed.): Common Crisis, North-South: Co-operation for World Recovery, The Brandt Commission 1983, London 1983, p. 126.

² See, for example OECD (publ.). Economic and Ecological Interdependence, Paris 1982.

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V E R L A G W E L T A R C H I V G M B H - H A M B U R G

This quarterly report – compiled by the Department of World Business Trends of the Hamburg Institute of International Economics – analyses and forecasts the economic development of the most important Western industrial nations and of the international raw materials markets.

These few figures should suffice to show the extent of the immediate danger in overall quantitative terms to the world's animal and plant species which can result from poverty-induced depletion and interest-induced wasteful exploitation, i.e. excessive utilisation of natural resources in developing countries. However, if species were to be lost in the developing countries on the scale described, there would also be other worldwide consequences, for the future development of agriculture and industry, and for standards of health and the quality of life in general.

The quantitative loss in the number of species leads to a qualitative deterioration in those which remain. For instance, many important useful plants have only a limited genetic base in the industrial countries. The loss of species in the developing countries concomitantly reduces the possibilities available for stabilising or increasing the yield of useful plants in the industrial countries. Many medicines and pharmaceutical products in the industrial countries depend directly or indirectly upon the diversity of species in developing countries. To illustrate, about 40 % of medicines in use are derived in whole or in part from natural products, and these again largely originate in the developing countries. Even the innovative potential – and hence the economic future – of biotechnology is dependent on genetic reserves in developing countries. The scientific and technical expertise needed to make (rational) use of the diversity of species has so far been essentially confined to the industrial nations, whereas the developing countries are important as the source of genetic inputs.

Despite these obvious interdependent relationships between ecology and economy, the once-for-all loss of species throughout the world proceeds apace. In the developing countries themselves, it is not only knowledge and know-how which is lacking; there is also a lack of economically realisable alternatives and, above all, of incentives to protect existing species. Obviously, the developing countries derive little economic benefit for themselves from the utilisation of their own diversity of species in or by the industrial nations. Precisely because of this, the developing countries have too little interest in the long-term protection of species. Thus the chain linking rational economic utilisation and guaranteed ecological endurance is broken due to long-term thinking's limited influence and to the logic of day-to-day survival. Once they have been utilised or exported, the value of natural resources is lost. This, however, makes the industrial countries' responsibility not less, but all the greater when it comes to harmonising ecology and economy in developing countries.

To sum up: One implication of the ecological-economic interdependence in the North-South context is that any significant loss of species in the developing countries will affect health and prosperity in both industrialised and developing countries. Thus the North and the South should recognize their common interest in curbing the decline in the diversity of species in developing countries.

Loss of Tropical Rain Forest

Many experts are now of the opinion that the tropical rain forests are being utilised (exploited) to an extent and in a fashion that will be (and should be) neither ecologically nor economically sustainable. Estimates of the rain forest's depletion either through re-use of the land for other purposes or through degradation tend to vary, but the message is clear: a joint research project conducted by FAO and UNEP puts the depletion at 14 % between the present day and the year 2000, or 7.6 million hectares per annum – and this study refers only to land re-used for other purposes, and only to self-contained tropical rain forests. Studies also including degradation reach a corresponding figure of 40 %, or 20 million hectares per annum. As against that, reforestation at present covers only 10 % of the area which is being deforested.

From an individual or business point of view these activities are designed to bring a short-term improvement in profitability, and from a national economic point of view, to achieve economic growth, create employment and stabilise the balance of payments. From the point of view of the world economy, the South-to-North transfer of natural capital (natural resources) corresponds to a given transfer of monetary capital (monetary resources). The final distribution (incidence) of the income resulting from nature's utilisation (which represents a flow) may be an open question, but the loss of natural reserves (a stock) is definitive. No one has so far given a convincing assessment of the significance of these ecological losses as far as their long-term effect on economic earning power or opportunities for growth are concerned.

There are not inconsiderable differences from region to region or country to country in the actual form taken by deforestation: clearing of land for settlements, conversion to pasture or other agricultural use, use of the timber for charcoal burning or firewood, and finally timber export for industrial purposes all differ greatly in their relative significance. Taking a worldwide view of timber felled from tropical forests, the ratio of firewood or charcoal burning to industrial use has been estimated at 4:1. Such estimates are contentious, and in any case

subject to variation over time. What cannot be disputed, however, is that the demand for energy is a major single cause of deforestation in developing countries, and energy supplies are in turn being severely curtailed as a result: the shortage of firewood in many African and Asian countries is locally acute and nationally increasing. Once more, because of the chain of interdependence in the ecological system, all kinds of serious consequences ensue. The UNEP report describes the heart of the problem in just a few stark words: "The imperatives for survival lead to action like cutting the last wood on slopes prone to erosion to secure warmth and cooking for the present, even though it means crops and fuelwood for the future are at risk".³

Far-reaching Ecological Effects

Hence far-reaching ecological effects can follow from short-term economic decisions: erosion, flooding, climatic change, salination of irrigation systems and hydroelectric facilities – all of which ultimately jeopardise the ability to export raw materials. According to the UNEP's estimates, forest reserves in Malaysia and the Philippines could be largely exhausted in about 10 years' time, and if the high level of exploitation persists the forests of Thailand will be completely felled in another 25 years or so.

In the light of such trends, local and national practices of timber production and the clearing of forests become global problems, and a simple, traditional (ecological) principle of forestry appears to be in urgent need of rediscovery on a worldwide level: "Do not cut down more timber than can grow to replace it!". Simple as the application of such a principle may seem under normal economic conditions, once these conditions are upset the difficulties are enormous. In many developing countries, short-term crisis decisions are reducing the ability to take long-term decisions at all:

- Increased use of the forest to secure short-term energy needs (firewood, charcoal) is, in the long term, posing a threat to survival within the limits of the local resource base.
- Deforestation aimed at increasing timber exports to stabilise the balance of trade in the short term jeopardises the country's very ability to export in the long term.

The case of the rapid clearing of the tropical rain forests in the developing countries also brings out another aspect of the problem as a whole: simply adding

³ UNEP: *The State of the Environment 1972-1982*, Nairobi 1982, p. 167.

together the environmental protective measures taken in individual countries will not suffice as an approach to solving environmental problems on a world scale. To have a domestic environmental policy is not enough by itself. The environment must become a topic for foreign policy and development policy. The success (or failure) of environmental policy cannot be measured within national boundaries, because the environmental problem, in most of its aspects, does not itself recognise such boundaries.

There is another economic chain directly linking environmental conditions in developing countries and industrial countries: when soil fertility is lost because of ecological damage in developing countries, still more upward pressure, as worldwide demand grows because of population growth, is placed upon food production in the industrial nations (both for export and for emergency programmes) leading to more erosion of their soils too wherever they are marginal or, via the increased use of agricultural chemicals, reinforcing the dangers associated with the increased burden placed on the soil and on water supplies – and hence ultimately on mankind.

To sum up: the disadvantages of the rapid depletion of tropical rain forests do not flow exclusively to the developing countries, but also to the industrial countries. Although the direct consequences of deforestation occur in the developing countries themselves, the ecological and economic repercussions are highly significant for the industrial nations. Some of the consequences of "having done too little and too late" will prove to be irreversible. Even so, in fact precisely for this reason, concerted action is needed now. The industrial and the developing countries have a common interest, though for different reasons, in achieving more rational utilisation of natural resources.

Differing Environmental Standards

Almost half the overall total of industrial or quasi-industrial investments made in the Third World in the last decade did not come from sources within the developing countries themselves, but through external channels, mostly via multinational corporations. A large proportion of this foreign direct investment was concerned with the utilisation and exploitation of natural resources such as fuels, minerals, timber, fisheries etc., the final consumption of which, however, again largely takes place in the industrial countries. Recent studies by the OECD, UNCTAD and other bodies have shown that there is an increasing tendency for certain industries to be located in developing countries. The trend is

especially marked as far as a number of traditionally heavy industrial polluters is concerned, such as the steel, aluminium, asbestos and toxic chemical industries. Despite this, differences between developing and industrialised countries in their environmental standards and protection regulations (costs of environmental protection) do not in general appear to have been the crucial factor underlying the choice of location; also involved are the type of resources, the size of the domestic market, wage, energy and transport costs which, either in general or in their specific weightings, are accorded a greater significance.

At the same time, though, it is striking that the developing countries have still not given high priority to the protection of the environment by industry when negotiating agreements with multinational concerns: taxes, exchange controls, employment guarantees, and technology transfer have always been more important questions. As a result, such agreements either contain no directions or regulations on environmental protection, or only limited ones. (According to a study of 21 mining agreements between multinationals and developing countries, 9 had absolutely no environmental provisions, and 12 covered only the most general precautionary measures. None of the agreements contained what could be called a complete set of environmental provisions.) Developing countries have not so far placed any appreciable pressure on individual countries or multinational corporations to adjust in their own favour any trading advantage stemming from lower environmental standards, however great this factor may be in concrete cases.

Need for Action

Nevertheless action is now needed to bring a harmonisation of environmental standards – and this not only in the regional sphere (e.g. catalytic exhaust filters in Western Europe) or on an East-West basis (e.g. action on transnational air pollution), but also in the context of North-South relations. In particular developing countries run a risk (increasing over time) of losing, or failing ever to gain, markets for their products in industrial countries because they apply lower environmental standards (e.g. import restrictions imposed because of pesticide residues in foodstuffs). Because the industrial countries, whose national environmental policies are growing in effectiveness, face an increasing risk of importing environmental problems from abroad (e.g. reintroducing the prohibited product DDT by way of food imports), the need for developing countries to pay closer attention to

environmental protection regulations will increase also for this reason.

A joint UNCTAD/UNEP report on the links between resources, environment and foreign trade includes the following recommendations:

- the governments of those developing countries which are rich in resources should initiate environmental legislation as soon as possible;
- greater attention should be paid to environmental protection in any future contracts governing the exploitation of natural resources in developing countries;
- taxation on the exploitation and/or export of resources should be increased, the revenue from which could be used to finance treatment of both existing and emerging environmental problems.

In short: the interest in participating in the possible benefits of an interdependent international system demands that all should play by the same rules (which need to be commonly agreed). This applies not only to the economic sphere, but more and more also to the ecological “rules of the game”. The points considered and recommendations reproduced above should not be taken to imply that environmental standards and protection regulations ought to be completely identical in industrial and developing countries. A trade-off does unquestionably exist between environmental protection and income growth. In other words, there is a more pronounced conflict between the need to increase incomes and the need to protect natural resources in poor countries than there is in the industrial nations. This, however, is not to say that developing countries can dispense with environmental protection or that they can exploit their natural resources, or allow them to be exploited, in future as they have in the past.

The interdependence between the economic and the ecological problems of the industrial and the developing countries, between North and South, creates “common interests” between North and South. It is important that this should be more fully and more quickly recognised, and made a topic of discussion on an international level. Undoubtedly the seriousness and intensity with which the topic is treated will depend on the time-horizon chosen and the telescopic abilities of those participating in the discussion: the further they look into the future, the clearer the connection should be between environment and development. What, however, should also be clearer is that any separation of the First, Second and Third Worlds for ecological purposes is thoroughly obsolete and must be superseded.