

CEPAL Review

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UNITED NATIONS
ECONOMIC COMMISSION FOR LATIN AMERICA
SANTIAGO, CHILE / DECEMBER 1980

CEPAL

Review

Number 12

December 1980

CONTENTS

Note by the Editor	7
Present development styles and environmental problems <i>Mostafá K. Tolba</i>	9
The interaction between styles of development and the environment in Latin America <i>Oswaldo Sunkel</i>	15
Comments on the article "The Interaction between Styles of Development and the Environment in Latin America" Comments by Aníbal Pinto Comments by Jorge Sábato Comments by Gabriel Valdés Comments by Jorge Wilhelm	51
Biosphere and development <i>Raúl Prebisch</i>	69
The environment in the political arena <i>Marshall Wolfe</i>	85
Development strategies with moderate energy requirements Problems and approaches <i>Ignacy Sachs</i>	103
Development and environment: the Brazilian case <i>Fernando H. Cardoso</i>	111
The environmental dimension in agricultural development in Latin America <i>Nicolo Gligo</i>	129
Environmental factor, crisis in the centres and change in international relations of the peripheral countries <i>Luciano Tomassini</i>	145
Comments on Peripheral Capitalism and its Transformation Comments by Lucio Geller Comments by José Ibarra Comments by Pedro Vuskovic	175

Present development styles and environmental problems

*Mostafá K. Tolba**

Latin America occupies a special place when consideration turns to what should be done to develop authentic and environmentally rational development styles. Most of the countries of the region have long experience of economic and social development and possess first-hand knowledge of the social and environmental problems connected with the rapid attainment of high levels of industrialization and economic growth, while at the same time they have suffered from grave social and environmental problems deriving from poverty, the manifest inequalities in the distribution of goods and income, and regional disparities in standards of living and resource development. Examples of this are the very high levels of air pollution, the loss of soil, the disappearance of the forest cover, and the colossal environmental problems of the urban centres. Many Latin American countries have suffered particularly severely from the economic and environmental problems created or aggravated by their weak bargaining power in the international trade field and investment markets. At the same time, however, some have tasted the promise of self-reliant and socially satisfactory development held out by technical and economic co-operation among the developing countries themselves. As they generally have high levels of literacy and a strong social conscience, they are also in a good position to initiate and maintain broad-based and lasting development styles.

The topic which needs to be examined in depth is that of which of the available alternatives hold out promise, and how they can be materialized. Naturally, there can be no unique or stereotyped solutions: they must be based on diagnosis of the problems, comprehensive appraisal of the possibilities and potential of specific situations, and examination of the nature and viability of feasible and satisfactory alternative development styles and ways of attaining them.

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I

Linear extrapolation or why present patterns won't work

The period since the establishment of the United Nations has seen the emergence of many countries from colonial dependence in physical terms, and with it a new responsiveness and commitment to ensuring a more equitable world for all peoples. The striving for political independence has been increasingly merged into a quest for economic development, and yet the model for this quest has frequently been seen as one established by the developed countries of the industrialized North. The questions we must pose ourselves are:

— Can developing countries imitate the development patterns of the North?

— Even if they could, would this be desirable?

— Can the countries of the North themselves continue with the same patterns of resource-intensive consumption-oriented development?

In regard to the first question, let us look for instance at the national resource base for food and agriculture, recalling the World Food Conference call for doubling of production in developing countries in twenty years.

Barely 15 to 18% of the soils in South America, Africa and Asia may be described* as having no serious limitations for agricultural use. As much as 95% of the total land area in the arid and semi-arid zones is subject to the risk of desertification. And desertification is not confined to the dry areas. Its hazard can reach large proportions even in the sub-humid zones. Nearly 35% of the world land is subject to moderate-to-very high desertification hazard: 55% in Africa, 34% in Asia and 20% in South America.

In South Asia, South-East Asia, and the South Pacific, the area under forests is being depleted at a rate of 2% per annum. In certain areas, for example Malaysia, Nepal and Thailand, there are some indications that if the present logging, farming and other practices continued, there could be a virtual disappear-

ance of closed forests within the next 25 years. The environmental consequences of such large-scale destruction of tropical forests in terms of erosion, salinization, desertification, flooding, waterlogging, silting up of reservoirs and streams, clogging up of irrigation networks, and unfavourable changes in local micro-climatic patterns are bound to be very grievous.

Another potential global problem in this area of food production is fisheries. Collapses of ocean fisheries have in recent years become increasingly common. If sea fisheries are to continue to supply significant amounts of high-quality protein foods a much more rigorous management of fishing and human activities around and in the ocean will be needed, regionally and nationally. This management must be based on sounder ecological considerations than hitherto.

These are all cases where the sustainability and applicability of certain development patterns is a major issue. If we add such dimensions as the energy intensive nature of much of modern agriculture, or the capacity of land to provide employment under certain development patterns, or the pollution of water from agricultural residues, or the increased resistance of agricultural pests, the questions multiply. And, as you are aware, similar questions arise when the resource base for industrial development is considered. Were developing countries to succeed in consuming minerals at the current rate of United States consumption, known recoverable resources of copper would be exhausted in 9 years, bauxite in 18 years, zinc in six months, lead in 4 years, petroleum in 7 years and natural gas in 5 years.

Let us turn to the desirability of the present patterns. Look at them, for example, in the context of the present and urgent problems of urbanization in Latin America. Empirical evidence clearly indicates that levels of per capita wealth of countries and their levels of urbanization are closely associated. There is no doubt that along with industrialization and diversification of economic structure and social development in general, urbanization will continue to gather momentum in developing countries.

The present, daunting urban problems of congestion in settlements and transport, squa-

lour, poor hygiene, noise, unemployment, mass poverty and social unrest which are experienced by developing countries today were also experienced by the great cities of London and Paris during the 18th and 19th centuries.

But the important difference is that the magnitudes of these problems, and the rates at which they are getting aggravated today in developing countries, are quite different ... If the populations of the early cities increased at about 0.5% per year, the populations of several large cities in the developing world are increasing today six times as fast, at 3% per year, or even more. Whereas urban societies and policymakers had to contend with annual population increases of tens of thousands, today in the developing countries, they have to provide the basic requirements of shelter, sanitation and water supply for annual additions of hundreds of thousands of people. It is estimated that merely the increment in the urban population of Latin America over the period 1975-2000 will exceed 200 million people. The relative extent of urbanization in Latin America is thus expected to exceed that in Southern Europe by the year 2000, constituting more than 75% of the population.

One aspect of the undesirability of imitation is the use of resources in military expenditure. Certainly there is no worse constraint to much needed development than wars and armed conflicts. In themselves they induce tremendous hazards and disastrous impacts on the human environment. Through their claim on resources, they jeopardize opportunities for development. The figures are startling. World military spending today is over US\$ 1 billion everyday. If half of the funds spent on armaments throughout the world from 1970-1975 had been invested in the civilian sector, annual output at the end of the period could have been perhaps US\$ 200 billion larger than it was—more than the aggregate GNP of Southern Asia and the mid-African region two large regions of acute poverty with a total population over 1 billion. It was estimated that for the world as a whole 60 million people are engaged in military related occupations. This corresponds to the entire labour force in manufacturing in Europe outside the USSR. About 25% of

the world's scientific personnel are engaged in military related pursuits. The world's armed forces are major consumers of a wide range of non-renewable resources, both energy and raw material reserves. It has been estimated that world military consumption of liquid hydrocarbons is about 700-750 million barrels annually—twice the annual consumption for the whole of Africa. There is still a widespread belief that disarmament or discontinuation of some specific weapons programme would swell the ranks of the jobless, particularly when unemployment is already high. There is evidence to the contrary. The United States Government estimates have indicated that while US\$ 1 billion of military expenditure creates 76 000 jobs, the same amount released in tax cuts would create 112 000 plus. Let us face facts squarely. We will not achieve much in terms of development and environmental protection through searching only for more appropriate patterns of development and life styles. The world must be serious in dealing with the issue of the arms race if it really wants to shoulder its responsibility to establish better quality of life for all.

The third question I mentioned was whether the countries of the North could continue with present patterns. Aside from the questions of international equity, illustrated by

the example of the American child consuming more than six times as much grain as the Indian child, and of the deepening international crisis with increased potential for conflict as competition over scarce resources intensifies, questions relating to the internal social strains in the countries of the North are now becoming apparent. The consumption society has not solved the problems of its poor or of employment or even of health, as the statistics for cancer show. Problems of societal stress are on the increase, as shown by figures for crime or drug abuse. The present energy intensive production and consumption patterns are seriously questioned as to their inability in the wake of what is being termed the energy crisis triggered by issues of the availability and prices of oil. The potential environmental risks of burning more coal and the possible serious impacts of proliferation of nuclear energy are creating heated, even emotional, debates everywhere. Cries for energy conservation and for quick development of safer and more readily available renewable sources of energy are being heard in almost every corner of the Globe. Adjustments in development and consumption patterns in the North are very much on the way with genuine efforts to base them on concepts of social justice, sustainability and conservation and quality of life.

II

The growing consciousness

A wide-ranging discussion of the nature, meaning and purpose of development goals and objectives is occurring. This discussion may be said to stem from disillusion due to failure to achieve targeted economic growth rated during the last two decades. Not only disillusionment but near despair is particularly marked when considering.

- eradication of poverty; material deprivation;
- unequal distribution of economic growth, among different countries; among geographical areas and among population groups;

— furtherance of national self-reliance and cultural identity; and the

— protection and enhancement of the environment while sustaining and improving the quality of life.

Concern about appropriate alternatives to economic growth is not confined to developing countries. The positive and negative effects of development is universal, encompasses all countries. Questions continue to be raised about the composition, distribution and the motive force of economic growth, and the impact of that growth on social and personal

well-being. These concerns also include issues of national self-reliance or minimization of external dependency, particularly in the wake of marked increases in the international prices of oil. They also include what countries should or should not do in their growth and life styles to reduce the negative impacts of present production and consumption patterns.

It is increasingly recognized that there can be no full comprehension of today's world if the intricate interrelationship between economic and other systems is neglected. Physical planning of socio-economic development at all levels must reflect an appreciation of the complex and integral relationships between environment development, resources and population. In selecting development alternatives—whether in terms of policies, programmes or projects—environmental objectives cannot be considered in isolation from other considerations such as, income growth, expansion of employment, alleviation of poverty and a more equitable distribution of income and wealth. All these goals have to be integrated in a viable pattern of development, whether defined at the national or international level and we must make the total interrelated system work in an optimal manner to reach the goals.

Before the Stockholm Conference in 1972, environmental problems were popularly identified as issues for the rich and élite: pollution control, the conservation of wildlife, and aesthetic preservation of landscape. These perceptions evoked some reservations and misgivings in developing countries; it was

considered that such concern about the environment was uncalled for in terms of their own threshold situations and would gravely jeopardize their efforts to industrialize rapidly and their economies. But the Stockholm Conference marked a watershed in environmental thinking. Economists, ecologists and physical scientists and representatives of the world's people came together, emerging with new view of interactions and caused relationships that exist between socio-economic activities and physical phenomena. The nature of the efforts of UNEP in regard to the assessment, monitoring and management of the environment reflects the progress achieved since 1972 and reflects also the inherent difficulties in the evaluation of the economic and social, no less than the environmental, consequence of development.

Notwithstanding the extensive literature and commentary of the need for appropriate development alternatives, it is regrettable to note that there has been little evidence so far of any significant breakthrough in consumption patterns and life styles, in public policies or in the structure and content of international co-operation for development. On the contrary, it would seem that the problems are becoming increasingly intractable. The reasons for this situation are not far to seek. It is my belief that they lie in the difficulty faced by policy makers to take account fully in their considerations of the integral nature of the relationship between population, resources, environment and development

III

Environment-development relationships should induce a systemic approach

Environment, when correctly understood in its relation to development, serves as a unifying, or integrating force with the capacity to facilitate the efficient utilization of resources and the efficient attainment of many contemporary and pressing objectives of development. Concern with the environment, with today's quali-

ty of life, with the future well-being of the young, and with inter-generation ethics, should be natural concerns of human beings everywhere.

An examination of the environment-development relationship which has emerged in recent years affords a number of insights:

First: Environmental problems in development often transcend national jurisdiction and consequently, international co-operation is essential to find lasting solutions to them. This is true not only for the use and management of shared natural resources and for global commons, but also for international trade in scarce natural resources, and the preservation of the heritage of mankind in respect of endangered tropical and equatorial forests and wildlife.

Second: Extremes in consumption levels and wide disparities in access to resources often lead to environmental degradation and resource depletion. There is, thus, significant common ground between broadly based distribution of the benefits of development and environmental improvement.

Third: There is no built-in conflict between output growth or growth of resource productivity and environmental protection and improvement. This is apparent in the successful recycling of wastes for greater output and employment and for improvement of environmental sanitation. It is also shown in programmes of environmental improvement at the community level that have simultaneously expanded employment and enhanced productivity of resources. There is also growing evidence that measures to improve the environment have

generated significant economic benefits in developed countries.

Fourth: It is much less costly and much more efficient to integrate environmental considerations, *ex ante*, in decision-making and planning for development than to react in response to such considerations at a later stage.

Fifth: The relevance and the practical viability of any alternative pattern of development cannot be guaranteed unless there is broadly based and well informed participation in the process of decision-making. It is essential to influence attitudes and perceptions of people. At the same time, there is a residual fund of environmental tradition and wisdom with people themselves concerning adjustments to environmental conditions. Evolution of alternative patterns of development must draw upon such knowledge and modes of adjustment.

Sixth: The question of autonomous determination of desirable life styles is crucial to the realization of environmentally sustainable improvements in the quality of life. This is so, not merely because the life styles associated with the recent experience of economic growth in developed countries may not be replicable in the poor countries on account of resource limitations, but also, and more importantly, because they may not be desirable in the interest of long-term social well-being.

IV

Technology: Pattern setter or instrument?

Technology is the fundamental link between natural and social systems. As it increasingly sets the pattern for the definition of needs and the use of resources, the issue of the choice of technology becomes crucial to the choice between patterns of development. Thus, it is important that the development of technology should not be linear, but it should respond to various criteria set by its supposed beneficiaries.

Currently technology which is inappropriate from the social and environmental standpoints, continues to be imported into developing countries without appraisal and ac-

cepted uncritically. It is crucial that policy makers and planners in their quests for rapid development concern themselves seriously with the choice of the most appropriate technology. The concept of appropriateness acquires a meaning only when it defines appropriate to whom and for what. It requires a determination of appropriateness in which the environmental and social dimensions are equally as important as the economic ones. Such technology should be optimal to the conditions in each case and may range from being the most advanced technology especially designed for such conditions, or adapted, to being tradi-

tional either to the area or in the sense of being in wide use elsewhere. Last Monday in a very high level meeting of Governments of Europe—East and West—convened in Geneva and adopted—among other important documents—a declaration on low and non-waste technology emphasizing the urgent need for a rational use of natural resources, stressing the potential dangers to the environment of present day technology, and setting a programme

of action for Europe to develop low and non-waste technologies, and ways and means of reuse and recycling of waste. Addressing that meeting I pointed to the issue of what I termed “transboundary pollution caused by transfer of hazardous technology”. I believe it is a solemn duty of the developing countries to deal with all these issues with utmost precision and efficiency.

V

The seminar and the strategy

The United Nations will soon deliberate upon an International Development Strategy for the 1980s and, as we are all aware, the General Assembly has decided that the New International Development Strategy will primarily focus on the attainment of the New International Economic Order. In this context, we perceive that some of the environmental problems of developing countries stem from an asymmetric relationship between developed and developing countries, for instance, in the environmental impact of monoculture and cash crops for export, over-exploitation of natural resources (including living marine resources), rapid depletion of minerals and fossil fuels to support resource-intensive consumption and production patterns, and land degradation caused by certain mining and industrial activities of transnational bodies. Moreover, measures taken by developed countries to protect their environment may, in certain circumstances, have a growing impact on development and environment in developing countries. Examples include environmentally-motivated import restrictions, redeployment of production capacities on environmental grounds, and increased costs of imports in developing countries on account of the applica-

tion of stringent environmental standards in developed countries.

There can, of course, be no single rigid, universally acceptable approach to realizing socially satisfactory and sustainable development. At the same time, it is also clear that specific approaches and solutions in particular situations need to be based on an integrated examination of the issues involved. Much can be achieved by way of identifying and adopting concrete and environmentally prudent solutions in particular circumstances. Much more can perhaps be achieved by making the methodological apparatus of the evaluation of the costs and benefits of environmental and developmental alternatives more broadly based, so as to embrace considerations of the quality of life of the populations affected.

That is why I expect that this Seminar, with its primary focus on the unique and integral relationship between environment and development, will stimulate and catalyze concrete action at national, regional and international levels, and indeed move beyond conceptual clarification to the identification of an operational content of the environment-development relationship.