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Public institutions *and explicit and implicit* environmental policies

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In recent years the question of the environment has been increasingly prominent in studies and proposals on the development of the Latin American and Caribbean countries. The serious processes of ecological imbalance in the world, together with numerous disasters and the ongoing loss of natural resources, have given rise to increasing concern over these matters. To a greater or lesser extent, all the governments of the region have tried to strengthen their environmental policies through various legal, technical, institutional and economic measures. Much still needs to be done, however, to correct the existing deficits and ensure that the new measures applied are really efficient and effective. The problems underlying the ineffectiveness observed with regard to environmental issues are much more complex than such factors as the level of political will or the degree of administrative efficiency of the environmental arrangements adopted. This article seeks to analyse the complex process of generation and application of environmental policies in the countries of the region, beginning by examining the evolution of the corresponding structures of public institutions and going on to make some recommendations aimed at promoting more novel and efficient ways of setting about the formulation of new environmental policies and shaping a system of public environmental institutions which will help to generate such policies.

I

The evolution of the institutions responsible for environmental policies

1. From the end of the Second World War to the end of the 1970s

Environmental problems have always been present in the history of the region (Gligo and Morello, 1982, pp. 112-148). Environmental analysis proper only began to be applied a few decades ago, however. Previously, examination of the environment was divided between studies of the quality of life of the population and studies of the natural resources situation, and was timidly included in some references to the deterioration of resources due to development processes.

Concern for natural resources, especially those of a renewable nature, goes back to colonial times. Various historical accounts of the time quote Governors, naturalists and members of the clergy who referred to the disastrous consequences of the conquest of America for the natural resources of the region.

At the beginning of the present century, over-exploitation of some natural resources, soil erosion, deforestation and water pollution were repeatedly denounced for their negative effects. Even then, it was already being asserted that the natural resources of the region were not unlimited.

It was after the end of the Second World War, however, that a more systemic conception of development began to take root and the question of the environment began to be a source of concern for the population and, hence, for political circles and governments too. The organization of the World Conference on the Human Environment, held in Stockholm in 1972, and the agreements subsequently adopted led to the question of the environment being dealt with and handled at the global level.

After that conference, there was a kind of burst of environmental activism in government institutions which gave rise to policies, laws and institutions dealing with the environment. The pioneering example of the establishment of the Ministry of the Environment and Renewable Natural Resources (MARNR) in Venezuela was a landmark for the countries of the region, and for a number of years it served not so

much as a model but rather as an argument and positive example cited by groups and sectors in the public institutions of other countries.

Despite the efforts to give the environment an integral form of treatment—as was attempted through the holistic approach taken in a broad-ranging study entitled “The environmental systems of Venezuela” (Venezuela, Ministerio del Ambiente y de los Recursos Naturales Renovables, 1982)—in most countries environmental issues were tackled as part of the planning process, or in a sectoral manner, or else in connection with the study of natural resources.

The approaches based on planning were applied by units or offices forming part of some planning body, at a time when planning was still in vogue in the region. Thus, this approach was applied by the National Development Council (CONADE) in Ecuador and by the Technical Secretariat for Planning of the Office of the President of the Republic in Paraguay. In some countries such as Colombia and Mexico, although environmental functions were entrusted to sectoral bodies, planning bodies helped to define certain environmental policies, especially those concerning regions within the country, on the basis of resource allocation planning.

Most of the countries centered their environment policies in sectoral bodies. The connection between spatial policies and urban development bodies led some countries to locate their environmental bodies within the ministry concerned with housing and urban development. In Mexico, for example, the national environmental body is the Ecology Department of the Ministry of Urban Development and Ecology (SEDUE).

In other countries, responsibilities for the environment were assigned to the health sector. This was so in Argentina, for example, where an Environmental Planning Department was set up within the Ministry of Health and the Environment. The fact that territorial planning considerations predominated, while there was little concern with environment-linked health aspects, meant that this department

operated with a high degree of autonomy within the Ministry.

A number of countries opted to strengthen or establish units in the agriculture and forestry sector. In Colombia, the National Institute of Natural Resources and the Environment (INDERENA) comes under the Ministry of Agriculture but has a high degree of autonomy. Chile assigned important environmental functions to the National Forestry Corporation (CONAF), which likewise comes under the Ministry of Agriculture. In Uruguay, responsibility for the environment was assigned to the Ministry of Agriculture and Fisheries, mainly through the Department of Soils and Fertilizers. In Guatemala, El Salvador and Honduras, environmental responsibilities were also concentrated in this area of government. In Nicaragua, although the Institute of Natural Resources and the Environment (IRENA) was described as a non-sectoral organization, its actions were centered almost exclusively on agriculture.

Approaches based on research into natural resources were applied in two countries: in Peru, through the pioneering work of the National Office for the Evaluation of Natural Resources (ONERN), and in Chile through the Institute for Natural Resources Research (IREN). Both these institutions have promoted integrated studies of resources on a markedly ecosystemic basis. In Bolivia, environmental studies were also centered on research at this stage and were carried out by the National Council for Scientific and Technological Research.

The complexity of Brazil makes it very difficult to define the approach taken in terms of institutional design. In that country, there was a combination between a centralized body (the Special Department for the Environment (SEMA)) and subnational bodies located in different spheres of the public administration machinery of each state. There were also some federal bodies which helped to promote the explicit incorporation of environmental aspects, such as the Brazilian Forestry Development Institute (IBDF), the National Council for Scientific and Technological Research (CNPq) and, in particular, the National Institute for Research on Amazonia (INPA).

In Latin America, very important contributions were made by some internationally supported projects for research on the environment, development planning, or the study of some particular process of deterioration. These projects, many of which were also carried out in the 1980s, helped to shed more

light on the environmental situation. The Regionalization Programme in Ecuador (ORSTOM-PROMARG); the ERTS programme carried out by GEOBOL in Bolivia; the UNDP/FAO/IBDF forestry research and development programme in Brazil, which assessed the deforestation of Amazonia, and the ILPES/CDG project for the development of the River Guayas basin in Ecuador are clear examples of activities which stimulated the incorporation of environmental issues in various countries of the region.

In addition to these projects, mention should be made of the studies carried out by the Organization of American States (OAS) through its Department of Regional Development and the Environment (especially the studies on the River Plate basin); the projects for protected areas promoted by the United Nations Food and Agriculture Organization (FAO), and the studies on development and the environment carried out by ECLAC through its Joint ECLAC/UNEP Environment and Development Unit.

2. The lost decade

While the 1980s represented a lost decade for Latin America and Caribbean in economic terms, it was also a very negative decade with regard to the environment.

The adjustments due to the economic crisis affecting the region had a heavy impact on the environmental institutions, which at that time were still only incipient, were still weak, and lacked financial resources commensurate with their responsibilities. The low political status of these new structures meant that they were treated exactly as might be expected in view of their inability to press for favourable treatment.

Budgetary constraints and consequent reductions in government spending affected the forms of institutional expenditure which the national authorities considered to be of low economic priority (Brzovic, 1989). Almost without exception, the authorities of the countries of the region placed environmental expenditure among the items of low priority.

The environmental effects resulting from these expenditure reduction measures were many and varied, so that it is very difficult to determine causal relations. The direct effects on public environmental institutions were easily identifiable, however, and were uniformly negative.

The restrictions on the current spending of the environmental units responsible for investment in the

sector limited their capacity to carry out or commission environmental impact studies or to negotiate and follow-up preinvestment studies or studies connected with the execution of projects with environmental implications.

All these reductions in spending affected the capacity of the existing environmental institutions. What is particularly difficult to measure, however, is their negative effect on the rate of expansion of those institutions, which was seen as an urgent need because of the growing importance of environmental issues. There can be no doubt that non-governmental environmental bodies, environmentally committed public opinion, and the environmental sectors of the public administration in each of the countries of the region were hoping for considerable expansion in such aspects as the strengthening of institutions, new legislation, more staff, more financial resources, etc. Not only did this expansion not take place, but in most cases there were actually reductions. Consequently, the effects of the "lost decade" still persist today, since because of the current budgetary restrictions it has been very difficult for the countries to make up for this lag.

In addition to these problems, there are the effects of an adjustment policy which explicitly or implicitly laid down in the countries of the region that the environment must not hinder achievement of the objectives pursued. Thus, the environmental institutions which existed at that time came to be seen as trouble-makers which needed to be silenced as far as possible. In many countries, environmental responsibilities were diluted to the point where there was no single clear authority; in others, although such an authority existed, it was constantly overridden by the parallel actions of economics ministries or sectors of production. In the late 1980s and early 1990s, however, the severity of the processes of deterioration, and the preparation of country reports for the United Nations Conference on Environment and Development (Rio de Janeiro, 1992) helped to bring about a change in the prevailing policies and gave a fresh impetus to environmental policies and the bodies responsible for implementing them.

3. The new impulse of the 1990s

The growing national and world-level awareness of the importance of the environment led to the reshaping of national approaches to this issue. At the same

time, the gradual globalization of the economy gave rise to new forms of international trade in which environmental considerations began to assume a previously unsuspected degree of importance.

The preparations for the Rio de Janeiro Conference had various effects in the countries of the region. Firstly, within the various sectors and circles in each country, they gave rise to an in-depth discussion of the problems of the environment and natural resources. Particularly noteworthy was the galaxy of scientists, academics, public figures, non-governmental organizations and other groups that was mobilized by Brazil for the preparation of its country report. Such integral discussion did not take place in all countries: in some of them, their country reports merely consisted of a contribution by the central environmental body.

Secondly, the preparations for the conference served to create a clearer conception of the differences between North and South. The Latin American and Caribbean countries as a whole, together with other developing nations, were able to establish a common front to make it clearly understood that the solution of environmental problems was partly dependent, without any doubt, on the eradication of poverty (ECLAC, 1991; IDB/UNDP, 1990).

The new trade relations between the Northern countries and those of the South have been one of the most decisive factors in the reaction of some countries of the region to environmental issues. The case of Chile is enlightening in this respect. There can be no doubt that the form of development previously adopted by that country did not give priority to the environmental dimension. The broad process of opening up of its economy, however, has given rise to frequent environmental demands which have proved to have much more weight than possible internal pressures from various segments of Chilean society. And there can be no doubt that Chile's association with the MERCOSUR countries and the free trade agreement signed with Canada will further increase these demands.

The North American Free Trade Agreement and its parallel agreement on environmental co-operation commit Mexico to the observance of high levels of environmental protection. One of the most important consequences of this treaty was the establishment of the North American Environmental Co-operation Commission, the Council of which is responsible for giving its verdict on the compatibility of environ-

mental standards. The parallel agreement also involved the establishment of the Border Ecological Co-operation Commission (Mexico, Poder Ejecutivo Federal, 1996). The treaty has helped to ensure fuller incorporation of environmental issues and has had some influence on the establishment of a stronger central environmental body, but it has not been the only positive factor for the environmental dimension in Mexico, for that country's commitments with the Organization for Economic Co-operation and Development with respect to the environment also include a considerable number of decisions which will have to be applied.

In Central America, the Central American co-operation agreements increased concern with the environment in the 1990s. The activities of the Central American Commission on the Environment and Development were intensified, and protocols were signed on sustainable development.

In the implementation of MERCOSUR, priority has been given to the trade aspect. There has, however, been some progress in the area of the environment which is perhaps most visible in the effects of the new physical integration infrastructures. The assessment of the environmental impact of the River Plate Basin waterway has resulted in substantial progress in the integrated knowledge of that basin and the effects of changes in it.

The Amazon Pact has continued with its traditional emphasis on securing better knowledge of the Amazonian ecosystem, its integration, and the effects of changes in it.

Special mention should be made of the developments in connection with Agenda 21, adopted at the Rio de Janeiro Conference. When the progress made in its implementation is reviewed, it is noted that the countries take little or no account of it. If a country has to assess the follow-up of this Agenda, what happens is that it simply collects information on the developments in the environmental field since the Rio de Janeiro Conference, including activities which would have been carried out with or without Agenda 21. The only exceptions are some international agreements forming part of the Agenda which, because of their greater weight, have resulted in some actions in line with the commitments entered into. Among these are the agreements on the ozone layer and climate change and the progress made in the Special Intergovernmental Group on Forests, of the United Nations Commission on Sustainable Development.

4. The new environmental institutions

The changes which have taken place within the countries and in the situation at the world level have led to major changes in the public environmental institutions, which have been strengthened not only in countries which established or strengthened ministries of the environment but also in those which preferred to assign maximum environmental authority to collegiate bodies such as commissions or councils.¹ In some countries, a "system of environmental institutions" has been set up, covering the various authorities, levels and units, but this has only been a structure established on paper, since environmental issues continue to be approached through centralized institutions and also, in the case of federal countries, through state or provincial institutions.

Traditionally, the highest status that can be assigned to an area of activity in the countries of the region is that of a ministry. Consequently, efforts have been aimed at the establishment of ministries to be responsible for questions of sustainable development. Generally speaking, these issues have not been seen as a national responsibility shared by all areas of government; the prevailing approach has been to entrust them to environmental bodies.

Of the new ministries set up, some deal not only with environmental problems but also with the natural resources situation. Almost all of them deal in broad terms with problems of pollution, but with regard to natural resources they give priority to renewable resources. This is so, for example, in the case of the Ministry of the Environment and Renewable Natural Resources (MARNR) of Venezuela. Similar cases are those of the Ministry of the Environment and Energy in Costa Rica; the Ministry of the Environment and Natural Resources in El Salvador; the Office of the Secretary for Natural Resources and the Environment in Honduras, and the Ministry of the Environment and Natural Resources (MARENA) in Nicaragua.

Two years ago, Mexico set up the Ministry of the Environment, Natural Resources and Fisheries, which not only has responsibility for traditional environmental issues but also covers sectors of production and associated sectors through its National Water

¹ For more details, see UNEP, 1996.

Resources Commission and its Fisheries Department, and forestry production programmes through its Natural Resources Department.

Other countries which have given ministerial rank to their environmental authorities have adopted similar solutions, but with some variations. Thus, Brazil set up a Ministry of the Environment and Amazonia which, as well as dealing with the environmental problems of the country, gives special attention to the territories in the Amazon region, which include the states grouped together in the official Amazonia region.

In setting up its Ministry of the Environment, Colombia took advantage of the existing structures of the autonomous regional development corporations and converted them into environmental corporations. The Ministry also took advantage of the experience of the Institute of Renewable Natural Resources and the Environment (INDERENA), which has made pioneering contributions to environmental matters in Latin America and the Caribbean.

Some countries of the region have entrusted these matters to a ministry associated with an existing traditional activity: thus, the various English-speaking Caribbean countries have established ministries associated with health or tourism, and in Central America Belize has a Ministry of Tourism and the Environment.

Uruguay has followed an old tradition in relating environmental issues with urban and territorial planning: thus, it has set up a Ministry of Housing, Territorial Planning and the Environment. In Cuba, environmental matters have been linked with science and technology through the establishment of the Ministry of Science, Technology and the Environment.

Two countries have tried to make institutional changes in order to cover the complex question of sustainable development. Bolivia was a pioneer in

this respect in establishing a Ministry of Sustainable Development and the Environment, while in 1997 Argentina changed its Ministry of Natural Resources and the Human Environment into the Ministry of Natural Resources and Sustainable Development.

The countries which have opted for commissions or councils have given more priority to coordination functions than to those of an executive nature. Thus, for example, Ecuador, Guatemala and Chile have national commissions on the environment, while Peru has a national council on the environment. Panama has centered its environmental functions mainly in the Institute of Renewable Natural Resources (INRENARE).

The strengthening of the public institutional structure for the environment has not been reflected in greater efficiency, however. In a number of countries of the region, the environmental contradictions typical of the prevailing form of development, which is expanding, have been reflected in a lack of political will to promote these issues. Sometimes, raising the responsible bodies to the levels of ministries or national commissions has been a purely cosmetic operation. For a number of governments, the environment is merely a stumbling block: an uninvited guest at the feast of economic growth with whom it is necessary to reluctantly share resources and whom it is necessary to isolate or edge into a corner in the most elegant manner possible: one of these manners being to establish a ministry which has to operate under ineffective and inefficient laws or which has very few resources at its disposal.

Nevertheless, there are some governments where the environmental dimension is beginning to occupy an important place and where the decisions of their environmental bodies are beginning to have the force needed to bring about serious changes in national environmental policy.

II

Explicit environmental policies, and those which are implicit within economic policies

1. The contradictions in the strengthening of institutions

If we analyse the various measures which have been taken in recent years with regard to the environment and natural resources, especially those connected with the strengthening of the institutions responsible for environmental matters in the public machinery, it may be concluded that progress has been made in the incorporation of the environmental dimension into the countries' activities. In addition to the noteworthy changes in the public structures described earlier, there are also such measures as new laws and regulations, more controls and standards, plans for the rehabilitation of the environment, expansion of protected areas and improved management arrangements for them, programmes to reduce the impact of big projects, environmental training and education programmes, and international environmental commitments.

However, there are no indicators or statistics which show that the environmental situation in the region has improved. Indeed, all the statistics show that the deterioration has continued (Gligo, 1995, pp. 107-122; UNEP, 1997, pp. 80-95).

Everything seems to indicate that the many efforts made in the region to reverse negative trends have merely served to slow down some processes of deterioration, without reversing them.

This situation is usually attributed to the inefficiency of the public bureaucracy, the lack of commitment on the part of business sectors, or, more generally, the insufficient environmental awareness of the population.

However, the causes are much more complex: the interaction of various factors such as the environmental contradictions of the prevailing economic model—especially as regards planning horizons—and the conflicts between social and private goods; the different rationales of the various social actors, especially those in the production sectors; the simultaneous existence of different degrees and types of environmental awareness in the population (from rather vague to highly critical attitudes); and the

tardy political maturity of the traditional sectors of the legislative authorities.

There is a key aspect which should serve in one way or another to integrate and prioritize factors that could lead to a form of action capable of bringing about a reversal in the processes of environmental deterioration: namely, the way public environmental policies are generated through the application of the current legislation and government programmes. So far, not enough importance has been attached to this factor for promoting the incorporation of environmental issues.

Explicit environmental policy originates in the central environmental bodies of the public administration: ministries of the environment or commissions or councils for the environment. There are also *implicit* environmental policies, however, which originate from other ministries or the central authorities and which are almost always connected with economic growth. The importance of these implicit policies has not so far been duly taken into account. Economic growth policies and social policies are those which carry most weight in the countries, and as they usually give priority to the short rather than the long term, they give rise to implicit environmental policies of a negative nature.

The environmental policies which are implicit in development policies should not be confused with the environmental impact of the latter. When we speak of implicit environmental policies it is understood that these are more or less known in advance and call for prior decisions of a political or technical nature deriving from the development policies.

2. Explicit environmental policies

Explicit environmental policies generally represent a reaction to other factors. They seek to reduce the negative effects generated in production processes and consumption as a result of the prevailing form of development.

Almost all the public environmental bodies of the countries of the region take this reactive approach

in their environmental policies. They react to the urgent needs which are mainly due to the pollution caused by urban and industrial expansion, deforestation, soil erosion, deterioration of marine resources and pollution through mining activity.

There are underlying forces which extend far beyond the political will of the governing authorities, their ideology, or the environmental conscience of the population, for reasons that go back for centuries.

One of the most important of these underlying factors is population increase. Although the region is in a stage defined as one of "demographic transition", the increase in the population nevertheless has an influence on the increase in economic and social demands, with their consequent environmental impact.

The other major underlying factor is the long-standing persistence of inequity and poverty. The persistence of poverty creates a survival mentality, and this in turn gives rise to an extremely short-term rationale which does not foster a will to invest for the benefit of future generations.

The most novel initiatives in explicit environmental policies are those having to do with the systems of assessment of environmental impact which almost all the countries have put into effect. Although the assessment of environmental impact might seem to be a non-reactive approach, the way it is applied is clearly of a reactive nature. Normally, it is not policies and programmes which are assessed, but projects which have already been decided upon in some sector of the economy that cannot be defined as environmental. These assessments merely seek to reduce the impacts of these projects; it is rare for them to manage to secure substantial changes in a project, and still less to reject it altogether.

Other explicit environmental policies are connected with the conservation of renewable natural resources. These are clearly of a reactive nature. A classic example is that of policies designed to reduce deforestation, which have had little or no success in the region. Almost all the countries have legislation and institutions for the protection of forests, and these should define explicit environmental policies, but the factors which enter into deforestation are beyond the control of those policies. Thus, processes of expansion of the agricultural frontier give rise to the use of systems of clearcutting and slash and burn practices which have an extremely high ecological cost. Moreover, energy price policies result to a greater or lesser extent in pressure to produce firewood from native forests.

Soil conservation policies have also failed, since erosion, depletion of nutrients and salinization are present in all the countries of the region.

Policies for the conservation of marine resources stem from threats of social crisis due to reductions in fishery activity and from the warnings of scientists who study those resources. As it is difficult for public opinion to become actively conscious of the problems raised by the decline in these resources, these policies tend to be somewhat less reactive than in the other cases.

Explicit environmental policies concerning the quality of life of the population, especially those relating to health (such as pollution), stem from the everyday problems faced by the population in their consumption and work. They are possibly the most reactive of all, because of the pressure exerted by the population; unfortunately, there is still a long way to go before the population demands more carefully planned preventive policies.

In general terms, explicit environmental policies have clearly had little success. Despite the institutional strengthening of the public sector environmental bodies, which were conceived as reactive environmental agencies, they have almost all had a difficult time, and most of them have run into serious conflicts with other areas of the State bureaucracy, as well as with society at large, especially business groups and non-governmental environmental organizations.

The functions allotted to these governmental structures have been clearly limited and have not managed to penetrate into the sectors of the economy connected with production activity.

3. The environmental policies implicit in public policies

The scant success of the environmental policies generated in the central environmental bodies has thus been due to their reactive approach to forms of development with high environmental costs.

The environmental bodies of the countries of the region show concern when the gross domestic product grows rapidly, because a high growth rate means more motor vehicles, more industrial activity and more wastes. It is not only the increase in consumption which worries them, however, but also the forms of production used. Thus, a high rate of investment may become a threat to marine resources, native forests or water resources.

Decisions taken in other areas of public policy or in the production sectors can obviously involve measures that will lead to environmental change, and they thus constitute implicit environmental policies. Unfortunately, however, so far little consideration has been given to this type of policies.

The economic crisis of the 1980s and the adjustment measures to which it gave rise led to a kind of implicit environmental policy which, in global terms, tries to play down environmental problems. If we analyse the application of the shock treatments used in various countries of the region, we see that the more stringent they have been, the less the importance attached to the environment in them. For governments applying anti-crisis recipes, the question of the environment is a nuisance, and it is only incorporated into the debates when it is a negotiating factor in a bilateral or multilateral trade agreement or when it interferes with the marketing of some product.

We referred earlier to the effects of economic policies aimed at reallocating expenditure and cutting the aggregate demand of public environmental institutions. It is now necessary to analyse the environmental policies implicit in those economic policies.

a) *Macroeconomic policies*

Macroeconomic policies affect the environmental situation by maintaining or extending a form of development which is openly harmful to the environment. There are no in-depth analyses of the environmental policies deriving from them. In general terms, there are three types of policies which countries tend to promote.

i) *Export promotion policies*. So far, no concern for the conservation of natural resources has been observed in this field. On the contrary, in view of the growing globalization of the economy, the countries of the region try to promote their exports at all costs, with incentive measures and support from export promotion agencies. If there are any environmental considerations at all, these are due to the demands of importing countries.

ii) *Policies for securing foreign investment*. In order to seek foreign capital, almost all the countries try to give an image of economic stability and stress the cheapness of their natural resources. This apparent cheapness is usually due to the fact that environmental costs are not included in the calculations and also, sometimes, to offers of tax exemptions. There are countries which, when publicizing the facilities offered to foreign investment, give considerable

prominence among them to the scantiness of environmental controls. In some cases, their publicity has even promised more than could be offered in line with the existing legal restrictions, thus giving rise to serious conflicts once the investments have been made.

iii) *Policies to promote the occupation of geographical space*. Many areas in Latin America are considered to be underoccupied and suitable for economic activities. A number of countries have deliberately promoted the massive occupation of their territory, for economic or geopolitical reasons. The incentives offered have often been of an economic nature: tax exemptions for production activities such as stock raising; establishment of industrial development areas with fiscal advantages; construction of transport infrastructure to facilitate the economic incorporation of parts of the territory, etc. All the implicit environmental policies deriving from these incentives have had a severe negative impact.

b) *Sectoral economic policies*

These policies give rise to implicit environmental policies of the greatest importance. The productive sectors of the economy condition investment, economic growth and environmental change. These sectors are responsible for the generation of wastes in their production activities or in the consumption of their products.

i) *Industrial development policies*, which have various degrees of effectiveness in the region, give rise to a set of implicit environmental policies deriving from various factors (inputs used, production processes, generation of wastes, final use of the products, etc.), which are in many cases of a negative nature. There are undoubtedly serious shortcomings in environmental policy with regard to industry, in such matters as the biodegradability of products, their useful life and their recycling.

ii) *Energy development policies* have incorporated the environmental dimension to some extent. The early appearance of the environmental problems deriving from energy sources, such as the global effects of energy consumption on the atmosphere, have led the countries of the region to incorporate the environmental dimension to some degree in the planning and management of their energy production. For some decades past, studies have been made of the environmental impact of big hydroelectric projects and explicit environmental policies have been formulated (as for example in the cases of Salto Grande, Itaipú and Yaciretá-Apipé, where it proved possible

to implement some palliative measures). Unfortunately, the decisions to include environmental aspects are usually taken after already deciding on the place of construction, the installed capacity and the macro design, thereby giving rise to high ecological costs that could have been avoided. Moreover, it is necessary to take account not only of the traditional concerns over the impact of energy sources such as biomass, hydroelectric power and nuclear energy but also of questions of energy efficiency and consumption patterns.

iii) *Agricultural policies* are of great environmental importance because agriculture changes living ecosystems. The expansion of the agricultural frontier (a process actively supported by a number of countries through such measures as tax exemptions, opening up of roads and agricultural credits) and the encouragement of land clearance by some countries, through subsidies for the use of machinery or credits in return for which the government demands a percentage of the cleared land, implicitly involve high ecological costs in terms of deforestation, loss of biodiversity, impoverishment of the soil, erosion and silting-up of watercourses and lakes. Agricultural modernization, in the sense of the application of technologies which involve a high degree of artificial modification of the ecosystem, also includes implicit environmental policies. Modernization policies tend to be of a short-term nature, since they create agro-systems with a low degree of natural stability. The objective of achieving high productivity in a short period of time raises environmental contradictions which are very difficult to solve. The environmental policies implicit in a substantial percentage of agricultural development plans and programmes are of a negative nature, since they involve the externalization of the ecological costs of the main processes of deterioration affecting agriculture, such as erosion and the depletion and salinization of soil.

iv) *Reforestation and forestry development policies*, promoted through credits, subsidies or other means, give rise to negative implicit environmental policies even though there may be a requirement that they must be sustainable, through explicit environmental regulation and control policies. The most illustrative case is that of reforestation policies, which lead to the replacement of native forests with artificial plantations. Native forests have various functions—as regulators of water resources, habitats for biodiversity, elements limiting soil erosion, improvements to the landscape—which are almost completely lost

because artificial plantations only provide a minimal part of these benefits.

v) *Public works policies* also involve important implicit environmental policies. Roads, bridges, dams, irrigation canals, docks and ports result in significant changes in the environment, and even though environmental impact studies are made in respect of them in many cases, these studies are only of a corrective nature. When engineering works change the environment, an effort is made to ensure that the changes are beneficial and sustainable in time. This is usually achieved, but in some cases the artificial effects produced are of a negative nature. Thus, there are often losses of infrastructure, especially of roads and associated works, as a result of expansion policies containing implicit environmental policies which are of a negative nature because they give little weight to climatic factors, seismic movements, etc.

vi) Special mention must be made of *scientific and technological research and development policies*. On the one hand, scientific research in our region lags seriously behind, especially with regard to biodiversity. On the other hand, technological research relating to the environment tends to concern only the development of clean technologies, without exploring in depth the environmental impact of the technologies which are in routine use. Furthermore, the analysis of new types of technologies which permit increasing harvests of natural resources has been neglected.

vii) *Urban development policies* show the complexity of an issue in respect of which there are serious lags in the region. These policies combine policies on town planning, housing, transport, industry, recreational centres, services and consumption, and parks and gardens. All these have environmental implications, and their application has marked repercussions on the environment. The regulatory policies adopted by cities give rise to implicit environmental policies which link up to varying degrees with the explicit urban environmental policies. In some cases the linkages are positive, but in others there are open contradictions (for example, between the policy of expropriating parks to expand road systems, the construction of housing developments, and the policy for the establishment and improvement of parks and gardens). As the evolution of the big cities is closely linked with the processes of industrial development, the implicit environmental policy deriving from industrial location should be duly appraised as a func-

tion of the environmental planning of the territory. Unfortunately, environmental location policies in the region are usually only a by-product of the regulatory plans of the cities and take little account of environmental considerations except as regards the availability of certain natural resources such as water, and in environmental location plans priority is usually given to transport costs, availability of services, access to skilled labour, etc. Moreover, cities assemble human goods in an existing natural environment. The com-

plexity of structures and of the flows of materials, energy and information often cause the importance of the environment to be minimized, giving rise to implicit urban policies of high environmental cost. Thus, many urban expansion policies in the region do not respond to environmental criteria but to pressures for the availability of cheap land and speculation with urban land; likewise, the construction of freeways instead of roads designed to give priority to public transport gives rise to congestion and pollution.

III

Towards effective environmental policies

The fact that emphasis is placed in this article on the importance of the environmental policies implicit in economic policies and in development policies in general does not mean that these policies are alternatives to explicit environmental policies generated by the environmental authorities. On the contrary, the two types of policies are complementary.

It must be assumed from the start that the policies generated in environmental bodies are of a reactive nature, prompted by the high environmental cost of the forms of development prevailing in the region. For an ideal solution, it would be necessary to change these forms of development and make them sustainable, but as this utopia is still quite far off, we must make a pragmatic effort to progress as far as possible with intermediate solutions for modifying the present trends.

Ideally, the environmental policies implicit in public policies should all be of a positive nature and should thus contribute to an environmentally sustainable form of development. This goal, which seems utopian today, should be the essential condition for organizing the environmental system of the country on the basis of commissions or councils of a purely coordinative nature. Its absence explains the failures and difficulties of various national commissions. For this reason, it is recommended that realistic solutions should be sought which mutually combine explicit and implicit policies, seeking their complementarity and a system of public sector institutions in keeping with such combination.

We shall therefore examine below the aspects which it is most important to strengthen in the matrix

resulting from the intersection of implicit and explicit policies.

1. Combining implicit and explicit environmental policies

In this matrix, the box which is almost empty in most of the countries of the region is that where territorial environmental planning (explicit policy) intersects with regional development (implicit policy). The spatial expression of the target image of each country's territory and its consequent quantification make possible a disaggregated projection of social and environmental changes and facilitates the treatment of social and environmental conflicts. In addition, in order to configure this target image, territorial environmental planning must not only intersect with regional development but also, for greater effectiveness, with all the production sectors too.

Another intersection which it is necessary to establish is that between export promotion policy (implicit policy) and the assessment of environmental impact (explicit policy), in view of the pressures on certain resources (especially renewable resources) in an economy which gives priority to exports.

The processes which take place in rural areas are of basic importance for the conservation of renewable natural resources. For this reason, the environmental policies which are implicit in rural development policies should be given higher priority. Particularly important among them is the expansion of the agricultural frontier, which must intersect with various explicit policies, namely, policies to combat deforestation,

erosion and desertification and those for the conservation of biodiversity.

With regard to the economic sectors, the importance of their implicit policies and the need to incorporate the environmental dimension more fully into them must be emphasized once again. It is essential that the various sectors of the economy should be incorporated into efforts at territorial environmental planning and that, as well as increasing the coverage of environmental impact assessments (in most cases only big projects are analysed), the impacts of programmes and action guidelines should also be considered.

Apart from these general considerations, the search for solutions to environmental problems should be a country-level activity. Although there are features which are shared by all the countries, there are also differences not only in the degree of maturity of environmental issues in them but also their diversity of economic structures and the special features of their ecosystems.

2. Reorganization of public institutions to make environmental policies more effective

Appraisal of the types of public institutional systems existing with regard to environmental matters reveals that the long-standing dilemma between sectoral institutions (ministries) and cross-sectional institutions (commissions or councils) now belongs to the past. Indeed, in practice this debate has been wrongly presented, because a number of commissions have been turned into sectoral bodies which differ from ministries only because they do not have the political weight of the latter.

The discussion must be centered, then, on how to adapt the institutions so that they will fit in with a set of duly ordered policies and so that the environmental policies implicit in economic policies will be modified by their intersection with the explicit environmental policies. In other words, it is necessary to find a way of modifying the institutions so as to minimize the negative environmental impact of certain policies and thus reduce the reactive nature of explicit environmental policies by coordinating them with the implicit ones.

In order for such an institutional solution to make an efficient contribution to the incorporation of the environmental dimension, political will is called for on the part of the Legislature and, in particular, the Executive. And since it is necessary to be pragmatic with regard to environmental policies, the institutional response must also be pragmatic.

There are three basic aspects which arise when an effort is made to modify the structures relating to public sector environmental policies. The first of these is connected with the need for a more complex approach, because it is necessary to take account of some of the implicit environmental policies, especially those connected with economic growth; this is the fundamental challenge for the coming years. The growing complexity of environmental issues and the danger that these will become the Achilles' heel of the economies of the region make it essential to go beyond the stage of public institutions which simply react to the problems of the moment, that is to say, institutions which are merely of a reactive nature. It is necessary to enrich the debate on the functions of the environmental institutions responsible for coordination, on the one hand, and those responsible for execution on the other, and to tackle seriously the question of the intersection of the environmental policies implicit in development policies (especially economic policies) with the explicit environmental policies.

The second aspect refers to processes influenced by exogenous factors which may "oblige" the authorities to take measures, even though they may not have the political will to do so. These exogenous factors include those associated with international trade and some international commitments assumed by each country. The environmental dimension of large-scale mining in the region is being increasingly regulated by the demands of international trade, and something similar is taking place with regard to some industrial imports and is beginning to be observed in the forestry sector too, in connection with the exploitation of native forests.

The third aspect is that of public awareness and the pressures of society. The growing pollution of water resources, the atmosphere and the soil has created an awareness of its harmful effects on well-being, which is reflected in growing pressure by the population for a solution to such problems. For this reason, urban and industrial development processes are subject to growing environmental demands. This is not so much the case with rural and marine areas, where the processes are more widely spread and some of them are hard to detect because they take place over a very long period of time. These processes should be given priority attention, both through suitable policies and through special environmental institutions.

Notwithstanding the foregoing, so far almost all the countries of the region have opted to establish central multifunction environmental bodies in response to the need to strengthen their environmental agencies. Normally, such bodies have to generate policies and strategies and also deal with routine technical problems: i.e., they must carry out political duties and also execute strictly technical activities. Experience has shown that in these cases they do not carry out either of these duties really well. The political functions cause the authorities of these bodies to propose negotiated solutions which are not necessarily justified by technical considerations, so that in some bodies the technical reports are merely background data placed at the disposal of the political environmental authority, which takes its decisions on the basis of obviously political parameters. Consequently, a clear division of responsibilities could help to secure the incorporation of environmental aspects at the highest levels.

Both territorial planning policies and those connected with exports and similar concerns are very difficult to generate in a central environmental body like those adopted in most of the countries. It would therefore be desirable that they should stem from a strategy-formulating body located at the highest possible level, whose aim is to incorporate the environmental dimension and make it an intrinsic part of the form of development that the country wishes to promote. It is also desirable that this body should not waste its time on long discussions about sustainable development, since this broad and flexible concept, accepted by all sectors of society, often becomes a trap which leads to mere immobility.

The generation of approaches which secure the interaction of implicit and explicit policies would be favoured by a system of institutions which includes i) a body of the highest level for dealing with integral development policies and environmental policies;

ii) a technical body independent of the political authorities and private interest groups, and iii) an environmental body which includes part of the production sectors connected with renewable natural resources.

An illustrative case in this respect is that of the public environmental institutions of Mexico which were referred to earlier. In Mexico, the Ministry of the Environment, Natural Resources and Fisheries has units connected with various aspects of production activities, such as the Department of Fisheries, the National Water Resources Commission, and the various forestry development programmes. It also has a Planning Department, which is responsible for inter- and intra-sectoral coordination, the National Ecology Institute, and the Office of Legal Affairs for the Environment.

The experience of Mexico is undoubtedly a valuable contribution to the debate on the effectiveness of environmental policies. The fact that authority for the management of forests and lines of production development has been assigned to the Department of Natural Resources makes it possible to support and promote truly sustainable programmes and projects. In spite of the progress made, however, more time is needed for imparting a real environmental sense to technicians who have in many cases acted for a long time with a short-term production-oriented attitude. The outstanding task of the Department in question in Mexico is to spread environmental ideas to the highest levels of the traditional sectors of the economy, and progress has already been made in this respect in the execution of the Mexican environmental programme for the period 1995-2000. It may therefore be concluded that solutions like those adopted in Mexico, which do not fit into any of the traditional moulds, represent interesting examples of progress towards the viability of environmental policies with real possibilities for the future.

(Original: Spanish)

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