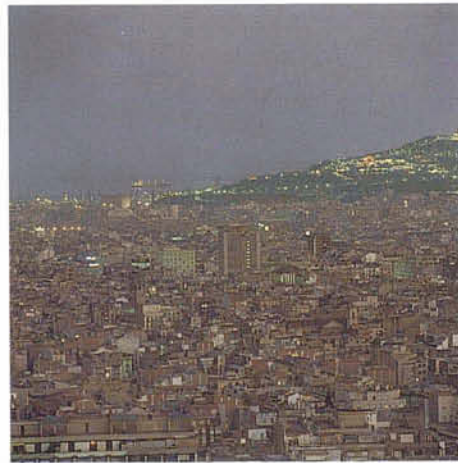


THE LIMITS TO GROWTH

It is now twenty years since the Club of Rome, in the well-known Meadows report, launched the controversial proposal of zero-growth as an answer to a world with a growing population and limited resources. Afterwards it was seen that growth rates are not quite as exponential as the report indicated and that from the point of view of its global operation the world is not as fragile as it seemed. In spite of this, it is true that the development originated, especially in the industrialized world, by man's creative and innovatory capacity has unfortunately not satisfied all the expectations for progress that it had aroused. Today, not only does this progress not reach everybody, but social differences between countries and between social classes within a country are actually being accentuated, in many cases causing profound and accelerated changes in our environment, and requiring urgent intervention if we are not to endanger the future for everybody. For this reason, the initial question remains unanswered: should we put limits to this type of development? Is irreversible degradation of the environment the price we have to pay for progress? Over the last twenty years, observations have built up, concepts have been developed and our understanding of changes caused by man in the environment has improved. Simplistic theories about environmental determinism have been replaced by an increasingly rigorous understanding of the way in which the physical and biological environments respond to the actions of humankind and, very especially, to the industrial system itself. For example, the evidence shows that problems in the degradation of the environment go beyond the limits of



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immediately observable phenomena which are possibly more familiar to us. The industrial catastrophes of the Rhine, the nuclear catastrophe of Chernobyl, the maritime catastrophe of the Exxon Valdez or the scandal of the exportation of industrial residues to African countries by certain multinational companies –to mention just a few of the most recent and most important events– has shown that pollution recognizes no borders. At the same time, and without denying the importance of

these accidents and of all those smaller accidents that are constantly occurring on a local level, there is special concern today for the emissions released into the air, rivers or sea by many chemical compounds which are far more difficult to detect and assess and that can even affect the environment on a global scale. The rise in world temperatures brought about by the greenhouse effect resulting from the increase of gases produced by combustion, the modification of the water-cycle as a result of the rapid destruction of forests and the emissions of biogenetic gases produced in coastal eutrophic areas, or the impoverishment of the ozone layer caused by the use of photoreactive synthetic compounds, are some of the most significant consequences to have been observed. Global environmental problems are not, however, limited to those processes or phenomena which are considered global because of their scale or their implications, but also to those which, in spite of being local or regional, are repeated everywhere and therefore become a cause for general concern. Examples of this second category could be: the acid rains, contamination of water courses or estuaries and coastal regions, desertification or soil erosion.

A new kind of awareness is therefore developing in which, unlike the awareness of the seventies, when the main concern was pollution on a local or regional scale linked to the industrialization process, there is a growing conviction that the effects of these problems are of a global or planetary type. The speed with which we will be able to anticipate these problems and take effective steps to solve them depends on the extent to which we understand the processes or phenomena giving rise to them. Whatever the case, there is already a pressing need for the adoption of new values in the administration of the industrial society, on the basis of broad international ecological solidarity. In fact, a better understanding of environmental problems is needed to contribute to the "ecological modernization" of the industrial society. This administration will have to give prevention plans priority over emergency plans. The basic tools of this administration are environmental watchdog programmes, understood not merely as exercises in information gathering, but as a way of identifying problems and providing answers to the questions raised. Naturally, all this activity will have to be accompanied by the application of suitable techniques for minimizing environmental impact, if we are to progress in the introduction of more conservationist technologies –that is, technologies that are more advantageous from the point of view of energy consumption and waste production. In this way, the World Commission for the Environment created by the UN in 1983, also known as the Brundtland Commission after its president, the Norwegian prime minister, showed that it was possible to reach a compromise between industrial development



and environmental production and launched a proposal for sustained growth or development –in other words, development which, while attending the needs of the present, makes growth compatible from the economic and ecological points of view and does not compromise the ability of future generations to attend to their own needs.

The EEC has gone even further and, in its Fourth Action Programme, has underlined the importance of

integrating the environment into the Community's economic, industrial, energetic, agricultural and social policies from the outset, in the conviction that this will stimulate technological innovation, job creation and the opening of new markets.

A final element to be borne in mind in shaping these new values is that of the sharing of responsibility amongst the whole society, starting with the formation of a social conscience which is as objective as possible about all environmental problems. The communication of information to the public will play a vital role in this process. It is no secret to anybody that there is considerable ignorance on the part of the public as regards the contributions that science and technology have made and are making in this field, which manifests itself in contradictory reactions when it comes to assessing conflictive situations or risk factors; and this when it is not social demands or practices themselves that destroy our environment or our resources. It is surprising to see, for example, the ease with which extremely negative situations are accepted for no other reason than that they are more familiar, while there are even aggressive reactions in the face of other, less well known situations. The thing is, as someone said, to reconcile biosphere and sociosphere. □

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