

TO: All Commissioners  
FROM: Nitin Desai  
DATE: 27 June 1986  
RE: NOTE ON THE CONCEPT OF SUSTAINABLE DEVELOPMENT

I am sending with this a very preliminary and tentative note on the Concept of Sustainable Development. The primary purpose of the note is to provide a starting point for discussion on the definition and description of a concept that is central to the Commission's report. Ultimately, the definition and description will form the first part of Chapter III "Towards Sustainable Development". The second part of Chapter III will elaborate the critical implications of the concept for basic needs, agriculture, . energy etc.

I would be most grateful for your comments on this note. Given the tight time schedule that we are working to send these by about 15 July?

W0027D/ND/es

## THE CONCEPT OF SUSTAINABLE DEVELOPMENT

1. The connection between patterns of development and environmental conditions is now so direct and observable that the issue is no longer one of promoting development or protecting the environment. Both objectives have to be pursued simultaneously and success in one will (*Handwritten note: delete 'can', insert 'will'*) reinforce the possibility of success in the other. Existing approaches do not (*Handwritten note: insert 'adequately'*) recognise this identity (*Handwritten note: delete 'identity', insert 'compatibility'*) of environmental and developmental compulsions and the dominant attitude is one of aiming at a revival of the growth patterns that prevailed in the years preceding the current economic crisis. Such a revival cannot be sustained for long and the world will be confronted by ecological, economic and social crisis of deepening intensity. It is therefore essential that development policy, in the broadest sense and environmental policy be integrated in a common framework. The concept of 'sustainable development' can provide the basis for such an integration.

2. A development path is sustainable if it meets needs of the present without compromising the ability to do the same in future. There are three crucial elements in this short statement. The first is the concept of needs, the second is the ability to meet these needs and the third is the link between the present and future capacity to satisfy needs. Each of these three elements needs further elaboration.

3. The satisfaction of human needs is clearly a major objective of development. In practice there are vast numbers whose basic needs for food, clothing, shelter, (cultural activity and social interaction) are not being met. (*Handwritten note, referring to bracketed terms in previous sentence: 'These two have no ceiling'*). The greater part of this deprivation is to be found in the developing countries. A world in which poverty is widespread will always be prone to crisis and, sustainable development requires that the basic needs of all persons should be met.

4. How should such needs be defined? Needs are socially and culturally determined and the only definition that is sustainable is one which is accepted by the people themselves. This is one sense in which sustainable development is not merely for the people but is defined by the people. For the majority of people on earth living standards are so low that their aspirations are modest: an opportunity to earn a living, enough to eat and wear, clean water to drink, a place to live, sanitary surroundings, access to education and health care and some opportunity for cultural expression. Sustainable development requires that these elements of a dignified life should be available to all.

5. The satisfaction of needs does not have to be restricted to the basic minimum. As the sustainable productive potential of societies increases living standards can and should increase. There are, however, two important qualifications which need to be noted. The first is that lifestyles which may be sustainable in one society act as models for others where they may not be as readily sustained. The existence of vast inequalities in consumption standards between and within nations and the growing reach of modern communications greatly increases the possibility of such an impact. The second qualification is that the dynamics of consumerism are such that aspirations grow and consumption standards rise without any regard for long-term sustainability. The massive expansion in motor-car ownership and household energy use in the developed countries is one example of this. Hence sustainable development requires that the affluent everywhere aim at consumption standards which, in time if not immediately, can be reached by everyone and which are within the bounds of the ecological possible.  
*(Handwritten note, in margin against previous sentence: 'Modify').*

6. Needs or aspirations are only one side of the equation. The other side is the ability of a society to meet these needs. One element in this is the productive potential of the economic system which depends on a variety of factors like the level of technological development, the skill with which resources are managed, the accumulation of capital. the nature of economic organisation and the position in the international, economy. But a high productive potential is not enough. The manner in which the product is distributed is as important. When there are great inequalities in the access to resources and livelihood opportunities, high levels of production and widespread poverty can coexist.. Hence sustainable development requires that a society's ability to meet basic needs be maximized both by building up its sustainable productive potential and by institutional arrangements which offer a more equitable access to resources and livelihood opportunities.

7. Development is clearly not a static concept. It implies changes in the definition of needs and in the ability to meet them. A society may meet today's needs by over-exploiting its own or someone else's resources. The direction of technological developments may solve today's problems but lead to even greater ones in future. Institutional changes meant to increase productive potential may marginalise large sections of the population and make it more difficult for them to meet their basic needs. In these and other ways a society may compromise its ability to meet the basic needs of its people in future. This need not happen. Sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological and institutional change enhance not merely the current but the future potential to meet basic needs.

8. Sustainable development clearly requires economic growth in communities where basic needs are not yet satisfied. (*Handwritten note in margin: 'Elaborate this in terms of avoiding widening the gap*). Even in others it is consistent with economic growth provided the

content of growth reflects the broad principles of sustainability and non-exploitation of others.

9. Sustainable development can be pursued more easily if population growth is contained. The growth of human populations is culturally determined and the process of development can itself moderate fertility. However in areas where deprivation is widespread and in poor households an expansion in numbers increases the pressure on resources and slows down the rise in living standards. The issue is not merely one of population size but the balance between numbers and access to resources particularly in poor households. Thus, sustainable development can be pursued more easily if fertility control policies are combined with measures to improve the access of poor households to education, health and livelihood opportunities. (*Handwritten note :delete 'fertility control' insert 'population' instead*).

10. The limits to development are not absolute. They arise the operation of certain natural processes (e.g. the hydrological cycle) or from social and biological compulsions (e.g. against overcrowding) and the pattern of development can be oriented to work with rather than against these processes and compulsions.

11. The world is still far from its limits of sustainable production. However this potential is very unequally distributed and there are many areas where the limits are much closer. Moreover there is no unique limit defined in terms of population or resource use with sustainability on one side and ecological disaster on the other. There are many different limits for energy use, for material demands, for land requirements, etc. Some of these will be approached faster than others. Many of these will manifest themselves in the form of rising cost and diminishing returns rather than any sudden loss of a resource base. But (*Handwritten note: insert 'ultimate'*) limits there are and sustainability requires that long before these limits are reached the concerned community should

(a) ensure equitable access to the constrained resource and (b) reorient its technological efforts to relieve the pressure on the constraint.

12. Development necessarily implies interventions in natural and social systems. Sustainability requires that these interventions be designed in a manner that does not endanger the essential features (*Handwritten note; insert 'and the viability'*) of these systems. The most important natural systems for humankind are those that support the very existence of life on earth - the atmosphere, the hydrosphere and the geosphere and the biomass that these systems sustain. Settled agriculture, the diversion of water courses, the extraction of minerals from the earth's crust, the emission of heat and noxious gases into the atmosphere, manmade forests, genetic manipulation are examples of how human beings intervene in natural systems in the course of development. Until recently these interventions were small in scale and limited in their impact except in some localised situations. Today the interventions are more drastic in their scale and impact and the risk to life support systems is more evident in many areas and, in certain respects, even globally. Sustainable development requires that the elements in natural systems critical for the maintenance of life be identified and all human activities be oriented so as to avoid endangering these elements locally, regionally or globally.

13. The resource base for development is not a simple addition of individual elements. There are systemic interactions between different resources which affect their productive potential. For instance forest cover, water regimes and land quality are interlinked and the pattern of use of any one affects the usefulness of the other. There are other such examples and sustainable development requires a systemic approach to resource utilisation.

14. Renewable resources need not be depleted by use provided the rate of use is within the limits of regeneration and natural growth. Forest products and fish are typical

examples. Sustainable yield is that which can be extracted/used without depleting the stock of the resource. Renewable resources are generally a part of a complex and interlinked ecosystem and sustainable yield has to be defined after taking into account systemic effects. Growth and development will involve changes in the physical ecosystem. Every biome everywhere cannot be preserved intact. What is required is conservation and protection in an overall sense and sustainability has to be defined at a suitable level of geographical aggregation for each type of resource. A forest may be depleted in one part of a watershed and extended elsewhere. This is not necessarily bad provided systemic effects on soil erosion and water regimes have been taken into account. Thus sustainable development requires that all renewable resources should be exploited in a manner which does not deplete the stock for future generations though changes in the location and composition of the resource may well take place.

15. The use of non-renewable resources necessarily reduces the stock available for future generations. Yet this does not imply that the resource should not be used at all. For if that principle were to be applied by every generation the resource would lie unused by anybody. Sustainable development requires that the rate of depletion of a non-renewable resource should take into account the criticality of that resource for the sustenance of human life and society, the availability of technologies for minimising depletion and the likelihood of substitute resources being available in the future. Land, for all practical purposes, is a non-renewable resource, critical for all human activities and will continue to remain as such. Hence sustainable development requires that land is not depleted through degradation. Minerals and fossil fuels are a different case. The possibility of substitution is present and the rate of depletion, the emphasis on recycling and economy of use should be calibrated to ensure that the resource does not

run out before acceptable and economic substitutes are available. In a broad sense sustainable development requires that the rate of depletion of non-renewable resources should foreclose as few options for future generations as is possible.

16. There is a tendency to restrict the use of the term resources to only some of the inputs used in the production process and, at the output end, the focus is on saleable products. From the point of view of sustainable development the conception of the production process has to be extended to include not merely paid inputs and marketed outputs but also so-called free goods like air or water, used or affected by the production process. It must also include all by-products and side-effects which may affect others. In this sense problems of resource use and problems of pollution are integrated in one framework since both sets of problems arise from the same activity. Sustainable development requires that the basic principles of resource-use outlined earlier should apply to all resources used or affected by the processes of production and consumption, not just those which, at present, have a market value. (Handwritten note: 'Put the negative impact clearly. There will be neg. impact. Minimise')

17. The processes of production generate hazards in the form of pollution, unforeseen side-effects, dangerous accidents, etc. The impact of such hazards is widening both in space and time and this is not reflected in present modalities for decision-making and enforcement of legal liability. Sustainable development requires the effective enforcement of responsibility for all environmental effects arising from any decision. This will require an adequate legal and institutional framework, nationally and internationally. Decision making systems for projects, programmes. policies and plans must reflect the wider concept of responsibility and the interlinkages between sectors of economic activity. (Handwritten note in margin: 'Need to maintain diversity')

(Handwritten note in margin: 'Para on technology development for sust. develop.')

18. In today's world the broad orientation of development and environment policy is determined at the national level. But



the nations of the world are linked together in a web of physical, cultural, political and economic interactions, a phenomenon that can be summarised in the term 'interdependence'. In many developing countries the nature of the involvement in the international economy has determined a style of development that causes the degradation of ecosystems and the impoverishment of large sections of the population. The impact of the world system is established through the mediation of local groups who share in the benefits and pass on the growing social and environmental costs to the majority of the population. The debt-crisis of the eighties exemplifies the developmental and environmental consequences of this approach: The issue is not so much the sufficiency of natural resources but the manner in which they are handled and the incorporation of technological patterns based on a dependent, centralized and standardised pattern of development. Sustainable development requires a framework of international cooperation that avoids exploitative relationships, reduces vulnerability and maximises the options available for sustainable development in each nation.

19. One aspect of international cooperation is central for sustainable development. This is the promotion of peace and a security environment that reduces the waste of vast military expenditures and the suspicions that make cooperation difficult in other fields. Today the link between military security and economic security is widely recognised. Sustainable development requires that the concept of security be widened further to cover basic developmental objectives and environmental protection.

20. To summarise, sustainable development is a type of (Handwritten note: insert 'environmentally sound') development that aims at equity in access to (Handwritten note: insert 'and use') the earth's resources now and in the future; it makes the present generation responsible for the welfare of future generations; it seeks to conserve and enhance the potential value of resources; it focuses attention on systemic features of the interaction between man, society and nature; it enforces responsibility in decision making for all effects, intended and unintended.