

# **PLANNING FOR ENVIRONMENTAL SUSTAINABILITY**

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*After a brief attempt to clarify conceptual ambiguities about sustainable development, the author sets the framework of discussion with the backdrop of India's rich natural endowments and far too inadequate efforts towards planned sustainable development. He takes a critical look at efforts about planned sustainable development, with focus on the Eighth Plan. After analysing various reasons for planning failures, he lays emphasis on the need for people's participation in the planning process.*

INDIA IS a country with vast natural resources. It has a land mass of about 329 million ha with 75 million ha as designated forest land, nearly 150 million ha under agriculture and an annual precipitation of 400 million ha metres.

## INTRODUCTION

India is among the richest countries in biological diversity supported by a unique range of topography and climate stretching from the world's highest ranges in the Himalayas, with permanent snow and temperatures much below freezing point, through the grasslands and plains of central India, the plateau of the Deccan, the dry and hot Thar Desert of Rajasthan, the wettest areas in the world around Cherrapunjee, a long coast line and islands in the Bay of Bengal and the Arabian Sea.

It supports 16 different types of forest systems ranging from the tropical evergreen forests of the Andaman & Nicobar Islands, the North-East and the Western Ghats, to the temperate coniferous and pine forests of the Himalayas, and the alpine pastures.

The country has ample sunshine and rich soils supplemented over centuries by the great rivers bringing down and depositing rich silt from the Himalayas and other mountain ranges. The Indo-Gangetic plain is considered among the richest agricultural areas in the world.

But India is also faced with formidable environmental problems and threats. It has a huge population (expected to cross the one billion mark by the turn of the century), much of which lives in poverty. According to

recent estimates, over 250 million children, women and men suffer from under-nutrition.

It has a domesticated animal population of nearly 500 million. Considering only 3.5 per cent of the land area is under grasslands, this population is supported by the forests and by agricultural residues which are thereby diverted from agricultural land. Out of total cultivable land, 175 million ha are degraded needing special treatment to restore productivity. Of the 75 million ha designated as forest land, only about 35 million are closed forests. Despite all efforts, India has continued to lose forest cover during the last decade. Over 1500 species of plants and animals are on the endangered list.

Levels of air and water pollution are much beyond acceptable limits, especially in the cities and industrial belts. A very large proportion of the surface water sources in the country is not fit to drink from. Many of our main rivers are not even fit for bathing.

This depletion of natural resources and pollution of the environment is much more a cause of poverty than a result of it. Therefore, efforts to eradicate poverty, through development projects, cannot succeed if in the process the environment is further degraded.

#### CONCEPTUAL FRAMEWORK

The concept of environmental sustainability is much maligned and misunderstood. In the sense that it is being used in this article, it follows from the notion of 'carrying capacity' which indicates the ability of an ecosystem to allow extraction and to assimilate pollutants without being itself damaged or modified to an unacceptable level.

Sustainable development means, therefore, that level of economic and social growth which is within the carrying capacity of the ecosystem.

To assess whether development is environmentally sustainable, at least two questions need to be answered: (1) Whether the *overall model* of development is environmentally sustainable? (2) Whether each *specific development project or activity* is environmentally viable in terms of being itself sustainable and contributing to sustainable development ?

An answer to these questions presumes an understanding of: (1) *Natural Resources Demand*: Whether the present and anticipated demand for natural resources directly (water, biomass, land, minerals, etc.) or indirectly (electricity, cement, steel, etc.) is within the carrying capacity of the ecosystem. (2) *Pollution*: Whether the environmental impact of development projects and activities and of the development model, as operationalised through the plan, especially in terms of air, water, land and noise pollution, and in terms of potential hazards and congestion, is within the carrying capacity of the ecosystem. (3) *Patterns of Resource Use and Distribution*: The patterns of resource consumption and distribution that development strategies and specific projects represent, as these have an impact on the society and culture of a nation and consequently, on its environment.

There are degrees of environmental sustainability. Each country has to decide for itself and its regions and specific locations, the level of ecological disturbance and modification acceptable, within the limits prescribed by ecology. Also of relevance is the acceptable time frame within which an ecosystem must repair itself.

To make increasing levels of production and consumption sustainable, at least two instruments are available: (1) *Technology*: Through technological innovations, ecosystems can be made more productive, their ability to assimilate waste can be enhanced, processes can be made more efficient, and alternatives for scarce or non-renewable resources can be developed. Technological innovations can also make environmental protection economical. (2) *Management*: With a constant level of technology, processes and activities can be better managed to reduce the environmental impact. Better management can often result in saving costs while saving the environment.

For a nation to establish an environmentally sustainable development order, what is required as a minimum is an integrated development plan which indicates how best social and economic goals can be achieved in an environmentally sustainable manner, and determines priorities between different demands.

#### INDIAN PLANNING

India plans in five-year cycles, with the Planning Commission laying down the 'thrust' or 'approach' and formulating the detailed chapters, for each sector, subject to the approval of the Union Cabinet and the National Development Council.

The sectoral chapters and the detailed allocations for schemes and programmes for the Eighth Plan (1992-97) show a total absence of integration of environmental concerns into plans of various sectors, especially industry, agriculture, water resources, energy, transport and mining.

This is at least partly due to lack of concern for environmental sustainability in the 'thrust' paper for the Eighth Plan finalised and approved by the National Development Council.

In the overall objectives of the Eighth Plan, contained in *Objectives, Thrusts and Macro-Dimensions of the Eighth Plan*, brought out by the Planning Commission in December 1991, there is no mention of environment or of environmentally sustainable development. The document says :

The Eighth Plan will give priority to the following objectives:

- (i) generating adequate employment to achieve near full employment level by the turn of the century;
- (ii) containing population growth through active people's co-operation and an effective scheme of incentives and disincentives;
- (iii) universalisation of elementary education and complete eradication of

- illiteracy among the people in the age group of 15 to 35 years;
- (iv) provision of safe drinking water and primary health facilities, including immunisation so as to be accessible to all villages and entire population, and complete elimination of scavenging;
  - (v) growth and diversification of agriculture to achieve self-sufficiency in food and generate surpluses for exports; and
  - (vi) strengthening the infrastructure (energy, transport, communication, irrigation) in order to support the growth process on a sustainable basis.

The Eighth Plan will focus on these objectives keeping in view the need for: (a) continued reliance on domestic resources for financing investment, (b) increasing the technical capabilities for the development of science and technology, and (c) modernisation and competitive efficiency so that the Indian economy can keep pace with and take advantage of global developments.

Though, there is a brief section on environment and forests, there is also no section which indicates how, if at all, environmental concerns are to be integrated into planning and implementation of development activities and projects.

The document also contains a section on "Emerging Issue of Planning and the Needed Policy Correctives". It identifies the issue as follows:

The most glaring problem that faces planning is that the essence of the planning process has been eroded. If planning is to be a prioritised application of resources—human, material and financial—to the needs of development, the process has to keep enough operational efficiency to make adequate and timely investments in priority programmes and to have reserves to take up new initiatives in short, medium and long-term development.

Even at this level, there is no mention of natural resources. This section goes on to list, as priority sectors, energy, physical infrastructure, irrigation, agriculture, social services, and poverty alleviation. However, the description of these priority sector goals contains no mention of sustainability or the environment.

#### *Implementation*

The implementation of a plan must be assessed on at least two basis : (1) the impact it has on the subsidiary plans, policies, action plans and programmes that are supposed to emanate from it; and (2) its impact on the activities and situation in the field.

#### *Impact on Subsidiary Plans*

The sectoral chapters of the plan document are supposed to exemplify

sectorally, and in greater detail, the broad thrust contained in the approach or thrust paper. This exemplification is supposed to be reflected in the schemes, programmes and projects approved and supported by the Planning Commission, and in the financial allocations and for each of them.

However, lack of integration and inability to clearly identify the interfaces between different sectors manifest in the thrust document, are aggravated in the sectoral chapters which, if anything, are even more stratified than the thrust or approach paper. These chapters mainly seek to further sectoral goals which are primarily seen as quantitative growth targets.

It is interesting to note that, in 1990, while formulating the approach paper for the Eighth Plan, then scheduled for 1990-95, the Planning Commission had made a valiant effort to break away from the tradition of target-oriented planning and had tried to replace quantitative targets with social indicators. However, this was not accepted by the Cabinet and the Commission had to revert to the earlier practice.

At the next level, the schemes and programmes of the Central Ministry and the states bear even less resemblance to the overall thrust or approach and even to the chapters.

This is partly because whereas the plan is formulated by the Planning Commission, the programmes, schemes and projects are formulated by ministries and departments in the central and state governments. Though, there is some discussion with Central ministries in the process of plan formulation there is none with the state governments. In fact, apart from the Chief Ministers being involved, as members of the National Development Council, in approving the approach or thrust paper and the plan document, the state governments seem to play a relatively small part in the overall planning for the country.

Perhaps the most important reason why schemes, programmes and projects do not always reflect the current plan philosophy is because a very large proportion of them are ongoing or half finished. The planning process might very well be a five-yearly process but it does not reflect the life of projects or schemes and, consequently, at the time when a new five-year plan is being formulated, or financed, a very large proportion of the funds available are already earmarked for ongoing or unfinished activities.

#### *Impact on Activities*

At the implementation stage, there is very little that the Planning Commission can actually do to ensure proper implementation of these plans, whatever their inadequacies. Past experience has shown that state governments and even Central ministries implement the plans according to their own priorities, both in terms of the strategies followed and even in terms of expenditure incurred.

The Planning Commission is involved in the process of approving schemes, programmes and projects at their inception on the basis of a proposal. When these same schemes, programmes or projects are initiated,

they need yearly financial outlays from the Planning Commission. However, at this stage the Commission has very little ability to assess their functioning and has to go by the reports, often very scanty, presented by implementors of these schemes and projects.

Even in terms of financial outlays, there is a tendency, especially among state governments, to disregard the allocations made by the Commission when it suits them. There is, again, little the Commission can do to prevent this. Some sectors, like agriculture, are 'earmarked' sectors implying that if states transfer funds out of this sector's allocation to other sectors, without clearance from the Planning Commission, the amount so transferred would be cut from their next year's Central assistance. The Central assistance comprises the State's share and other dispensation from the revenue collected by the Central Government. However, even for earmarked sectors, it becomes politically difficult for the Commission to ensure that it is respected.

The inability to develop and implement an integrated plan which clearly lists priorities and identifies the interface between different sectors and sectoral interests has a negative impact on many aspects of development but, most significantly on the environment. Essentially 'sustainable' development implies integration of environmental concerns into all sectors of development. Clearly this is not happening adequately in India.

The inability to implement strictly even the stratified sectoral plans also has implications on the environment which are serious. Where states or ministries are allowed a free hand, they often favour the hard core 'development' sectors like industry, irrigation, communication, tourism and mining all too often at the cost of 'soft' and 'anti development' sectors like the environment.

The Planning Commission, and the integrated planning model that it represented, have lost influence perhaps due to the following reasons:

1. Whereas in its initial years the Commission was able to develop integrated plans, the emergence of diverse and new issues relevant to development (like the need for environmental protection) heightened the conflict between different sectors of development. Rather than face and resolve these contradictions through the medium of planning, the planning process was allowed to disintegrate and become pre-occupied with producing a series of sectoral and sub-sectoral plans which were, often, at variance with each other.
2. The resolution of conflicting demands, especially for natural resources, needs a basic, long-term plan, prioritising different uses in a rational manner. Without this, planning becomes *ad hoc* and irrational. It often leads to lower priority demands getting satisfied while higher priority ones are refused. But, despite this, the planning process has not succeeded in formulating such basic plans for many crucial areas of conflicting demands. The lack of a land-use plan is one such example, even though the Government of India

had set up a high powered Land Use Board, way back in 1985, under the chairmanship of the Deputy Chairman of the Planning Commission.

3. Apart from being sectoral and sub-sectoral, such planning also remains essentially centralised in a nation so diverse that centralised fiats have little relevance.
4. The irrelevance of centralised planning is aggravated when it has to be performed in the absence of detailed and authentic information of a disaggregated nature, as is the case for at least environmental planning.

#### PEOPLE'S PARTICIPATION

Arguably, even with the best of intentions, planning for sustainable development can never be effective without the participation of people.

There is, in India, a large and growing network of non-government institutions and organisations working in the area of environment. These are involved in environmental research, training, awareness and advocacy. However, the tasks at hand far outstrip the ability of these institutions and organisations.

Consequently, the involvement and support of NGOs has been inadequate. The main constraint is the atmosphere of secrecy in which most governments operate. Information, data and documents are not made available to the public or NGOs, who are left to fend for themselves and have to spend vast amounts of time, money and effort discovering things that are easily available in government records.

The process of governance is highly centralised with almost no mechanism for consulting local communities about projects and activities that would affect their lives. Talk about decentralisation, in the government, usually means decentralising from one level of government to another, never decentralising from the government to the people. As a result, there is a lack of public participation, and sometimes even acceptance, of the programmes and policies of the government.

There are also no easy sources of funding for NGOs. The two main sources available are either the government or foreign agencies. It becomes difficult to get money from the government in order to, very often, fight cases against the government, or criticise governmental action and inaction. Taking foreign funds opens up NGOs to the charge of being foreign agents and therefore anti-national.

Finally, the expertise required is often not available, both in technical and legal areas, among NGOs. There are also few training opportunities for NGOs where they could send their members for learning what they need to know in order to perform their role effectively.

#### CONCLUSIONS

There are many decisions that have to be taken and tasks to be carried



out in order to ensure that development processes in India are made environmentally sustainable.

1. A major constraint to the formulation of a sustainable model of development for India is the lack of understanding of what such a model is or what it implies. The term 'sustainable' does not easily translate into plans, strategies and allocations. Also, it is not clear what the implications of a sustainable model of development are, especially in terms of the pace of economic growth and the investments required.

Though, it is not at all certain that if such a model (or models) and its implications were clear, the government would necessarily adopt it. However, the formulation of such a model is a necessary first step to its possible adoption.

Despite the fact that the institutions for integrated planning are in position, there is little evidence of the plans being actually integrated, especially in terms of environmental protection and sustainability. Consequently, environmental concerns continue to be viewed as constraints to growth, very much like financial procedures, but with much less acceptability.

There is also little concern for the environment among the proponents of development projects and activities, resulting in the need for constant regulation and monitoring.

Perhaps what is required is for the Government of India to set up a National Commission on Sustainable Development, within or in association with the Planning Commission, to advise the National Development Council, the Union Cabinet and the state governments on how to plan for sustainable development. Such a Commission must have the ability of involving in its work various Ministries and Departments of the Central and state governments, as also professional institutions and individuals from outside the government. Planning for sustainable development must be done with the involvement of the people, especially the rural and tribal people, and must plan for participatory action at a decentralised, local, level.

2. Efforts at better planning for environmental sustainability have been constrained by absence of reliable and up-to-date information on various environmental parameters and on the carrying capacity of regions and specific locations. This has also resulted in delays while data are being collected to complete environmental impact assessments.

There is a need for the government to set up a reliable and comprehensive system for collecting information critical for sustainable development planning. Such information must be collected in partnership with individuals and organisations, especially professional organisations, outside the government and must be made easily

accessible to everyone.

3. The availability of efficient and environmentally friendly technology is critical to the sustainability of development, especially industrial development. This not only includes clean production and processing technology but also pollution abatement technology. In India, one of the major problems is that much of the old industrial machinery is polluting and yet, for economic reasons, cannot be immediately replaced. What is, therefore, required is intermediate technology, indigenously developed, which would lessen the environmental impact of such industrial units till they could be replaced.
4. A major deterrent to better environmental management is the apprehension that this would lead to delays and higher costs. Yet, for many types of industries and projects, better environmental management might actually lead to savings. However, this requires planning and technological and managerial expertise, for example by making available the waste of one industry to another which can use it as a raw material. The investments and concern for systems which promote recycling must be much more than at present.
5. Though, there is a growing body of environmental experts, there are few training programmes available for them in India. Also, equally important, environmental skills are not being imparted to engineers, technicians, administrators, business executives and other professionals during their basic training. The government should identify training and education needs both for environmental experts and for other professionals. The government should set up and encourage the setting up of the required training programmes and introduce modules on environment in existing training and education programmes.
6. It is difficult to plan for sustainable development without having good information on the availability of natural resources and the health of the environment. The idea of introducing natural resources accounting in India is already being considered. Along with such accounting, it is essential to build up a natural resources budget which indicates, yearly and five yearly, the availability of natural resources. The 'revenue' would be the additional environmental capacity achieved through cleaning up the air or water, through water and energy conservation, through afforestation, etc. The 'surplus' would be what is available for allocation after environmental and other committed needs are met.
7. It is difficult in a democracy to implement environmental safeguards, especially when they involve some short-term economic sacrifices, if the general public is not supportive of such measures. However, the support of the public is a result of the levels of awareness and understanding they have about environmental issues. Also, the costs and benefits of environmental conservation must be shared equitably.

