CHAPTER V
The term "Sustainable development" was brought into common use by the world commission on Environment and Development (the Brundtland Commission) in its seminal 1987 report entitled 'Our Common Future'. The idea of sustaining the earth has proved a powerful metaphor in raising public awareness and focusing on the need for better environmental stewardship. The Brundtland commission definition of the sustainable development means "meeting the needs of the present generation without compromising the needs of future generations" - is strongly endorsed by this report. We also believe, with the Brundtland commission, that meeting the needs of the poor in this generation is an essential aspect of sustainable meeting the needs of subsequent generations. There is no difference between the goals of development policy and appropriate environmental protection. Both must be designed to improve welfare.

Making the concept more precise, however, has proved difficult. It is not plausible to argue that all natural resources should be preserved. Successful development will inevitably involve some amount of land clearing, oil drilling, river damming, and swamp draining. Some have argued that natural capital should be preserved in some aggregate sense, with losses in one area replenished elsewhere. This approach has helpfully focused attention on the
need to estimate the value of environmental resources and on the importance of protecting certain essential ecological systems. This report supports efforts to assess values but goes further. Societies may choose to accumulate human capital (through education and technological advance) or man-made physical capital in exchange, for example, for running down their mineral reserves or converting one form of land use to another. What matters is that the overall productivity of the accumulated capital—including its impact on human health and aesthetic pleasure, as well as on incomes—more than compensates for any loss from depletion of natural capital.

In the past the benefits from human activity have often been exaggerated, and the costs of environmental loss have been ignored. These costs must be built into decision making, and all short and long-term impact must be carefully explored. This cannot be done without taking account of the uncertain ties and irreversibilities associated with some environmental processes, recognizing that some environmental benefits come in intangible forms and that some impacts occur for into the future. Not all environmental resources can or should be assigned monetary values, but trade-offs should be made as explicit as possible. It is sometimes argued that the benefits from human investment are temporary, while the benefits of an undisturbed environment last forever. This has prompted some to advocate using a lower discount rate in project analysis. But this
may lead to more damage (through envourasing investment) rather than less. The answer lies not in artificially lowered discount rates but in ensuring that the benefits from an expanding economy are reinvested. Basing developmental and environmental policies on a comparison of benefits and costs and on careful macroeconomic analysis will strengthen environmental protection and lead to rising and sustainable levels of welfare. When this report uses "sustainable development" and environmentally responsible development, it refers to this narrower definition.

The scholars like Michael Red lift, has defined sustainable development in very rational manner in which he explains that:

"Sustainable development is a concept which draws on two frequently opposed intellectual traditions: one concerned with the limits which nature presents to human beings, the other with the potential for human material development which is locked up in nature". ¹

Therefore latterly this definition means a development which recognises that the limits of sustainability have structural as well as natural origins and was related to the mechanism of the international economic system. Which is the out come of the environmental resources exploitation, and that is operative in
constraints on the achievement of long-term sustainable practices. While some theoreticians have introduced the concept of sustainable development (or growth), the basic idea of which is to reconcile economy with ecology as well as to solve the resource problem. For this purpose three illusions have been fabricated, namely (1) that, thanks to technological development, resource use can be reduced in spite of growth, (2) that technological protection of environment of possible and (3) that the active integration in the world market would make an eco-friendly economic development possible in the third world countries.

The basic purpose of the first two illusions is to relegate the industrial society and uphold it as a model for the rest of the world, David Pearce viewed this situation, specially in third world context as, "The new ecology technology and industry will create many new jobs. All three taken together are to reinforce the faith of the third world societies that they too can become industrialised, which is believed to be absolutely necessary to overcome poverty".

These illusions are argumentatively interconnected. The first two serve as doctrines, from which the third and the whole idea of sustainable development are derived.
Poverty is considered not only to be bad in itself, but also to be one of the main causes of environmental destruction. It follows then that, in order to protect the environment, poverty must be overcome which is considered to be possible only through development, i.e. increasing production and labour-productivity through industrialisation. Although this argument carries a weight but again these are the hard fact that, the otherside of the industrialisation, also leads to the pollution, acid rain, environmental deterioration and ruthless resource exploitation for just to create the waste etc.

But this is also true that sustained rapid economic growth is also required in third world countries to sort cut the socio-economic and other problems. This has been accepted by the world Commission on Environment and Development (WCED) better known as the Brundtland commission, writes that,

If large part of the developing world are to avert economic, social and environmental catastrophes",..."more rapid economic growth in both industrial and developing countries" is essential"

Of course, it knows about therefore that a more rapidly growing world economy will apply environmental pressures that are no more sustainable than the pressures presented by growing poverty. But it has noted favourable
trends that allegedly prove that future patterns of agriculture and forestry development, energy use, industrialisation, and human settlements can be made far less material-intensive, and hence both more economically and environmentally efficient.

While Blowes Andrew defines sustainable development in this way,

"growth, means using up more and more resources, whereas sustainable development means to increase the benefits derived from the use of the same quantity of resource".

Thus it is very clear from this explanation that the basic difference between the growth oriented developmental activities are primarily market mechanism phenomenon while sustainable development phenomenon is fundamentally long term conscious activities.

On the other hand P.S. Ramakrishnan has conceptualised sustainable development in this manner,

The concept of sustainability implies the use of ecological systems in manner that satisfies current needs without compromising the needs or options of future generation".

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But sustainable development cannot be the same in both the developed and the developing countries. Because resource exploitation in the third world countries has largely been required to meet the very basic needs of food, fodder, fuelwood and shelter of a large section of deprived societies on the other hand, developed parts of the world have largely concerned themselves in trying to maintain and accelerate the high level of resource consumption that they have achieved for a much smaller segment of the world's population, based on an early initiative taken and advantage gained through industrialization. It is in this context that one needs to view the concerns expressed by environmentalists on over exploitation of natural resources for industrial growth and development on the one hand, and to meet basic need of vast majority who are below subsistence level struggling to survive.

E.B. Barbier has developed a definition of sustainability as follows:

"sustainable development is a basic strategy for global and local evolution. It is however, more than a policy. It is above all a "process of change", in which exploitation of resources, the direction of investment, the orientation of technological development and institutional change are made consistent with future as well as present needs".
Therefore in this observation, global as well as local dimension, policy matter, its process, direction, intention, orientation, and its temporal aspects has been precisely emphasised in a very rational manner.

a) we should recognised all economic processes the reversibility of entropic change.

(b) we should acknowledge the fact that natural resources have to be viewed as components of an entropic metabolic flow from and back to the environment.

(c) we should consider a steady state situation as the normal, healthy condition of an economy versus the idea that growth is the necessary condition for a healthy economy.

Hence much confusion could be avoided if one would agree to use the word "growth" to refer only to the quantitative scale of the physical dimensions of the economy. Qualitative improvement through optimum utilisation of minimum resources could be labelled as sustainable development.

The man nature relationship and resource intensive development activities has been scientifically analysed by Robin cook in these words,

The unity of survival consists of the environmental plus the organism. We learn by bitter experiences, that organism destroying his environment, destroys it self".

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Thus it is very clear from this observation that even so called creative activities of man is basically destructive in its nature, up to some extent because philosophically speaking nothing could be creative in this world, it is just formation of a new phenomenon by assimilating of two or more than that elements existing already in this world.

While Robert Repetto has advanced, very precise and rational definition of sustainable development in these words,

"Sustainable development (is) a development strategy that manages all assets, natural resources, and human resources, as well as financial and physical assets, for increasing long-term wealth and well-being. sustainable development, as a goal rejects policies and practices that support current living standards by depleting the productive base, including natural resources, and that leaves future generation with poorer prospects and greater risks than our own".

The most important area for which sustainable development has implications is in the way technology
mediates our relationship with the environment. Technology is not an isolated phenomenon. On the one hand, every technological development brings about changes and every technological development alters the way of life and the manner in which society is organized. On the other hand, technology does not stand a chance and is not viable if it is not accepted and utilised by society. The essence of this theme is that science and technology plays a significant role in development phenomenon, therefore sustainable development requires sustainable technology. Because there is nothing inevitable about the destructive progress of science and technology, as Einstein wrote,

"we should be on our guard not to overestimate science and scientific methods when it is a question of human problems, and we should not assume that experts are the only ones who have a right to express themselves on questions affecting the organization of society".

Thus right choice of technology and rational use of scientific research is very essential for sustainable society in which fruits of development has to be shared in majority of citizens not in a small group. Therefore positive role of science and technology is very much clear and helped a lot to sort out the social problems. While other side of the coin is also witnessed time and again i.e. Hirosheema and Nagasaki bomb explosion in 1945. Bhopal Gase
tragedy in 1984, and chernobile incident etc, has shown that scientific advancement has to be put under certain rational control to avert catastrophes.

The traditional societies before the great cultural shock of the modern industrial era were always in transition, but very slowly. The tremendous speed of change due to the influence of dominating industrial states has severely damaged cultural identify, self-reliance, and even self-respect in many Third World countries. The introduction of life-saving medicines and life destroying weapons produced in the industrial countries has severely undercut the status of traditional leadership.

Development tends to be conceived by the new leaders as a matter of increase in industrial activity and consumption. Yet the uncritical imitation of Western ways by Third World leaders is now hopefully on the decrease. A growing trend it to look for the assistance of traditional medicines, traditional ways of population stabilization, traditional ecological insights, and in general support of customs which still have some authority and which clearly favour sustainable development, including sustainable cultural identity, and a population proportional to resources.

Hence sustainable development can be achieved by adopting sustainable technology, rational use and distribution of natural resources in majority of citizens. Decentralisation of power, democratisation of decision making authority etc. But these factors were missing in my
area of case studies, i.e. Tehri and Narmada valley projects. Mega Dam's construction is going on both the places. Local people would be displaced, they were not consulted for Dam construction even at their native places. Decision was taken by few planners at Delhi, Lukhnow, and Ahamadabad. Even after that local people has been continuously been misguided given false information by the authority. But reality has its way to come up. At the places local people has been mobilised under the leadership of, Chardi Prasad Bhat, Sunderlal Bahugana, and Megha Patkar etc. Now people are voicing for their democratic right to know what would be their future. They are being replaced, not happy with rehabilitation etc. And after all, taking into account all factors, Tehri Dam is not viable, not sustainable. Same thing with Sardar Sarover Dam. Whatever Government of Gujarat and India claims, seems to be fall sort. The Third case study is Khejarly village conflict occurred in 1730s. During the princely state regime, that has different dimension than mere development perspectives. Socio-economic, religions and ecological aspects were more prominent in this case.

Therefore, it is very clear from these case studies that sustainable development model never have been applied in our country whether it is a Khejarly village revolt or Tehri, Narmada Dam construction etc. But even then there has been certain measures taken for sustainable development. Efforts has been made through various Laws and
time to time to protect the Environment. There are about 30 major enactments related to protection of environment now being administered by the central and state Governments. Prominent among these are: India is one of the few countries which has a forest policy since 1894. It was revised in 1952 and again in 1988. The main plank of the revised forest policy of 1988 is protection, conservation and development of forest. In the beginning of the fourth plan, problems related to environment received government's attention. A committee on environmental coordination was set up in 1972 to look into these problems and suggest solution in consultation with experts and concerned ministries/departments of the government. Another committee was set up in January, 1980, for reviewing exhaustive legislative measures, administrative machinery for ensuring environmental promotion and for recommending ways to strengthen them. On the recommendation of this high powered committee, the Department of Environment was set up in 1980. Subsequently, it was made a new ministry of Environment and forests in 1985 to serve as the focal point in administrative structure for planning, promotion and coordination of environmental forestry programmes. The water (prevention and control of population) Act 1974. The Air (prevention and control of pollution) Act, 1981. The factories and insecticides Act. Twentythree states of the Union have already adopted the Act and respective state pollution control boards have been constituted. These states are Andhra Pradesh, Assam, Bihar, Goa, Gujarat,
Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Manipur, Mizoram, Orissa, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, West Bengal and Arunachal Pradesh has adopted the Act but is yet to constitute the board.

Enactment of the Environment (Protection) Act, 1986, which is the umbrella legislation for enforcement or measure for protection of the environment has further extended the scope of the activities of the Board. Under the E (P) Act, 1986, effluent and emission standards in respect of 555 specific industries have been notified so far, 84 laboratories have been recognised as environmental laboratories. Minimum national standard (MINAS) for pollution discharged from specific industries have been formulated and control measures are being implemented in a phase manner. The Government has issued a notification instructing polluting units in the country to meet the prescribed standards. Seventeen categories of heavily polluting industries have been identified, namely, cement, thermal power plants, distilleries, sugar, fertiliser, integrated iron and steel, oil refineries, pulp, and paper, petrol, chemicals, pesticides, tanneries, basic drugs and pharmaceutical dye and dye intermediates, caustic soda, zinc smelter, copper smelter and aluminium smelter.

On the basis of the designated best use of criteria the Central Pollution Control Board (CPCB) has identified 13 grossly polluted stretches of Sabarmati,
Subernarekha, Godavari, Krishna, Indus (tributaries), Sutlej, Ganga (tributaries) Yamuna, Hindon, Chambal, Damodar, Gomati and Kali to formulate short-term result oriented programmes. The Central Board in consultation with the state boards, have identified 17 critically polluted areas in the country which needs special attention for control of pollution. These are Vapi (Gujarat) Singrahli (UP) Korba (Madhya Pradesh) Digboi (Assam) Talcher (Orissa) Bhadravati (Karnataka) Howrah (West Bengal) Dhanbad (Bihar) Pali (Rajasthan), mandali, North Arcot (Tamil Nadu) Vishakha Patnam (Andhra Pradesh), Chember (Maharashtra) Najafgarh (Delhi) Govnindhgarh (Punjab) and udyog mandal (Kerala).

The National Waste Lands Development Board (NWDB) was established in May 1985 with the primary objective of undertaking waste lands development through a massive programme of afforestation and tree planting with the people's participation. National wildlife action plan, adopted in 1983, provides the framework of strategy as well as programme for conservation. At present, protected area net work comprises 75 national parks and 419 sanctuaries covering 4.5 percent of the total geographical area of the country. The Wildlife (protection) Act, 1972 adopted by all states except Jammu and Kashmir (which was its own act), governs Wildlife conservation and protection of endangered species.

Priority is accorded by the ministry to promote environmental education, creation of environmental
awareness among various age group of the country's population through several programmes and mass media campaign as well as to disseminate environmental information through Environmental information system (ENVIS) network to all concerned. The ministry has been organising a National Environmental Awareness Campaign (NEAL) since July, 1986, to create environmental awareness at the national level. As a part of this campaign, 18 November to 18 December every year is observed as the National Environment month (NEM). The National museum of Natural History (NMNH) which was set up in New Delhi in 1972, is concerned with the promotion of non-formal education in the area of environment and conservation. Education in forestry is being conducted in 14 agricultural universities of the country.

Govind Balabh Pant Institute of Himalayan Prayavaran and Development, set up at Almora. The ministry has decided that from 1991 Indira Gandhi Paryavaran Puraskar (IGPP), instituted in 1987, would be awarded both to an individual as well as to an organisation for significant contribution in the field of environment. The Award carries a cash prize of Rs. One lakh and a silver trophy and a citation. Indira Priyadarshini Vikshanitra Award: instituted in 1986 to recognise the outstanding contribution of individuals as well as organisations in the field of afforestation and waste lands development. Every year ten awards are given in these five categories:
Individuals; (2) educational institutions; (3) panchayats; (4) voluntary agencies (5) government agencies. The Award carries a medallion, citation and a cash component of Rs, 50,000. A Bill to set up Environment Tribunals has been introduced in Parliament. Three Eco-Task forces constituted for the purpose of undertaking ecological restoration work with participation of Ex-servicemen, in selected environmentally degraded area, carried out afforestation, pasture development, soil and water conservation and other restoration works in the states Uttar Pradesh, Rajasthan, and Jammu & Kashmir.

A national river action plan for cleaning the grossly polluted stretches of 17 major rivers of country has been drawn up. This follows the progress achieved in improving the water quality of the river Ganga during the last 7 years. A notification was issued designating the Aravalli Hill Range, one of the oldest mountain ranges in the world, an eco sensitive area, which provides for the regulation of industrial and other activities in this region. A coastal zone Regulation has been formulated which establishes guide-lines for all kind of developments along India's 2000 km long coast line. Project Tiger was launched in 1972. The Wildlife protection Act was amended to ban all types of hunting of wild animals for commercial purposes or for pleasure. A new scheme called Paryavaran Vahini (Environmental been launched with the objective of involving common people, village youth, students and NGOs in the environmental management, protection and conservation over
the length and breadth of the country.

The role of non-governmental organisations (NGOs) in creating environmental awareness among common people of our country is remarkable. There are 908 total NGOs working in different parts of country. These NGOs are becoming active on the environmental front because of the increasingly clear nexus between meaningful, equitable, sustainable economic growth and the conservation of environment. The number of voluntary groups actively engaged in environmental issues in India today is larger than in any Third World country. Out of these NGOs the most prominent are, Kerala Sastra Sahitya Parishad (KSSP), Centre for Environment Education, Ahmedabad. The Begeeya Vigyan Parishadmost Bengal, Assam science society, Bigyan Prachar Samithy, Orissa. Ekalavya in Madhya Pradesh, Centre for Science and Environment (CES) New Delhi, Goan Research Institute for Development (GRID) etc.

The basic differences between Government and NGOs are as under observed by M.K. Prasad,

"The NGOs are doing for the people what the government cannot do for them; telling them now the environment is being destroyed, who is destroying it, and what can be done about it. There is a major difference in the perspective between voluntary and governmental educational efforts; the government agencies usually end up blaming the poor for envi
ronmental degradation while voluntary agencies stress the over-consumption by the elite and the government policies, and exhort the people to appreciate alternative development processes”.

This is the state of environment in India, Government’s achievement in this regard is very black because of lack of commitment at implementation level, mere passing of Laws and Acts as well as propaganda through state machinery won’t serve the purpose in long term perspective. The NGOs has made very positive progress in this context but even then there is a long way to go. The danger seems to be very possible that even some of them could indulge in over consumption and became elite by virtue of opposing the same ideology. Therefore keeping eyes on both, Government and NGOs ideology. Beside adopting this strategy that, Non-renewable resources should not be used in principle. Renewable resources should not be utilized at a rate higher than that of regeneration. Pollutants should not be emitted at a rate faster than the natural environment is able to absorb or neutralise it. Democratisation of decision making bodies, people’s participation in planning process. Optimum utilisation of minimum resources. Fruits of development should be shared among all citizens. Scientific education and right to information to all citizens.
nto account local, socio-economic and ecological aspects as well as global scenario into consideration we could achieve the sustainable society in New World Order.
REFERENCES


