

Dr. M.S. Swaminathan

B 4/142,
Safdarjung Enclave,
New Delhi - 110029

28th September, 1988

Dear Smt. Rao,

I enclose two copies of my report on a visit to China in May-June this year to participate in a high-level dialogue on China and the World in the Nineties. If you need additional copies, Dr.(Mrs.) Manju Sharma, Chief(Science), Planning Commission will be able to provide them.

With warm regards,

Yours sincerely,

M.S. Swaminathan

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Smt. Nirupma Rao,
Director,
Ministry of External Affairs,
South Block,
New Delhi.

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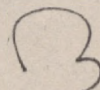
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Environment protection & Sustainable Economic Development
- Strategies for the Eighth Plan

CHALLENGE

The Sixth Five Year Plan marked the beginning of integrated and intensive efforts in conserving our natural assets. A separate Department of Environment was set up at the Centre and State governments were also requested to do likewise. Detailed attention was paid to the legislative and institutional aspects of environmental protection. A comprehensive Environment Protection Act was enacted in 1986.

The Seventh Five Year Plan laid even greater stress on an integrated approach to the conservation of land, water, flora and fauna in addition to the prevention of atmospheric and terrestrial pollution. This is because of the recognition that human beings form an integral part of the biosphere. Both globally and nationally, the life support systems upon which ~~both~~ sustained economic development and the livelihood security of millions of poor people depend, are under severe stress from the very process of development.

For the first time in history, the whole world ~~has had~~ ^{is having} its living conditions profoundly altered by the extent of our industrial and agricultural activities and the formidable power of our technologies.

The earth has remained a comfortable place for living organisms for a whole 3.5 billion years since life began despite ^a 25% increase in the heat output from the sun. Can we maintain this legacy?

It is clear that we can, provided we learn to live in harmony with each other and with the earth which supports us all.

Global atmospheric changes resulting in ~~these~~ altered temperature and precipitation patterns and rising ocean levels, are no longer within the realm of ~~the~~ ^{theoretical} possibilities.

In spite of the growing awareness and the strengthened administrative machinery, we find that progress in environmental conservation is far from adequate. Soil erosion and degradation, deforestation, siltation of rivers and lakes, leading to frequent flash floods, loss of biological diversity and pollution of various kinds are all increasing. The growing investment in drought and flood relief is an index of the shape of things to come. The challenge before us, then, is to enlarge ^{and sharpen} our ongoing efforts to an extent when we can, first prevent further damage to the diverse ecosystems we are fortunately endowed with; secondly, undertake an ecological rehabilitation programme which, by the end of the century, can help to restore ^{some of} the damage already done; and finally, promote the growth of a conservation society based on the sustainable use of recent advances in agricultural, industrial and information technologies. Such a conservation society should ensure the minimum needs of our people ~~in the country~~ and and should be based on ^{the principles of} ~~both~~ intra-generational and inter-generational equity. ~~Globally~~, We have to promote a deep awareness of the ecological inter-dependence of our planet, as emphasised by the World Commission on Environment & Development chaired by Mrs. Gro Harlem Brundtland. We must acknowledge and respect the rights of our environment. Above all, we should break the vicious circle whereby environmental degradation and poverty are inextricably linked, ^{as} stressed by the late Prime Minister Smt. Indira Gandhi in her address to the UN Conference on the Human Environment in Stockholm in 1972. In addition to meeting the genuine needs of the poor, every attempt will have to be made to curb the damage being done to our forests, either because of commercial greed or careless technology on

look.

During the Nineties, we have to increase food production from existing land to 230-250 million tonnes and, at the same time, produce over 700 million tonnes of livestock fodder and over 200 million tonnes of fuelwood. In addition, a variety of raw material which supports a large section of our industry will have to be produced. Ecological security is the only foundation upon which such production can be achieved on a sustainable basis. Sustainable development, therefore, should be the basis of all development programmes.

THE RESPONSE

Our response to the above mentioned challenge has to be all-pervasive and multi-dimensional. Conservation has to start from below and from every village and block. While we can have national goals for environment protection, the precise action plans will have to be developed and implemented locally. Each village ~~will~~ ^{should} ~~have to~~ protect the fertility of ~~the~~ ^{its} soil ^{and} the quality ^{and quantity} of ~~water~~ ^{its} and ~~the conservation of~~ ^{conserve} local flora and fauna. Unless people's associations for sustainable development can be fostered in every village or in groups of villages, it may be difficult to arrest the damage now happening, let alone undertake rehabilitation work. The slogan "People's participation in the conservation of their own environment" should be given meaning and content. Environmental education will have to play a key role in this regard. Such educational programmes should begin with the village school since it is the youth of today who are going to determine the ecological fate

of tomorrow. Environmental education is best done through observation, analytical thinking and practical field work. A suitable programme will have to be developed in our schools to enable the children of each class to prepare through field visits and observation extending to a whole school ^{year} ~~area~~, a Charter for Nature for that village. Colleges and universities can play an important role in environmental monitoring and in assisting schools with relevant information and educational resources. Non-governmental organisations will have to be encouraged in ^{spreading} ~~separating~~ the message and methods of sustainable development. Unless genuine efforts to involve the people, particularly the youth and women in the conservation of our life support systems are made, it will be difficult to achieve our goal of a happy and healthy life for all.

In every State, there is need for looking at existing ^{patterns} ~~methods~~ of land and water use in order to examine ^{where} ~~by~~ the current practices ^{are in} ~~or in~~ conformity with the goal of sustainable development. The land of every block will have to be classified into three major categories - those which ought to be maintained in their pristine ^{beauty} ~~beauty~~; those which ought to be under ^a ~~h~~ restoration regime (i.e. wastelands as well as degraded wetlands); and those which can be placed under sustainable intensification procedures of ~~agri-~~ culture, crop husbandry, animal husbandry, fisheries and forestry. Community gene banks and botanical and zoological gardens will have to be encouraged to promote public attention to the need

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for conserving biological diversity. // At the district level, a consortium for sustainable development will have to be established consisting of representatives from people's associations and non-governmental organisations, concerned government departments and professional institutions. At the State level, an effective coordination mechanism will have to be established such as the creation of a position analogous to the Agricultural Production Commissioner who will have the necessary authority to bring about the necessary cooperation among the various departments of government. Such an Environment Protection Commissioner will have to be supported at the scientific and technical level with an appropriate Environment Protection Agency. The establishment of such an Agency should not imply the proliferation and duplication of staff and programmes but should involve the optimal utilization of the existing expertise and infrastructure in the State, both at the Government and non-government levels.

At the Central level, every Ministry of government should have a commitment to the cause of sustainable development. An environmental ethic should permeate every chapter of the Eight Plan and not just in one chapter titled "Environment and Ecology".

Identifying and filling major gaps in institutional instruments

Both at the State and the Central level, we should identify the important gaps in the current legislative, administrative and organisational arrangements for a sustainable use of environmental assets. The public policy instruments essential for creating a stake in the protection of the environment among socially

and economically disadvantaged and ecologically handicapped sections of the community ^{need attention.} At the same time, ^{our} ~~the~~ capacity for environmental impact analysis should be strengthened so that development projects which, on the whole, may have negative benefits in the long run can be avoided. For developing such a capacity the science of ecological economics should be promoted in our universities and government establishments.

Ecologists, on the other hand, should be trained to show how sustainable development can be achieved, rather than merely promoting ^a "don't" philosophy. Rapid economic growth is vital for the nation to solve its problems of poverty and unemployment.

The mandate of the environment departments, both ^{at} ~~in~~ the centre and in the States should be to foster accelerated economic development on ecologically sound lines.

In many parts of the country, the carrying capacity of land for sustainable productivity has already been exceeded. The promotion of a small family norm and the containment of animal population to the level permitted by the natural resources of the area are important. The available instruments for the conservation of biological diversity ^{and} for monitoring the state of our environmental systems and ^{for} preparing periodic environmental ^{need} ~~need~~ ^{check} ~~balance~~ ^{balance}.

^{strengthening} ~~consideration~~. Besides agricultural labour, the role of industrial labour in environment protection needs to be strengthened with the help of labour unions. Above all, both the hardware and the software aspects of environmental communication through the

This will call for training a cadre of Developmental Ecologists

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mass media as well as the formal education system ~~need~~ ^{strong attention} ~~consider-~~
ation. // Forty one years ago, Jawaharlal Nehru spoke about
free India's tryst with destiny. He pleaded for harmony with
nature and for spreading a message of love towards the other
living and non-living organisms co-inhabiting the earth.
The Eighth Plan will have to be the beginning of a new era
where we can achieve the economic destiny we all desire through
~~ecological and scientific~~ pathways based on an environmental
ethic.