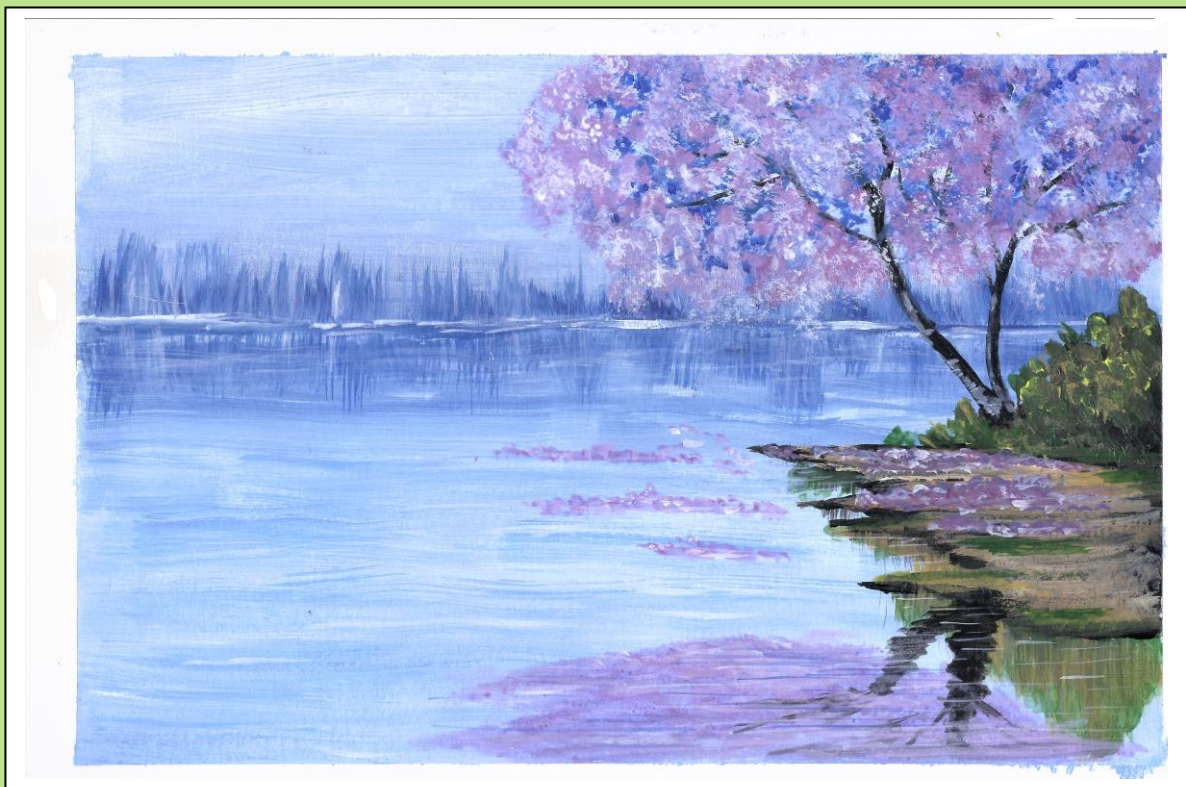


WORKING PAPER

The Natural Environment: Current Policies and Alternatives

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The cover illustration is by Uma Bordoloi.

A. The Area

The natural environment comprises of land, water, atmosphere and the life and vegetation supported by these. For the purpose of this paper, however, one would consider issues rather than areas: issues that are currently critical in India.

The issues, in their order of criticality, that I propose to look at are concerning forests, land and water, water and air pollution and preservation of genetic resources. Though this is nowhere near a comprehensive list but a consideration of these would perhaps help us better understand the total area.

B. The issues

1. Forest:

1.1 As is by now well recognised, forests are essential for the well-being of our land and water resources and for our climatic regulation. Our agriculture is critically dependent on the forests for preventing soil erosion, floods, siltation of dams, desertification and drought.

It has been determined that the minimum forest cover required in India is 33% of its land area, with 60% cover of hill areas and 20% of the plains. Against this the current forest cover is expected to be no more than 11%.¹ (for details see table I.)

1. As quoted to the Parliamentary Committee for Forests and Environment. Based on satellite imagery.

History has shown us that when the forest cover of an area goes below 10% then there is a serious threat of desertification. Many ancient civilisations have paid the price of desertification. "It is no coincidence that many ruins of great temples and palaces are today found amid sandy wastelands."

Mount Lebanon is referred to in the Epic of Gilgamesh (before 2000 BC) as a vast green mountain with tall cedars. Felling of the cedars of Lebanon had begun as early as 3000 BC, after which they formed the cornerstone of the phoenicians' international trade".²

More recently, Ethiopia is an example of a country where forest cover has shrunk to below the critical level.

1.2 While understanding the issues relating to forestry in India, perhaps three aspects can be kept in mind: conservation, Afforestation and the distribution of the forest resources.

1.3 The current situation with respect to each of these three is as follows:

- a) Conservation: Forest policy till very recently stressed on the productive aspects of forests. Very little, if anything, was done to conserve the forests. Though a system of working plans was introduced which involved the planning of timber extraction in accordance with principles of scientific forest management, these were very

² rarely, if ever strictly followed. Revenue from
 2. Alan Grainger, Desertification. An Earthscan Paper Back International Institute for Environment & Development, 1982, p.37-38.

forests was, as is, a significant proportion of the state's revenue, (see Table II) and this along with the need to clear forest land for agriculture and other uses ensured that not much forests were conserved.

The forest contractor further added to this denudation by extracting even more than what was authorised, and sharing this ill-gotten wealth with many who mattered.

In recent times the institution of forest contractors has been done away with by most of the states, who have replaced these contractors by Forest Development Corporations. Unfortunately, this has not significantly stepped illegal felling for the forest corporations have themselves become centres of vested interests and very often work through the same persons who were earlier contractors.

In 1980 the Government of India passed the Forest Conservation Act which specifies that no forest area can be converted to any non-forest use without the clearance of the government of India. Though a bold act, it only marginally, if at all, curbed deforestation.

To begin with, this act only prohibits the conversion of forest land to some other use, it does not in any way prevent the felling of trees in the existing forest. We therefore have a situation where though forest land is over 24%, forests are only 11%.

Secondly, though this act is a central one, the implementation of it is in the hands of the state government, who with impunity violate it.

As a result, the total remaining forests in India are now around 35 million hectares of a total land area of 328 million hectares. According to the satellite data, we are losing a net amount of 1.5 million hectares per year. If this is not stopped, in thirty years we will have no forests left.

b) Afforestation: this was primarily the task of the forest department. Whereas it is estimated that since independence we have lost about 45 million hectares of forests and are presently losing them at the rate of 1.5 million per year, the total area brought under forests between 1951-80 ^{is} as follows:

Area of established Plantations 1951-80

<u>Type</u>	<u>Area</u> (in thousand ha.)	<u>Percentage</u> <u>of total</u>
Industrial	2197	69%
Fuelwood	386	12%
Environmental	599	19%
	3182	100%

Estimated average survival rate

Industrial	70%
Fuelwood	60%
Environmental	50%

Source: Forest Resources of Tropical Asia, FAO, 1981

Since 1980, it is estimated that another 3 millions hectares has been brought under plantation in the last five years.

The current response of the government is the setting up of the Wasteland Development Board with the target of planting 5 million hectares of wasteland (or wasted land) with trees every year. So far, there has been no statement on how this target is to be achieved.

One line of thinking that the government is speculating with, or so one is given to understand, is to allow private industry to set up plantations in so called wasteland to meet with their raw-material requirements. This would, among other things, involve the amendment of the rural land ceiling act. It would also have, to my mind, various disastrous consequences which I have argued elsewhere in detail. Primarily the fear is that this would lead to a large scale conversion of good agricultural land into eucalyptus or other such plantation for use by the industry, thus seriously affecting our food production. Preliminary data from Gujarat, which is a state already afflicted by

'farm forestry' seems to bear this out.

Given below is the data regarding the type of land used for forestry in Gujarat:

Land Used for Tree Farms

	Proportion of farmers
Fallow land	27%
Land earlier under cash crops	37%
Land earlier under food crops	27%
Land earlier under mixed crops	9%

Source: Gujarat forest Department, as reported in the CSE Citizen's Report, 1984-85, p.54.

c) Distribution:

The most unfortunate aspect of forest management in India is the way in which the poor people are deprived of the forest produce while it is freely supplied to the industries and for elite urban consumption. A study of the British forest policy for India shows how progressively control of the forests was taken over by the government and the rights of the people curbed. Even after independence the same policy was followed.

Even where rights on forest-produce exist on paper, very rarely are they honoured in practice.

Large forest areas are clear-felled without any consideration for the tribals and villagers living in and around them. Not only is their source of firewood and other forest products like bamboo and leaves destroyed, very often denying them a means of livelihood, but their water-points dry up and their agricultural lands become fallow. Many examples of such rampant deforestation exist, especially around various paper mills. A good case study is presented by the Shahdol Group in their report Planning the Environment. Here they record how the Orient Paper Mills at Amlai, Shahdol District, Madhya Pradesh, not only destroyed all the forest in the surrounding areas but is now getting its wood from Himachal Pradesh.

It is also well documented that the prices these industries pay for the forest produce is a fraction of what is paid by the poor artisans and villagers. For example, while bamboo was being sold for Rs.15/- per tonne to paper mills in Karnataka, the poor could only purchase it at over Rs.1000/- per tonne.

The Social Forestry Programme is another example of the power of the rich industrial capitalist. Though the purpose of the programme was to raise plantations which could provide fuel and fodder to the poor villagers, this hardly happened anywhere in the country. Partly by the choice of species, and partly using other devices, most of this production was diverted to industrial and commercial use. The

substantial involvement of foreign funding agencies in this effort make the real objectives of this programme even more suspect.

As of today, no comprehensive and substantial policy exists to ensure that the benefits of the forest are equitably distributed. In fact, the forest act proposed some years earlier, and mercifully dropped at least temporarily, envisaged very harsh penalties to be imposed on tribals and other forest dwellers who encroached into the forests. Though at least three committees have presented their reports to the government on this aspect, the political will to do something decisive seems to be lacking.

2. Land and Water

Of the 328mha. land area about 143 mha are cultivated lands. Of these, it is calculated, nearly 100 million hectares are degraded. In fact, of the total land area over 50%, that is a total of 175 million hectares was declared degraded in 1980 by the Ministry of Agriculture, Government of India. The details of degradation ^{is} as follows:

Total degraded area	175mh	(100%)
Serious water & wind erosion	150mh	(85.7%)
Waterlogging	6 mh	(3.4%)
Saline soils	4.5 mh	(2.6%)
Other culturable wasteland fit for reclamation	6.6 mh	(3.8%)
Diara Land	2.4mh	(1.4%)
Alkaline Soils	2.5 mh	(1.4%)
Shifting cultivation	3.0mh	(1.7%)

The major causes of this degradation is deforestation, badly managed surface irrigation and a skewed land holdings pattern which results in a lot of the land being over-cultivated without giving it a chance of replenishing itself. The acute shortage of cooking fuel in the rural areas has also diverted from the soil traditional sources of nutrition like agricultural waste and cow-dung.

The recent policy of the government to set up paper mills using agricultural waste has further aggravated this problem.

Despite the fact that agriculture is still the main basis of the Indian economy, and that a progressively degraded land resource can only lead to disaster, no significant policy measure has emerged from the government. Mammoth irrigation schemes are still being implemented, without any workable method of preventing seepage and the resultant water-logging and salinity. There is no energy policy for a majority of the country, as the policy does not cover the vast majority of the rural population. Land reforms is not even seriously talked about, and no significant effort is being made to reverse this process of degradation.

3. Water & Air Pollution

3.1 Water Pollution: this is by far the most destructive form of pollution in the country today. These are mainly three sources of water pollution - industrial, agricultural and municipal.

Though in bulk the majority of pollutants in our waterways are municipal, the industrial and agricultural pollutants are far more toxic and deadly.

According to the National Environmental Engineering Research Institution, Nagpur, 70% of all the available water in India is polluted. Out of India's 3119 towns and cities only 8 have full sewage and sewerage treatment plants and 209 have partial treatment plants.

It is estimated that 73 million work-days are lost annually due to water-related diseases (CSE report, 1982, p.17).

Apart from these, the chemical pollutants from industry and the pesticides used in agriculture get assimilated into vegetable and animal tissue and can sometimes affect you after years of ingestion.

The Government's response to this problem was the passing of the water (Prevention and Control of Pollution) Act of 1974. It was envisaged, under this act, to set up a Central Board for the prevention and control of water pollution, and similar boards in each state. The task of this board would be to monitor water pollution and to take steps to prevent and control it. All industries already existing at the time of enactment were required to seek consent of the board within three months of the setting up of the board.

3.2 Air Pollution, though not as much of a menace as water pollution, is still a big problem primarily in the urban areas. The air-pollution levels of certain selected cities is given below for 1979:

	Suspended Particulate matter (microgramms/cu. metre)	Sulphur Dioxide (mg/cum)
Ahmedabad	243	71
Calcutta	578	85
Delhi	401	39
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Maximum levels permissible	150	60
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Source: NEERI Report.

In actuality, the situation in specific areas of each city is much worse. For example, in some of Delhi's industrial areas the level of suspended particulate matter ^{is} reach/over 900 in the winter months.

The Governments response to this has been the enactment of the Air (Prevention and Control of Pollution) Act 1981 which is also to be administered by the earlier mentioned central and state boards.

3.3 Conclusions:

Despite the 'water act' being in force for 11 years and the 'air act' for 4 years, less than 50% of the large and medium industries have, till today, fitted in pollution control devices (as per the Dept. of Environment annual report of 1984-85). This, despite the fact that the law requires them to do this within three months of the setting up of the boards.

In many cases where devices have been fitted, they are not used and are only there for showing the inspectors.

C. The Debate

Or the lack of it!

today

It is ~~un~~fortunate that even issues relating to the natural environment are not usually considered important enough to form a central part of the debates on political economy. I can do no better than quote Michael Redclift from his Development and the Environmental Crisis: Red or Green Alternatives? (in the series on Development and underdevelopment, Methuen, London and New York, 1984).

He says:

"The environmental crisis in the South is looked upon as a policy problem, or in popular imagination, it is seen as an Act of God. In neither case is it seen as a political issue, in the sense that a political response is necessary to avert the crisis, and that such a response would, inevitably, favour some interests over others in the global economy. The environment has not, in fact, been interpreted within the framework of global economic relations. It has not been part of the political dialogue about development and the analysis of underdevelopment.

There are several reasons for this omission. Any action which calls for internal agreement is likely to meet with the objection of sovereign states and their governments. Also, attitudes towards the environment, and man's attitude towards nature generally, are curiously ambivalent. An explicitly political stance on the environment was slow to develop, even in those countries, like the United States, where the

environmental movement had long roots. Much more notable, however, has been the tendency to characterize environmental conflict in the South as anything but environmental. Urban squatters were protesting about their social and economic 'marginality' rather than making environmental politics. Peasant movements were largely concerned with responding to political repression, rather than making essentially environmental demands. The tendency has existed for some time to depoliticize environmental issues at the international level while considering resource conflict at the local or national level as other than environmental.

There are, in addition, reasons why political economy has failed to engage with the debate about the environment. Natural resources were never at the centre of the stage in Marxist thinking. Also, the environment was rarely looked upon as a distributive issue. It was 'given' in the development situation of most countries, over which they had little control. Rather like the climate, natural resources were distributed according to rules that man did not invent, thus disputes between men about them were not inherently environmental. These disputes between men had their origin in the international economy and the class structure of individual countries." (p.1-2)

Whenever the debate has started, it has usually been seen as a debate of Development versus Environment, as if economic and development issues were on one side and environmental issues in opposition, so to speak. Even today

economists and social scientist who would scoff at an unscientific approach to any other area of reality, continue to ignore the environmental debate without even knowing what it is all about.

It seems quite clear to me that the legitimate environmental debate is not in contradiction with economic interests but actually representative of the long-term economic interests. In other words, ^{when one} /talks of economic development vs environment one is really talking of short-term (often short-sighted also) economic interests vs long term economic interests except that ^{day} in India to the situation has become so critical, especially as regards forests and land, that there is now no different between short-term and long-term interests; there exists no long-term for us, unless something is immediately done.

D. Policy Alternatives

1. It seems quite obvious that the large-scale destruction of forests is a result of the uncontrolled growth of forest-based industry on the one hand and the desperation of the poor rural folk who have no alternative but to rob their own forests to destruction. Obviously this situation has been supported by rampant profiteering among the industrial capitalists and the traders and contractors, corruption and complicity among the politicians and the administrators, and a general inability of the system to help the poor villager earn his living in a more sustainable manner.

Further, the short-term politics in a so-called democracy, where elected governments have to demonstrate tangible gains within a five year period, effectively excludes a consideration of the environment - which is essentially a long-term sector.

A nationalisation ^{of} ~~of~~ all forest-based industry seems to be the only possible step available. Following such a nationalisation, a realistic evaluation can be made of the optimal pricing of various forest-based products, and the quantum it has to be produced in. This would remove much of the force behind mass destruction of forests.

In order to make afforestation a possibility, wasteland must be identified and then given to landless labour who can be helped to plant trees and maintain them.

2. It is urgently required to take at least some of the most degraded land out of cultivation and help it to recover its health. This can only be done if some preliminary land-reforms is done so that people who are displaced can find other land to cultivate. The government should immediately identify the worst affected areas and take up the work of land-relocation there on a war-like footing.

3. The 'water' and 'air' acts should be amended to give locus standi to individuals and groups of individuals so that polluting industries could be acted against. Violation of the law should also involve criminal liability.

Table - 1

State-wise forest areas by satellite data
(in million hectares)

State/Union Territory	Forest area by satellite data		Area contro- lled by forest department 1980
	1972-75	1980-82	
Andhra Pradesh	4.90	4.04	6.41
Assam	2.11	1.98	3.07
Bihar	2.27	2.01	2.92
Gujarat	0.95	0.51	1.95
Haryana	0.08	0.04	0.16
Himachal Pradesh	1.51	0.91	2.21
Jammu & Kashmir	2.23	1.44	2.19
Karnataka	2.95	2.57	3.79
Kerala	0.86	0.74	1.11
Madhya Pradesh	10.86	9.02	15.39
Maharashtra	4.07	3.04	6.41
Manipur	1.51	1.38	1.52
Meghalaya	1.44	1.25	0.86
Nagaland	0.82	0.81	0.29
Orissa	4.84	3.94	6.77
Punjab	0.11	0.05	0.24
Rajasthan	1.13	0.60	3.49
Sikkim	0.18	0.29	0.26
Tamil Nadu	1.67	1.32	2.18
Tripura	0.63	0.	0.59
Uttar Pradesh	2.59	2.10	5.14
West Bengal	0.83	0.65	1.18
Andaman and Nicobar Islands	0.33	0.64	0.71
Arunachal Pradesh	5.14	5.21	5.15
Dadra and Nagar Haveli	0.02	0.01	0.02
Goa, Daman and Diu	0.12	0.11	1.11
Mizoram	1.39	1.20	0.72

Source: National Remote Sensing Agency

