Towards a Perspective on Environmental Movements in India

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The paper divides Indian society into three sections, the ecosystem people, primarily dependent on a natural resource survival base; the omnivores, with privileged access to resources and ecological refugees, who have been rendered destitute through deprivation of traditional access to natural resources. It regards the Indian environmental movement as a response by these three components to various concerns relating to environmental degradation and outlines seven strands in the movements. The paper points out that the internal contradictions in the ideology of these various strands have prevented the movement from emerging with a comprehensive, consistent alternative agenda for environmentally sound development.

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Introduction

India's environmental as well as social setting has changed dramatically, first over the British colonial period, and at an ever accelerating pace since 1947, when India attained freedom. If we were to contrast our country's landscape 50 years ago, with that of today, striking differences would be readily apparent. The earlier landscape would have much smaller areas of barren rocks and urban sprawl; fewer large water bodies, but many smaller lakes freer of weeds at the peak of monsoon; much more extensive tree cover, but a far lower extent of crop fields retaining their greenery even at the height of the summer. In today's landscape, the natural world is continually being replaced by a world of artifacts where trees, shrubs and grasses are giving way to plantations and crop fields, roads and buildings; where rivers are being increasingly impounded with waters diverted through underground tunnels to turn giant turbines or merely being disciplined to
flow along paths straight and narrow; and where old wetlands are being 
drained and new ones created in the form of water-logged fields.

For a fuller appreciation of the human consequences of this trans­
formation, however, such a bird's eye view must be supplemented by 
a worm's eye view of life on the ground as the social fabric, and the 
ways in which India's intricate mosaic of human groups is coping with 
these changes.

A citizen of India walking through the countryside would be imme­
diately struck by the chronic shortages of natural resources faced by 
every segment of Indian society. Fisherfolk are faced with the exhaus­
tion of fish stock; shifting cultivators with the declining availability of 
forest land; mat weavers are running short of reeds; and peasants short 
of dung to manure their fields. Millions among the urban poor are 
shelterless and without adequate water supply. Irrigated farm lands are 
turning saline and whole coconut orchards are dying of disease. Paper 
mills are starved of their favourite raw material, while bamboo, and 
textile mills are plagued by power cuts. City roads are clogged with 
traffic and city air is full of noxious fumes. The ever growing numbers 
of Indians, their exploding appetite for consumption and their wasteful 
patterns of resource use have together conspired to ensure that all 
segments of society are in the midst of one resource crunch or another.

In the Midst of an Ecological Crises

If the bird's eye view revealed a picture of considerable ecological 
change, the worm's eye view converts that image into one of a serious 
ecological crisis. This crisis is being translated into increasing social 
conflict, as different groups exercise competing claims on a dwindling 
resource base. India today is a veritable cauldron of social conflicts, 
many of which pertain directly to the control and use of natural 
resources. These conflicts are played out at different levels and with 
varying intensities. Within numerous scattered small villages, rich 
farmers and landless labourers fight for access to common grazing 
ground, while in city slums desperately poor households quarrel over 
the trickle of water that reaches them from a sole municipal tap. Such 
localised conflicts usually go unreported, and far better known are the 
resource conflicts that involve large numbers of people and occur over 
extensive areas. These include, for example, the massive displacement 
of villages by a chain of dams being built on the Narmada river in 
central India, or the bitter fight between the politicians of the states of 
Karnataka and Tamil Nadu over the waters of the river Kaveri.
These conflicts, localised within villages or spread across large regions, provide the backdrop to the vibrant environmental movement in India. This is a movement that has grown rapidly in the last two decades. Indeed it is the protests of environmentalists, rather than the concerns of the state or of the intelligentsia, that have generated a wide public awareness of the extent of environmental degradation in India, and (what is more important still) of its human consequences.

The numerous local groups comprising the environmental movement have been concerned, above all, with stopping economic activities that destroy the environment and impoverish local communities — be they large dams on the Narmada or magnesite mines in the inner Himalaya. By its very nature this has been a defensive movement, at times little more than a holding operation. In the circumstances, it is hardly surprising that the environmental movement in India has not given sufficient thought to the larger processes that are contributing both to ecological deterioration and to social strife. Here some environmentalists have focused too narrowly on individual actors. For example, on forest managers in the case of the Chipko movement against commercial forestry, or on the World Bank as in the case of the Narmada agitation; while others have been content with identifying impersonal, abstract forces such as 'capitalism', 'materialism' or even 'modern Western patriarchal science' as being ultimately responsible for our present predicament. Universally lacking is a proper social-scientific analysis that might locate these individual actors in a wider context, or which would give flesh and bone to broad concepts such as 'capitalism' or 'science'.

**Ecosystem People, Omnivores, Ecological Refugees**

From an ecological perspective, ours is undoubtedly the most complex society in the world. It is a society which contains within its ranks stone age hunter gatherers of the Andamans and white collar 'Babus' of Delhi, nomadic shepherds of Himachal Pradesh and pavement dwellers of Calcutta, artisanal fisherfolk of Tamil Nadu and purse seine operators of Goa, shifting cultivators of Mizoram and sugar barons of Maharashtra, textile mill owners of Coimbatore and software exporters of Bangalore, fuel wood headloaders of Kumaon and engineers drilling the Bombay High for offshore oil. These varied constituents of Indian society differ greatly amongst themselves in their access to the resources of the earth. While bureaucrats in Delhi daily watch American soap operas on their Japanese television sets, the vast majority of
women in villages of Bihar and Rajasthan can neither read, nor even listen to a cheap transistor radio. While citizens of Mumbai have drinking water brought to their taps from rivers dammed tens of kilometres away, women in villages of Saurashtra must trudge long distances to bring home a pitcher of water. While obesity clinics sprout up in Chennai and Bangalore, fully one-third of the Indian people cannot afford to buy enough food to keep their body and soul together.

The relentless transformation of the natural world into a world of artifacts, has most asymmetric implications for these different constituents of Indian society. For the many who earn barely enough to fill their bellies, there is little left over to acquire the new goods on the market: be they soaps or food processors, mopeds or television sets, apples flown in from the Himalayas or flats in high rise buildings. The bulk of the poor, or even the not-so-affluent must scratch the earth and hope for rains to grow their own food, must gather wood or dung to cook it, must build their own huts with bamboo or sticks of sorghum dabbed with mud and must try to keep out mosquitoes by engulfing them with smoke from the cooking hearth. Such people depend on the natural environments of their own locality to meet most of their material needs. Perhaps four-fifths of India's rural people, over half of the total population, belong to this category, which we may call ecosystem people following Dasmann (1988).

As the natural world recedes, so shrink the capacities of local ecosystems to support these people. Dams and mines for instance, have physically displaced millions of peasants and tribals in independent India. Others have fled as forests and with them springs have vanished. These people constitute the ecological refugees who live on the margins of islands of prosperity, as sugarcane harvesters in western Maharashtra or farm labourers in Punjab, as hawkers and domestic servants of Patna or Hyderabad. As much as one-third of the Indian population probably lives such a life today with little that they can freely pick up from the natural world, and not much money to buy the commodities that the shops are brimming with either.

The balance one-sixth of the India's population are the real beneficiaries of economic development, which might be defined for the present purpose as the growth of the artificial at the cost of the natural. These beneficiaries are bigger landowners with access to irrigation, these are modern entrepreneurs in pockets of industrialisation and the workers in the organised sector, these are the urban professionals — lawyers, doctors, investment bankers — rapidly gaining in wealth and
prestige, and these are the ever growing numbers of employees in government, semi-government and government aided organisations. They have the purchasing power to buy cars and fly in aeroplanes, to dress in polyester clothes and feast on the fish, flesh and fruit brought to them from the four corners of the land. Not only do they have the money to pay for these commodities, but they also have the clout to use the power of the state to ensure that the goodies come to them cheap, if not altogether free. As prosperous farmers they pay next to nothing for the electricity that runs their pumpsets; as city dwellers they pay little for the water brought to them from hundreds of kilometres away. The news they read is printed on paper subsidised by the low rate at which bamboo is supplied to the mills, and the state builds and maintains, at its own expense, the highways on which ply the lorries that bring them all manner of commodities from great distances. Enjoying the produce of the entire biosphere, Dasmann (1988) calls their Western counterparts 'biosphere people' in contrast to the ecosystem people who have a very limited resource catchment. Devouring everything produced all over the earth, they might equally be termed omnivores.

'Omnivores', 'Ecosystem people', and 'Ecological refugees' are three broad categories, to which we might assign all of India's huge population. These three classes might be distinguished by the size of their respective resource catchments, or by their relative ability to transform nature into artifacts. They might be distinguished too by their widely varying powers to influence state policy, or by the degree of control they exercise over their own lives.

Like all attempts to classify and interpret complex phenomena, this one too would run into the inevitable boundary problems. Is a village school teacher, with an assured salary from the state exchequer and perhaps some land, too, an ecosystem person, or is he a rural omnivore? The owner of a small garage in the city lacks the social power to qualify as an authentic omnivore; but he can hardly be called an ecological refugee either. These examples could be multiplied but recognising this difficulty, we are nevertheless convinced that a majority of the Indian population is covered by the three categories identified by us. More crucially, from a socio-ecological point of view we believe our categories to be a great improvement on the more conventional ones of class or interest group. This is not to say that the frameworks of class and interest groups cannot be fruitfully applied in the study of other societies or other historical contexts. But as we have argued in our
recently published book, this alternate, three-fold classification pro-
vides a fuller and more convincing interpretation of political, eco-
nomic and environmental change in contemporary India (Gadgil and
Guha, 1996).

The Major Strands
One may define an environmental movement as organised social
activity consciously directed towards promoting sustainable use of
natural resources, halting environmental degradation or bringing about
environmental restoration. Viewed in this light, India has a wide
diversity of environmental movements involving members of one or
more of our three categories of omnivores, ecosystem people and
ecological refugees. In this multiplicity of movements, one may dis-
cern seven major strands. Two of these are exclusively focussed on
nature conservation, one on aesthetic/recreational/scientific grounds
and the others on the basis of cultural or religious traditions. The
wildlife conservation movement, largely attracting urban omnivores
represents the first strand; the Bishnoi peasants of Rajasthan assidu-
ously protecting *khejadi* trees and blackbuck, *chinkara*, *nilgai*, and
peafowl around their villages, the second. A third strand focusses on
efficiency of resource use from a technocratic perspective. This has
prompted the establishment of land use boards and integrated water-
shed development programmes, manned and run by omnivores.

However, the dominant strands in the Indian environmental move-
ment are those that focus on the question of equity. These have largely
arisen out of conflicts between omnivores, who have gained disprop-
portionately from economic development, and ecosystem people
whose livelihoods have been seriously undermined through a combi-
nation of resource fluxes biased against them and a growing degrada-
tion of the environment. Such movements, most often, tend to involve
a small group of socially conscious omnivores working with larger
numbers of ecosystem people or ecological refugees.

We might call these movements the 'environmentalism of the poor'
to distinguish them from the environmentalism born out of affluence
that is such a visible presence in the advanced capitalist societies of
the West (Martinez-Alie, 1990). There are four broad strands within
these movements. The first emphasises the moral imperative of check-
ing overuse and doing justice to the poor, and largely includes
Gandhians. The second emphasises the need to dismantle the unjust
social order through struggle, and primarily attracts Marxists. The third
and fourth strands emphasise reconstruction, employing technologies appropriate to the context and the times. These might arise either out of the concerns of scientists, or more significantly, through the revival of community based management systems. The latter include spontaneous village level efforts to protect and sustainably use local wood lots or ponds, or to pursue environmentally friendly agricultural practices.

Environmental Struggles

In analysing environmental movements, one may distinguish amongst their material, political and ideological expressions. The material context is provided by the wide-ranging shortages of, threats to and struggles over natural resources. Against this backdrop, the political expression of Indian environmentalism has been the organisation by social action groups of the victims of environmental degradation. Even the urban well-to-do, increasingly subject to noise and air pollution, and deprived of exposure to nature, might be viewed as victims of environmental degradation, and their organisation into societies like the World Wide Fund for Nature (WWF-India) is an environmental movement of sorts. Indeed some Western scholars like Thurow (1980) have contended that environmentalism is predominantly an interest of the upper middle class of the rich countries, and that poor countries and poor individuals are simply not interested in environmentalism. It is abundantly clear however, that Indian environmental movements very much involve the poor and the disadvantaged victims of environmental degradation. In the rest of our discussion, therefore, we shall almost exclusively focus on environmental movements involving struggles of ecosystem people.

Environmental action groups working with such people have embarked upon three distinct, if interrelated, sets of initiatives. First, through a process of organisation and struggle they have tried, with varying degrees of success, to prevent ecologically destructive economic practices. Second, they have promoted the environmental message through the skillful use of the media, and more innovatively, via informal means like walking tours and eco-development camps. Finally, social action groups have taken up programmes of environmental rehabilitation (for example, afforestation and soil conservation), restoring degraded village ecosystems and, thereby, enhancing the quality of life of its inhabitants. Although these myriad initiatives may be construed, in the broad sense, as being political in
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nature, they have been almost wholly undertaken by groups falling outside the sphere of formal party politics. Across the ideological spectrum of party politics in India — from the Bharatiya Janata Party on the right to the Communist Party of India (Marxist) on the left — the established parties, whose higher level leadership has become an integral part of the omnivore establishment, have turned a blind eye to the continuing impoverishment of India's natural resource base, and the threat this poses to the lives and livelihoods of vulnerable populations. In the circumstances, it has been left primarily to social action groups not owing allegiance to any political party — what the political scientist Kothari (1984) has termed 'non party political formations' — to focus public attention on the linkages between ecological degradation and rural poverty.

Through the process of struggle, the spreading of consciousness, and constructive work, action groups in the environmental field have come to develop an incisive critique of the development process itself. Environmental activists, and intellectuals sympathetic to their work, have raised major questions about the orientation of economic planning in India, its in-built biases in favour of the commercial-industrial sector, and its neglect of ecological considerations. More hesitantly, they have tried to outline an alternate framework for development which, they argue, would be both ecologically sustainable and socially just. Although perspectives within the movement are themselves quite varied, in its totality this fostering of a public debate on development options constitutes the ideological expression of the environmental movement.

Creating Awareness

Creating Awareness

In most of the conflicts over natural resources, collective protests (against the agencies of the state or against private firms) have been closely accompanied by coverage in the print media. Sometimes, leading environmental activists — Sunderlal Bahuguna and Baba Amte come immediately to mind — themselves write signed articles in newspapers drawing attention to the struggle they are engaged in. More frequently though, sympathetic journalists write on these struggles and their wider implications. Since the mid-seventies, there has been a virtual implosion of environmental writing in English and Indian language newspapers and magazines. Amongst the most notable of such publications have been the 'Citizens' Reports on the state of Indian Environment' and the magazine Down to Earth published
by the Delhi-based Centre for Science and Environment, and the books and magazines brought out by Kerala Sastra Sahitya Parishad, Kerala's popular science movement. With radio and television controlled by the state, the print media have played an important role in reporting, interpreting and publicising nature-based conflicts in modern India.

And yet, in understanding the spread of environmental consciousness, one must not underestimate oral means of communication. For example, to increase popular awareness of deforestation and pollution, the Kerala Sastra Sahitya Parishad has performed plays and rendered folk songs in all parts of Kerala. In the neighbouring state of Karnataka, themes of environmental abuse and renewal have figured in the traditional dance-drama of the West coast, Yakshagana. An activity which combines discussion and practical action is the 'eco-development' camp, widely used by action groups to promote afforestation and other forms of environmental restoration (Bhaskaran, 1990).

But in the sphere of communication too, the most innovative technique of the environmental movement recalls its acknowledged patron saint, Mahatma Gandhi. This is the padayatra or walking tour. Used by Gandhi to spread the message of communal harmony and by his disciple Vinoba Bhave to persuade landlords to donate land to the landless, the padayatra has been enthusiastically revived by environmental activists. The first environmental padayatra was in fact undertaken by one of Bhave's own disciples. This was the Kashmir to Kohima trans-Himalayan march, covering 4000 kilometres, accomplished by Sunderlal Bahuguna and his associates in 1982-83.

The most notable padayatra of this ilk was the 'Save the Western Ghats March' of 1987-88. Following seven months of preparation involving over 150 voluntary organisations (from the states of Kerala, Tamil Nadu, Karnataka, Goa and Maharashtra), the march commenced on November 1, 1987 simultaneously from the two extremities of this 1600 km long mountain chain — Kanyakumari in Tamil Nadu and Navapur in the Dhulia district of Maharashtra. Three months later, marchers from the north and south converged at Ponda in Goa, for the meeting which marked the march's conclusion. By then they had collectively covered 4000 km of hill terrain, making contact with over six hundred villages en route. The predominantly urban marchers themselves came from a variety of backgrounds and age groups. Their aim was three fold (Hiremath, 1988; Vijapurkar, 1988):

- to study, at first hand, environmental degradation and its consequences for communities living along the Ghats;
• to try and activate local groups in playing a watchdog role to prevent further ecological deterioration; and
• to canvass public opinion in general.

One of the objectives of the Western Ghats March, in which it largely succeeded, was to draw attention to threatened mountain ecosystems other than the Himalayas, whose plight had hitherto dominated the Indian environment debate. As a haven of biological diversity (1400 endemic species of flowering plants alone) and the source of many rivers, the Ghats are as crucial to the ecological stability of peninsular India as indeed the Himalayas are to the Indo-Gangetic plain. Notably, the Western Ghats March inspired padayatras across other vulnerable mountain systems. In the winter following the Western Ghats campaign, a 'Save the Nilgiris' March was organised. Covering villages in four talukas, this march culminated in a public meeting at the hill station of Udagamadalam (popularly known as Ooty), on Christmas Eve in 1988 (TheTimes of India, 1988). Again, 'Save the Sivaliks' march was undertaken across 200 km of the Sivalik range in Jammu and Kashmir the winter following the Western Ghats enterprise, while in early 1991 a 50 day march was carried out through the Eastern Ghats of Andhra Pradesh and Orissa. The latter effort, termed the Vanya Prant Chaitanya Yatra (forest areas awareness march) focused on the interconnections between environmental degradation and tribal poverty, as exemplified by deforestation, pollution, land alienation and displacement (Saraf, 1989; Vinayak, 1990). Most recently, a group of social activists, predominantly Gandhian in orientation, organised a two month long 'Aravalli Chetna Yatra' in late 1993, traversing over 600 kilometres on foot through a mountain chain that extends over the states of Gujarat, Rajasthan, and Haryana apart from the capital city of New Delhi. The marchers drew particular attention to the damage caused by illegal mining and logging in the Aravallis (Saint, personal communication).

Our final illustration of an environmental padayatra highlights not a region but a threatened resource — water. This was the Kanyakumari march, organised by the National Fisherfolk Forum in April 1989 under the slogan 'Protect Waters, Protect Life'! As in the Western Ghats, two teams started independently — one in a fishing village in West Bengal on the east coast and the other near Mumbai on the west coast. Making their way on foot and by van, the marchers organised a variety of meetings and seminars in villages along the way. Although initiated by organisations working among fisherfolk, the march had a wider ambit. Apart from declining fish yields, the marchers studied the
pollution of coastal waters by industry and urban sewage, and the destruction of key ecosystems like mangrove swamps and estuaries.

The objectives of the march as enumerated by its organisers (National Fisherfolk Forum, 1989), were:

- to widen people's awareness of the link between water and life and to encourage popular initiatives to protect water;
- to form a network of all those concerned with these issues;
- to pressurise the government into evolving a sustainable water utilisation policy, and to democratise and strengthen the existing water management agencies;
- to assess the damage already done, identify problem areas for detailed study, and evolve practices for rejuvenating water resources; and
- to revive and propagate traditional water conservation practices and regenerative fishing technologies.

The marchers on both coasts converged in Kanyakumari, on the southernmost tip of India, on May Day 1989 (this culminating date reflecting the trade union locus of the organisers). An exhibition on water pollution and conservation, held at a local high school, was followed by a march to the sea. Here the participants, led by one hundred women, took a pledge to 'Protect Waters, Protect Life'. Finally, a crowd of nearly ten thousand, at least half of whom were women, wound their way to the public meeting that was to mark the culmination of the march. Sadly, an incident provoked by a government bus, disrupted the marchers and led to police firing in which several people were killed, and the rally was called off. Despite its aborted ending, the Kanyakumari march had fulfilled its aim of highlighting the threats to a liquid resource which, in the Indian context, must be reckoned to be as important as oil (Dietrich, 1989; Kumar, 1989).

As tactics of struggle and consciousness raising, the satyagraha and padayatra have received generous media coverage. Less visible, but equally significant, are the programmes of ecological restoration that various social action groups have undertaken. With the state's manifest inability to restore degraded ecosystems, many voluntary organisations — some exclusively involving local people, and others relying on outside catalysts — have taken it upon themselves to organise villagers in programmes of afforestation, soil and water conservation, and the adoption of environmentally sound technologies.
Environmental Rehabilitation

In focusing on environmental rehabilitation in preference to struggle or publicity, some groups are merely reviving indigenous traditions of community control, while others have been variously influenced by the Gandhian tradition of constructive work, by religious reform movements, or by the example of international relief organisations. Often, voluntary groups with a background of work in health care, education or women’s upliftment have turned in recent years to promoting sound natural resource management. Of a wide range of groups we have chosen here to highlight two initiatives involving contact with the outside world, and two others which exclusively involve local people.

We start with the Dasholi Gram Swarajya Mandal (DGSM), the group that pioneered the Chipko movement, under the leadership of Chandi Prasad Bhatt. One wing of Chipko, identified with Sunderlal Bahuguna, has preferred to connect Himalayan deforestation with national and global environmental concerns. The DGSM, however, has turned from struggle to reconstruction work at the grassroots. Over the last decade, the DGSM has concentrated chiefly on afforestation work in the villages of the upper Alakananda valley. Two notable features of these plantations have been the lead taken by women, and the high survival rate of saplings — an average of 75 per cent in contrast to the 14 per cent by forest department plantations. In addition, in heavily eroded landscapes, volunteers have taken up appropriate soil conservation measures like the plugging of gullies, construction of small check-dams, and the plantation of fast growing grass species. Finally, the DGSM has enthusiastically promoted energy saving devices like fuel-efficient cooking stoves and biogas plants (Centre for Science and Environment, 1985; Prasad, personal communication).

A recent investigation by the Space Applications Centre at Ahmedabad underscores the efficacy of this approach. Cultivated lands constitute only four per cent of the total landscape in this mountainous terrain; one per cent less than land under permanent snow cover. By 1972 when the first satellite pictures came, over nine per cent of the land, mostly close to roads had come to be covered by landslides or degraded scrub. In the seventies, the efforts of the DGSM focused on checking the pace of deforestation. Satellite imagery showed that despite these efforts another two per cent of the land came to be covered by degraded scrub and landslides between 1972 and 1982. But
plantation efforts were beginning to pick up in this decade, and an equivalent amount of old wasteland was nursed back to tree cover in this period. The tide was fully turned around in the 1980s. In this period, only half a per cent of land was newly converted to was land. At the same time, over six per cent of land was successfully brought under newly planted tree cover between 1982 and 1992 (Space Applications Centre, 1993).

Our next case study originated not in a movement but in a remarkable individual, Anna Saheb Hazare of the village of Ralegaon Siddhi in Ahmednagar district of Maharashtra. Ahmednagar is in a drought prone region. Speaking of the scarcity of water there, the Bombay Chronicle of March 2, 1913 had called it 'the most unfortunate and heavily tried district in India'. Thus when Anna Hazare returned to the village on retirement from the army in the mid-seventies, food production was barely 30 per cent of its requirements. Quickly locating the problem as insufficient retention of rain water, he organised villagers into building a series of storage ponds and embankments (nallah bandhs) along the low hills surrounding the village. Very soon, run off was reduced and aquifers recharged, and the groundwater table rose considerably. There is now sufficient water for household use and irrigation, and crop yields have increased dramatically (the village has even started exporting food). Alongside, Hazare has mobilised villagers to plant 4,00,000 saplings. With his village now acknowledged as a model of eco-restoration through self-help, Hazare is training volunteers to work in other villages. He has simultaneously launched a movement against corruption in government run forestry and drinking water programmes. Awarded the Padma Shri, a high national honour, Hazare returned the award to the Government of India in April 1994, following its failure take effective action against forest officials accused of corruption (Rai, Mukul and Kumar, 1991).

Chandi Prasad Bhatt and Anna Hazare are among India's most celebrated environmentalists. Their own exposure to the wider society, through the Sarvodaya movement in the one case and army employment in the other, undoubtedly helped crystallise the ideas and strategies of action which they then applied in their own localities. However, there are many other initiatives often totally unknown to the outside world, in which a group of local people have spontaneously organised efforts at eco-restoration and the sustainable use of natural resources. We report here two examples previously unrecorded in the literature, that we are personally acquainted with.
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The first of these is from two villages, Hosdurga and Rampura in the semi-arid taluka of Pavgada on the Karnataka-Andhra Pradesh border. In this undulating terrain, the hillocks were once wooded with many hardy species. But gradually they have been shorn of all tree cover, often through sale by local villagers to charcoal merchants. Some ten years ago a group of forty youths of Hosdurga, who had organised a small mutual fund for their own purposes, decided to reforest the hillock near their village. They sought and obtained the cooperation of the representative political body, the village Panchayat. Investing some of the money from their mutual fund, they employed a watchman and strictly protected the emerging regeneration on the hillock. The vegetation is now coming back, and the group makes a little money by permitting harvests at a moderate level. The group has subsequently assumed an active role in other village development activities as well. Witnessing this success, a group from Rampura, a hamlet of Hosdurga village has similarly taken to protecting the forest on a hillock near their habitation.

Our last example comes from the state of Manipur on the India-Myanmar border. Hill areas of this state are inhabited by shifting cultivators who led almost completely isolated lives till about 1910. Their traditional system of shifting cultivation involved leaving substantial patches of forest areas intact as they were believed to be abodes of nature spirits where cutting was taboo. These tribals embraced Christianity between 1910 and 1960, and on conversion cut down almost all of these sacred forests. The results were disastrous, with fire from plots being brought under cultivation entering the villages and reducing them to ash. In many of the now Christian villages, such as the Gangtes village of Saichang in Churchandapur district of Manipur, villagers have re-established a so-called 'safety forest' fringing the entire habitation. This safety forest is given strict protection, including a ban on harvest of canes which have a lucrative market. While no longer believed to be an abode of nature spirits, this safety forest receives community protection, including the traditional punishment to any offender of having to sacrifice a pig and give a feast to the entire village. These tribals have also re-established protected bamboo forests from which no shoots are harvested as food, while bamboos may be harvested only for use in the construction of one's own house.

As these examples show, reconstruction work may proceed hand in hand with struggle. Yet in many other instances, groups temperamen-
tally unsuited to confrontation have done estimable work in promoting environmentally benign technologies and in rehabilitating degraded lands. All in all, reconstruction work constitutes a valuable third front of the environmental movement, complementing the activities of consciousness building and popular resistance to state policies.

**Green Development**

Individual groups working in the environmental fields are typically confined to a small area. In the last decade, some attempts have been made to develop a macro-level organisation to coordinate these varied groups and activities. This process got a considerable boost with the rally against 'destructive development' held in Harsud in September 1989. In a follow up meeting held in Bhopal in December — to coincide with the fifth anniversary of the gas tragedy in that city — groups that participated in the Harsud rally initiated the formation of the Jan Vikas Andolan (JVA) (peoples' development movement), a loosely knit national-level organisation to coordinate local struggles, chiefly of ecosystem people.

Over the past four years, the JVA has had meetings in different parts of the country, involving a wide range of movements and individuals. In defining itself as a movement against the existing pattern of development, the JVA's (Jan Vikas Andolan, 1990) own objectives are fourfold:

- to coordinate collective action against environmentally destructive policies and practices;
- to provide national solidarity to these struggles;
- to mobilise wider public opinion on the need for a new development path; and
- to work towards an ecologically sustainable and socially just, alternate vision for India's future.

To this end, it has joined groups representing construction workers, fisherfolk and other non-party formations in a National Alliance of People's Movements.

Social action in the generic modes outlined above, constitutes the bedrock of the Indian environmental movement. While such activism has characteristically been localised (with most groups working within one district) the links between the micro and macro spheres have been made most explicit (recent initiatives like the JVA and the national alliance excepted) through the environmentalists' critique of the ruling ideology of Indian democracy — that of imitative industrialisation.
For environmentalists have insistently claimed that the intensification of natural resources conflict is a direct consequence of the resource-intensive, capital-intensive pattern of economic development, modelled on the Western experience, followed since Independence. The resource illiteracy of development planning, they claim, is directly responsible for the impoverishment of the resource base and of the millions of rural people who depend on it (Jan Vikas Andolan, 1990).

While there is widespread agreement within the environmental movement as regards the failures of the present development model, there is little consensus on, indeed inadequate effort at working out plausible alternatives. Here we might identify three distinct ideological perspectives within the movement. It is of course entirely possible that none of the ideologies, so identified, is present in a particular struggle, or that adherents of all three viewpoints might participate unitedly in a specific initiative. However, interaction over many years with groups spread all over India does suggest that the three strands analysed below are the dominant ideologies of Indian environmentalism.

**Crusading Gandhians**

The first strand, which we may call crusading Gandhian, relies heavily on a moral/religious idiom in its rejection of the modern way of life. Here, environmental degradation is viewed above all as a moral problem, its origins lying in the wider acceptance of the ideology of materialism and consumerism, which draws humans away from nature even as it encourages wasteful lifestyles. Crusading Gandhians argue that the essence of 'eastern' cultures is their indifference, even hostility to economic gain.

Thus, if India were to abandon its pursuit of Western models of economic development, it would only be returning to its cultural roots. These environmentalists call, therefore, for a return to precolonial (and precapitalist) village society, which they uphold as the exemplar of social and ecological harmony. Gandhi’s own invocation of Ram Rajya (the mythical, but benign rule of King Rama) is here being taken literally, rather than metaphorically. In this regard crusading Gandhians frequently cite Hindu scriptures as exemplifying a 'traditional' reverence for nature and lifeforms.

Crusading Gandhians have worked hard in carrying their message of moral regeneration across the country and indeed across the globe. They have sharply attacked the stranglehold of modernist philosophies
— particularly those upholding rationalism and economic growth — on the Indian intelligentsia. Through the written and spoken word, they propagate an alternate, non-modern philosophy whose roots lie in Indian tradition.'

**Ecological Marxists**

The second trend, in many ways the polar opposite of the first, is Marxist in inspiration. Marxists see the problem in political and economic terms, arguing that it is the unequal access to resources, rather than the question of values, which better explains the patterns and processes of environmental degradation in India. In this sharply stratified society, the rich destroy nature in the pursuit of profit, while the poor do so simply to survive (the crusading Gandhians would tend to deny altogether that the poor also contribute to environmental degradation). For ecological Marxists, therefore, the creation of an economically just society is a logical precondition of social and ecological harmony. In their practical emphasis, socialist activists concentrate on organising the poor for collective action, working towards their larger goal of the redistribution of economic and political power.

While including various Naxalite and radical Christian groupings, in the Indian context ecological Marxists are perhaps most closely identified with the People's Science Movements (PSMs), whose initial concern with taking 'science to the people' has been widened to include environmental protection. Ecological Marxists can be distinguished from Gandhians in two significant respects: their unremitting hostility to tradition (and corresponding faith in modernity and modern science) and in their relatively greater emphasis on confrontational movements.²

**Appropriate Technologists**

Crusading Gandhians and ecological Marxists can be seen as being, respectively, the 'ideological' and 'political' extremists of the Indian environmental movement. Due to of their ideological purity and consistency, their arguments are often compelling, albeit to different sets of people. In between these two extremes, and occupying the vast middle ground, lies a third tendency, which may be termed (less controversially) as appropriate technology. This strand of the environmental movement strives for a working synthesis of agriculture and industry, big and small units, and western and eastern (or modern and
traditional) technological traditions. Both in its ambivalence about religion and in its criticism of traditional social hierarchies, it is markedly influenced by western socialism. Yet in its practical emphasis on constructive work, it taps another vein in the Gandhian tradition. Thus appropriate technologists have done pioneering work in the generation and diffusion of resource conserving, labour intensive and socially liberating technologies. Their emphasis is not so much on challenging the 'system' as in demonstrating in practice a set of socio-technical alternatives to the centralising and environmentally degrading technologies presently in operation (Bhatt, 1984; Reddy, 1982).

All the above three tendencies are represented in that most celebrated of environmental initiatives, the Chipko movement (Guha, 1989a). The Gandhian trend, associated above all with the figure of Sunderlal Bahuguna, is best known outside the Himalayas. The Marxist trend within the Chipko movement has been represented by the Uttarakhand Sangarsh Vahini, a youth organisation, that has organised popular movements against commercial forestry, unregulated mining, and the illegal liquor trade. Finally, the appropriate technologists are represented by the organisation under whose auspices the movement began, the DGSM, whose fine work in ecological restoration has already been alluded to. These contrasting perspectives may be further clarified by examining each strand's attitudes towards equity and science, as well as their style and scale of activism. Most crusading Gandhians reject socialism as a western concept; this leads some among them to gloss over inequalities in traditional Indian society, and yet others even to justify them. Clearly, the Marxists have been most forthright in their denunciations of inequality across the triple axes of class, caste and gender. The appropriate technologists have been sufficiently influenced by Marxism to acknowledge the presence and pervasiveness of inequality, but have rarely shown the will to challenge social hierarchies in practice. Attitudes towards modern science and technology also vary widely. The Gandhians consider science to be a brick in the edifice of industrial society, and responsible for some of its worst excesses. Marxists yield to no one in their admiration, even worship, of modern science and technology, viewing science and 'scientific temper' as an indispensable ally in the construction of a new social order. Here, the appropriate technologists are the most judicious, calling for a pragmatic reconciliation between modern and
traditional knowledge and technique, to fulfill the needs of social equity, local self-reliance and environmental sustainability.

Coming next to the scale of activism, appropriate technologists prefer to work on a micro-scale, a group of contiguous villages at best, in demonstrating the viability of an alternate model of economic development. The Gandhians have the largest attempted reach, carrying their crusade on worldwide lecture tours. They have often tended to think globally and act globally, even as the appropriate technologists have acted locally and occasionally thought locally too. The Marxist groupings work in the intermediate range, at the level of a district perhaps, or (as in the case of the Kerala Sastra Sahitya Parishad) the level of a state. Finally, the three strands also differ in their preferred sectors of activism. Their rural romanticism has led the Gandhians to exclusively emphasise agrarian environmental problems, a preference reinforced by their well-known hostility to modern industry. While appropriate technologists do recognise that some degree of industrialisation (though not of the present resource-intensive kind) is inevitable, in practice they too have worked largely on technologies aimed at relieving the drudgery of work in the village. Here, it is the ecological Marxists, with their natural constituency among miners and workers, who have been most alert to questions of industrial pollution and workplace safety.

Wilderness Enthusiasts

Crusading Gandhians, appropriate technologists and ecological Marxists represent the three most forceful strands in the Indian environmental debate. But two other points of view also have a significant measure of support, especially among the omnivores. First, we have the Indian variant of that vibrant strand in global environmentalism, the wilderness movement. Indian naturalists have provided massive documentation of the decline of natural forests and their plant and animal species, urging the government to take remedial action (Krishnan, 1975). Although their earlier efforts were directed almost exclusively towards the protection of large mammals, more recently, wildlife preservationists have used the scientific rhetoric of biological diversity and the moral arguments in favour of 'species equality' in pursuit of a more extensive system of parks and sanctuaries and a total ban on human activity in protected areas (Guha, 1989b).
<table>
<thead>
<tr>
<th></th>
<th>Crusading Gandhians</th>
<th>Ecological Marxists</th>
<th>Appropriate Technologists</th>
<th>Scientific Conservation</th>
<th>Wilderness Enthusiasts</th>
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<tbody>
<tr>
<td>Polity</td>
<td>Highly decentralised democracy, ‘village republics’.</td>
<td>Dictatorship of the proletariat.</td>
<td>Decentralised democracy with women, low caste participation.</td>
<td>No firm view</td>
<td>No firm view</td>
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<tr>
<td>Decision making</td>
<td>Highly dispersed power of decision making</td>
<td>Centralised planning</td>
<td>Decentralised planning</td>
<td>Centralised planning</td>
<td>Strongly centralised administration</td>
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<tr>
<td>Society</td>
<td>No firm view</td>
<td>Economically equitable, but centralised political power</td>
<td>Economic, political equity</td>
<td>No firm view</td>
<td>No firm view</td>
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<tr>
<td>Economy</td>
<td>Mixed economy</td>
<td>State occupying ‘commanding heights’</td>
<td>Mixed economy</td>
<td>Mixed economy</td>
<td>No firm view</td>
</tr>
<tr>
<td>Scale of economic enterprises</td>
<td>Predominantly small, village level</td>
<td>Predominantly large</td>
<td>Focus on small, complemented by large</td>
<td>No firm view</td>
<td>No firm view</td>
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<tr>
<td>Appetite for consumption</td>
<td>Limited through moral choice</td>
<td>Limited only on grounds of both equity and ecology</td>
<td>Unlimited</td>
<td>Unlimited</td>
<td></td>
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<tr>
<td>Linkages to global economy</td>
<td>Weak</td>
<td>Weak</td>
<td>Weak</td>
<td>Weak</td>
<td>No firm view</td>
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<tr>
<td>Rate of technological change</td>
<td>Exceedingly low</td>
<td>High</td>
<td>Moderate</td>
<td>No firm view</td>
<td>No firm view</td>
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<td>Commitment to military expenditure</td>
<td>Very weak</td>
<td>Strong</td>
<td>Weak</td>
<td>No firm view</td>
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We finally come to an influential strand of thinking within the state and state agencies, focusing on efficiency. This strand might be termed 'scientific conservation' (Hays, 1957). Prominent here is the work of B.B. Vohra, a senior bureaucrat who was one of the first to draw public attention to land and water degradation. In a pioneering and impressively thorough paper Vohra (1973), documented the extent of erosion, waterlogging and other forms of land degradation. There was, he noted, no countrywide organisation or policy to deal with these problems; nor was there coordination between concerned government departments. For Vohra, as for the early scientific conservationists (Hays, 1957), the solution lay in the creation of new ministries and departments to deal with problems of environmental degradation. The Central Government, he has written, 'has no option but to obtain a commanding position for itself in the field of land and soil management through financial and administrative measures' (Vohra, 1973:A12).

Both wilderness protection and scientific conservation do not command a popular following; yet each has had a considerable influence on government policy. Both tendencies look upon the state as the ultimate guarantor of environmental protection, and their energetic lobbying has informed stringent legislation in pursuance of this ideal, for example, the Wildlife Protection Act of 1972 (modified in 1991); the Forest Conservation Act of 1980; and the Environment Protection Act of 1986. However, in so far as neither group is cognisant of the social roots of environmental use and abuse, they tend to be dismissed as 'elite' conservationists by environmentalists owing allegiance to Gandhian or Marxist traditions.

So much for a thumbnail sketch of the main ideological strands of the Indian environmental movement. Table 1 summarises their respective positions on a series of choices relevant to a new developmental paradigm. It is useful to construct such a table, to bring out first, that only Gandhians and Marxists have an overall, largely consistent philosophy of development, and second, that there is very little agreement on any of the pertinent issues. Indeed, the ideological debate has been marked by a level of acrimony and abuse perhaps only to be expected in a youthful, radical movement, but distressing nevertheless. Little wonder then that the environmental movement has been quite unable to articulate a coherent alternative to correct the many shortcomings it has been so persistently fighting against. This has allowed the proponents of business to dub environmentalists as being anti-progress, or even as agents of foreign
powers out to sabotage India’s forward march. Such criticism must properly be met on its own ground, by articulating a coherent alternative path of development that accepts the fact that an overwhelming majority of human beings are engaged in the pursuit of their own self-interest. This is, to our mind, the most urgent challenge confronting the Indian environmental movement today; it is a debate we have attempted to take forward in ecology and equity.

NOTES
1. For a statement by the leading crusading Gandhian, the Chipko activist Sunderlal Bahuguna, see Bahuguna (1983); for an argument by a feminist follower of Bahuguna, see Shiva (1988); and for more sophisticated intellectual treatments in the same vein, Nandy (1987 and 1989).
2. For representative statements of this viewpoint, see Kerala Sastra Sahitya Parishad (1984) and Raghunandan (1987).

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Their views are forged and reinforced in dialogue with a range of prominent opinionmakers and public figures, exposing the costs and faults of globalization from a Western/Northern as well as an Eastern/Southern perspective, such as Indian writer Arundhati Roy, Philippine sociologist Walden Bello, Australian journalist John Pilger, or economist and Nobel laureate Josef Stiglitz. By signing petitions calling for the cancellation of developing countries’ debt, contributing money to the activities of organizations like Attac or Greenpeace, mobilizing to stop the building of dams in India or deforestation in Brazil. Do the traits of political systems and their attitudes towards citizens’ demands influence challengers’ impact in the political arena? In Indian context, huge number of environmental movements have emerged in India especially after 1970s and 1980s. In this framework Sahu, Geetanjali (2007) stated that: In India, the environmental movement has grown rapidly over the last three to four decades. It has played a key role in three areas such as, In creating public awareness about the importance of bringing about a balance between environment and development. In opposing developmental projects that are inimical to social and environmental concerns. In organizing model projects that show the way forward towards non-bureaucratic and p