

National Policies for Natural Resources Management Marginalization of Poor Rural Women

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The interrelationship between human factors and natural resources management is complex and has remained at the center of the development debate. With the growing population and increasing pressure on resources the arguments about 'limits to growth' were raised. Warnings about the world's exhaustible resources such as forests, minerals, petroleum etc., and the need for regulating their exploitation to avert future crises, gave rise to conservationist movements. The environmental degradation, due to ruthless exploitation of natural resources for commercial gains, became a major area of concern. However, the initial concern was more about physical environment (air, water, land pollution and impact on health etc.). in the early 70's the focus shifted from 'no-growth' in high consumption countries to more sustainable and environmentally sound development. In the Stockholm, U.N. Conference on the Human Environment, "population of poverty" became an important issue. Is poverty the only pollutant responsible for environmental degradation? It is acknowledged now that economic growth goes side by side with deteriorating conditions of work and living for sizable section of the poor, landless, rural migrant, urban slum dwellers etc... This is so because the growth process itself imposes new forms of deprivations, dislocations, exclusion and alienation from the productive resource base. The resource use and management is dictated by the demand of dominant sections, urban consumers, industries and export earnings.

The basic contention of this study is that there are close links between forestry, agriculture, food production and water resource management system. However, the macro policies, relating to the management and use of these resources and compartmentalized approaches to agriculture, forestry, common resources and management of India's major river systems, have led to increasing marginalization of people from the poorer households and casualisation of labour. These processes have destroyed their life support systems and alienated them from their resource base without creating viable, alternative livelihood systems.

A country like India with a population of 800 million and intractable problems of poverty and unemployment, ought to make better use of its human and natural resources i.e. land, water and forest. No other group is more adversely affected by environmental destruction, as the poorer households who are more dependent on the biomass for their life support activities. The changes brought about in livelihood systems through state policy interventions relating to use and management of resource base, may affect poorer household adversely unless they are given viable alternatives.

Development planning provides a basis for evolving methods of maximizing human and natural resource development. The factors which determine direction of change, are -

- i) the nature of socio-economic stratification in the society and distribution of resources and power;
- ii) the ways in which macro policies determine investment patterns and exploitation of natural resources; expansion of opportunities; laws governing distribution of resources and rights of use; sectoral priorities and their implications for different socio-economic groups given a skewed distribution of assets, resources and power;
- iii) the public policy responses to specific issues and problems arising out of planned development and change; and supportive policies for intervention in favour of the deprived and marginalized groups and micro level responses devised by such households.

The size of bureaucratic structure to manage India's resource base, over the decades, has expanded and so has the problem of deforestation, wasteland, environmental degradation and pollution. These necessitate the creation of new administrative structures to stem the crisis. Resource planning for long-term development goals, usually justified in the national and people's interest, imply state intervention and inevitable redistribution of resources. New investment policies and plans for utilization and allocation of resources later the existing relationship between resources and use rights of people. In agrarian societies livelihood systems in rural areas are directly dependent on land, water and eco-systems. Transformation (from common to private or State owned resources) of these resources also results in transforming the livelihood systems leading to migration; casualization labour; turning skilled artisans into unskilled wage labourers.

Land resources - crop lands, forest lands, grazing lands, are critical to our economy. Lands are either government owned, privately owned or are part of common property

resources. Agriculture occupies a key position in the Indian economy and provides a source of livelihood for a majority of the population. The imperatives of increasing foodgrain production to feed India's growing population, resulted in increasing attention of agricultural development policies. The performance of the agricultural sector has been impressive and according to the VIIth Plan the output of foodgrains which was 132 million tones in 1978-79 rose significantly to 151.5 million tones in 1983-84. This has been made possible due to the increase of area under irrigation, increased use of HYV seeds and fertilizers and the creation of an infrastructure (technology, extension, procurement at remunerative prices, research and development etc.). However, there are some disquieting features. A large part of agricultural land continues to be rain-fed and minor irrigation through wells is vulnerable to the vagaries of the monsoon, and is reflected in persisting fluctuations in agricultural output. Another disquieting feature according to the VIIth Plan is that the bulk of increase in output particularly good grains, is concentrated in a few regions which are well endowed with infrastructural facilities (such as surface irrigation, rural electrification, road, markets etc.) and where farmers have resources to invest and take risks. It is estimated that such developed area account for less than 15% of land under foodgrains and contribute around 56% of the increase in the goodgrain production in the post-green revolution period.

With the rise in foodgrain production, the per capita consumption of food grains has not been rising appreciably which means that a more balanced growth in agriculture has not taken place and the purchasing capacity of the rural poor has remained low.

Another aspect of imbalance has been the crop-wise disparities in growth between food grains and non-food grains. A major area of concern, however, has been that the growth in agricultural output in the recent past has not been commensurate with the increased inputs (irrigation, fertilizers, seeds, subsidies etc.) the reasons are manifold.

A report prepared by the Indian Law Institute, points out that due to growing mismanagement of land as much as 175 million hectares (53 percent of India's total landmass) are subject to serious environmental degradation due to rapid deforestation, soil erosion, salutation of reservoirs, water logging, salinity etc Thus the fertility of agricultural lands is affected. Of the cultivable land too, about 61 per cent of arable land and 72 per cent of pasture, grazing and grass land, are degraded and therefore produce much below their potential. The land area prone to floods has doubled during 1971-81, from 21 million hectares to 40 million Hectares. According to the National Commission on Floods, the flood damage in 1976-78 was around Rs.3180 crores. Six million hectares are affected by water logging and another 7 million hectares have gone out of production due to salinity and alkalinity.¹

In addition India supports a large cattle population. With India's major Dairy Development Programme and emphasis on animal husbandry in anti-poverty programme, and grazing pastures increasingly being brought under cultivation, the pressure on grazing pastures and forests for fodder has increased. The grazing land has degenerated and nomads and cattle breeders have to travel long distances or give up their traditional livelihood. India's Social Forestry Programmes have failed to meet the fuel, fodder crisis. The CSE report emphasizes that the environmental problems created by the neglect of India's grazing land and compartmentalized management of land-crop lands are managed by department of agriculture and irrigation, forests by department of forests and grazing land by the department of animal husbandry, none of whom talk to each other or care to understand each other's problems - can only lead to further deterioration of land and impoverishment of its rural populace.² Urbanization, industrialization, mining and quarrying activities, and big and medium irrigation projects have also taken their toll of India's cultivable lands and forests.

The argument here is not anti-development but for a more judicious, holistic and humane development. Every time a big irrigation project is planned, forest and land laws are enacted or modified and investment policies for use of natural resources are determined. This affects people's relationship to resources and their well-beings.

Women's Access to Land, Forest and Other Resources

Macro Policies for resource utilization, allocation distribution and management affect the resource base. Given an unequal distribution and access to resources between classes and gender, such policies at terms accentuate gender inequalities and reinforce the ideology of women's subordination. This would constrain their access to productive resources, assets, skills, information and technology by depriving them of customary options (land, forestry produce etc.), affecting the quality of life (environmental degradation, migration, displacement) and emergence of new agents of exploitation.

The two basic formulations in this report are:-

- i) women have been neglected by and large as human resources in most of the development programme and strategies;
- ii) women of the poorer households have borne the brunt of macro development policies and strategies for resource mobilization, distribution and management.

For historical, cultural and socio-economic reasons there are gender differentiations in ownership and distribution of productive assets, work roles and work loads, income distribution and consumption patterns within the household. A sexual division of labour mediates in a given production system and gets reinforced or altered through development interventions. Several studies have explored how agricultural development and modernization has displaced women. Why the majority of women are working in the agricultural and informal sector? Why the large segment of women agricultural workers are subsistence producers? Why very few women own agricultural land in their name? What do we know about the roles women play in water resource management? How do land use and forest policies affect women's role in agricultural animal husbandry, sericulture, horticulture etc.? What are the differential effects of irrigation and water management systems on agriculture production, changes in land tenure, increase or decrease in the demand for women's labour time, changes in household income and its positive or negative impact on resource allocation by gender.

Access of rural women to land and other productive resources has to be understood within the framework of land ownership and resource utilization patterns and systems of inheritance. A complicated set of factors determine women's access to and control over land the other productive resources. Sometimes laws deny women equal rights, e.g., none of Indian legal system recognize wife a joint owner of husband's property. Then, there are contradictions within the legal system (customary laws, coded laws, statutory laws) and between personal laws governing women's ownership of property. Many customary laws relating to women's access to resources and usufruct rights have been abbreviated by statutory laws. .e.g., forest laws and land laws.

P. Chidambaram in his valedictory address to the three day convention on Uniform Civil code stated that -

"An analysis of the marriage and succession law of all religions showed that they stemmed from a fundamental desire to secure and keep control over property in the hands of men and assert the superiority of one gender over the other".

Denial of women's right to own land, has a long history. A recent seminar on "Women's access to land and other productive resources", emphasized that land is a vital issue and yet so little attention has been given to examine women's position in the actual working of the land system in different regions of the country.

The erosion of women's customary rights to land and other productive resources began during the colonial period with land settlements and land legislation, affecting tenancy rights and inheritance rights of women among the landed elite. Legislative interventions and judicial interpretations of customary laws affected the position of women with regard to access and ownership of land. The land laws regarding inheritance and succession frozen the comparatively fluid situation regarding women's inheritance under customary laws. The government's land policy closely linked to the policy of maintaining a community of proprietors brought two major changes:-

- i) the notion of private property and that land could be inherited, bought, sold and mortgaged;
- ii) court's interventions

After independence in the early 50's there was a great desire to remove legal disabilities against women, however, the forces of conservatism were strong (e.g. debate on the Hindu Code bill) and the result was enactment of separate legislation relating to marriage, divorce, succession etc. rather than a unified civil code. On major issues relating to women's equality the conservative forces have asserted themselves in noticeable ways. Two provisions of the Hindu Succession Act (1956) granting exemption in favour of special rules for devolution of tenancy rights in respect of agricultural holdings and retention of Mitakshara Coparcenary (defeats Hindu Women's access to land) contained features more discriminatory to women than the existing Hindu and Muslim laws.

The demand of the Haryana Assembly in 1979 to abrogate the provision applicable to agricultural properties under the Hindu Success Act reflects the resistance from landed classes to daughters inheriting the land.

The issue of access to resources is not only a legal one. The biggest blow to women's struggle for resources was the policy of land reforms which gave land little to men and subsequently extension, training, credit, technology and inputs were disproportionately channeled to men. Privatization of land through agrarian policies, eroded women's traditional usufruct rights to communal land. Evidence from Africa and Asia shows that the transition from communal to private ownership of land and other resources has adversely affected women's access to resources, its management and their role in production systems. Agrarian reforms generally aiming at a more equitable distribution of land, invariably gave land to the male head of the household; further strengthening the institutional barriers to women's access to state institutions and resources as their legitimacy as farmers is not recognized. The

institutions created to improve agricultural production, marketing, stabilization of prices, transfer of technology etc. have all ignored women.

It is clear that the state's regulatory mechanisms are significant in changing land relations. One outcome of state interventions was a highly developed notion of private property which could be bought, sold, inherited, partitioned and mortgaged. The present paper does not go into details on the issues of state and judicial intervention which affected women's rights to land holdings. However, state interventions did introduce disabilities and disparities among certain sections which did not exist earlier.

In this context another area of concern is the conflict between tribal women's rights in land and forest resources and alienation of tribal land. In the following sections it has been argued that the basic reason for tribal poverty is land alienation and privatization of common property resources.

The state mediated growth has generated changes in land-use patterns. Much has been written on women in agriculture, focusing on implications of agricultural development and modernization, labour differentiation by gender, displacement of women labour by technological development, struggle for access to resources in the situation of uneven development and agricultural policies which make no mention of women farmers. In those countries where farming systems are predominantly male (except in some tiny pockets), women's roles vary according to land ownership, cropping pattern, labour market segmentation and division of labour, local traditions and caste, class norms of behaviour. Given the overwhelming distributions of resources in favour of men, the process of development has further increased the gender gap. Most of the rural women in labour intensive sectors. There seems to be no correlation between the quantum of work done by women and their socio-economic status in terms of control over productive resources and decision-making. Men dominate in the decision-making and management of commercial crops and large scale agriculture, women continue to work in subsistence agriculture with low levels of technology and returns and many of them work as unpaid family workers in small farms and enterprises.

Despite international and national recognition of rural women's contribution to food production and their rights to own land, attempts to incorporate the principle in land development and land distribution policies, have been marginal. Resistance to women's access to resources comes from both vested interests and power of tradition which favour males.

The World Congress of Agrarian Reforms and Rural Development (1979) and Programme of Action stressed that nation states should consider improving women's equitable access to land,

water and other natural resources by providing joint or collective ownership to land, access to rural services, and equal employment opportunities. However, much ground remains to be covered.

The VIth Five Year Plan stated that the government will provide joint title to husband and wife when land and house sites were to be distributed under the anti-poverty programme. However, no data is available on the implementation of this measure in different states. Another strategy, which was tried out under IRDP, to provide assistance to at least 30% women in rural areas did not make much progress as only 11-12% women were covered.

Policy intervention cannot make any dent without dealing with issues of resource distribution as skewed distribution of resources and power reinforce current forms of social and economic organisation which are discriminatory to women.

Credit is yet another resource to which women have little access due to inherent biases of class and gender. Women do not own assets or have control over productive resources. Organizations of rural/ urban poor women which have formed their own financial institutions have proved that control over resources empowers women. Organisations of women, now recognized widely as successful, have evolved through action, struggle and control over resources. Strategies used by them have made them more visible, raised their income, offered them opportunities to control their assets and income. The basic idea behind the model of collective organization of poor women is that existing structures and institutions and relations of production do not serve their needs. State interventions have further strengthened male control over land and other productive resources. The VIIth Plan acknowledges that women will have to be given special recognition and given assets to raise their own and their household's income. An undeniable fact is that the women's question cannot be treated in isolation from that of national economic development. The disabilities of women inherent in the model of economic growth cannot be resolved by allocating certain percentages or quotas in programmes of self-employment, training and credit.

Large Scale Irrigation Projects: Ecological and Human Costs

Since independence, India has spent a massive amount of Rs.71.5 billion on major and medium irrigation projects. It has been estimated that the cost of irrigation one hectare of land today is around Rs.15,000 but the yield per hectare has never exceeded 107 tones as against the target of 5-7 tones.³ In the VIth Plan the Planning Commission admitted that the huge investment in irrigation have yielded disproportionately low returns. One of the major problems in these big

river valley projects has been siltation due to continued denotation of forest in the catchment areas and the problems of water and soil conservation. Prohibitive increase in costs of these projects due to tardy implementation and a wide gap between the potential created and that utilized is another major problem.

The VIIth Plan admits that the utilization of irrigation potential continued to be low and the gap has remained of the order of 5 million hectares for major and medium irrigation schemes. The Command Area Development Programme was initiated during the Fifth Plan with a view to optimizing agricultural production through better management of land and water resources in the command areas of irrigation projects. Evaluation studies have identified a number of deficiencies, such as, slow pace of implementation resulting in tremendous cost escalation; lack of adequate financial and organizational support for maintenance of works; lack of motivation and extension support; inadequate system of data collection and monitoring etc. The VIIth plan envisages that the ultimate irrigation potential from major, medium and small irrigation projects will be 113.5 million hectares of which 58.5 million will be from major and medium projects and 55 million hectares from minor irrigation schemes.

During the Sixth Plan period it was envisaged that 65 major irrigation projects, started before 1976, would be completed. However, during the mid-term appraisal it was revealed that only 38 would be completed and a later assessment indicated that only 25 will be completed by 1984-85. The VIIth Plan has made a provision of Rs.11,556 crores for creating an additional potential of 4.3 million hectares and by the end of the current plan the nation would have invested around 27,000 crores on creating irrigation potential. The VIIIh Plan argues that in view of the long-term objective of realising the full potential by 2010 A.D. it would be necessary to increase the pace of creation of additional irrigation potential during the plan period and in subsequent plans in respect of major and medium irrigation projects, Vohra argues, that in view of the cost escalation due to delay in completion of projects (156 major irrigation projects have undergone a cost escalation of 562%); the slow pace at which potential will be fully realised and losses incurred by such projects (which rose from 453.8 crores in 1981-82 to Rs. 578 crores during 1982-83 and may further rise to 800 crores), will in the near future make such projects totally unacceptable, Further as much irrigated land goes out of use due to water logging and salivation as is brought under cultivation through new projects. He also argues that ground water management as a source of irrigation will offer a cheaper and more efficient source of irrigation.⁴

Raising agricultural productivity is a major rationale for increasing irrigation potential. Biswas and Biswas argue that while water control is essential for agriculture, it is not enough to increase irrigated areas but it must be sustained on a long-term basis and the effectiveness and efficiency of the supply and distribution systems must be maintained. Some of the major environmental problems caused by large irrigation projects discussed by them are : increase in water borne diseases, secondary salinisation and alkalization of productive land, population displacement and social and economic dislocation effect on people.⁵

A report quoting the Auditor General of India indicates, that the Tawa Dam in Hoshanabad District of Madhya Pradesh costing Rs. 3000/- million, has reduced farm production instead of increasing it. A farmers' agitation in 1977 called "Mitti Bachao Andolan" (Save the Soil Campaign) against water logging of erstwhile fertile area, was demanding a review of this project. The Tawa Irrigation Scheme was conceived in 1956 at a cost of 139.5 million and was expected to be completed by 1967. It has been revised time and again and its completion date and the cost has pushed ahead manifold. Further, according to Vohra, the cost of reclaiming one hectare of waterlogged farm, land ranges anywhere between 8750 to-Rs. 25,000.⁶

Over the years environmental action groups have countered the government's claim of the economic benefits which are expected to accrue and what have been actually derived by the people. The picture is dismal particularly when one looks at the human costs involved through displacement and loss of livelihood.

Another project funded by the World Bank 'The Bodhghat Dam' is going to destroy the rich deciduous forests of Bastar, the heartland of a tribal population. For a modest power generation of 107 megawatts at the cost of \$400 million; destruction of 200000 hectares of prime forest and ousting thousands of tribals from their homes and livelihood is totally uncalled for. Large tracts of Bastar forest have already been destroyed by the Bailadile Iron ore project and the Dandkaranya project for re- habilitating Bengali refugees.⁷

Marginalised people hardly enter the calculus of cost-benefit analysis in such projects. The term 'rehabilitation' has become a meaningless exercise as the disruption caused to the cultural, economic and social life of these people is hardly taken note of.

The government not only lacks a clear cut and comprehensive policy for rehabilitation of oustees from the major irrigation sites but also an administrative infrastructure to handle resettlement programmes. The Narmada Valley project which has received Central Government clearance recently is one of the biggest river valley projects funded by the World Bank. Besides causing large scale environmental destruction, it is claimed that it will displace over a million

people, largely tribals, and dispossess them of their land. The project involves building 30 large dams, 135 medium, size dams and 3,000 minor irrigation schemes at an estimated cost of 90 billion - but it is estimated that the final cost may well be over 250 billion.

A study done by an environmental action group indicates that at least 200,000 hectare of agricultural land and 350,000 hectares of forest land will be submerged and will need to be compensated by large-scale planting programmes, At least 5 million hectares of agricultural land in the command areas will have to be protected against water logging and salinity and strict measures will have to be taken to protect forests in catchment area. According to an estimate quoted in the study, the construction of unit I would mean that in addition to the cost of the dam the economic value of the forest which will be submerged, alone will be around 3.3 billion, rehabilitation of people will cost 2 billion and relocation of railway tracks will cost an additional Rs. 650 million. However the project report of Narmada Sagar puts the cost at 3.45 billion only a gross underestimates.

Another study has noted that the Madhya Pradesh Government prepared a plan to construct a dam, near Punasa which threatened to submerge 255 villages and 913.48 sq.km. of land. In 1979 after the Narmada Water Disputes Tribunal gave its award the State government decided to go ahead with the execution of the project. Household surveys were completed in 1983 and villagers were informed that they will have to shift. All these long years since the conception of the project to the time when it got clearance, people have lived under conditions of uncertainty. They cannot develop new infrastructures because the government will not provide compensation for my asset constructed after 1983, banks have stopped giving finances and since 1983 people are living on tenterhooks pending the final clearance of the project from the Central Government. The report adds, since independence the area has remained backward and in a stage of stagnation, Some villagers reported that there has been talk of this dam for the last three- decades and we have been half dead due to the government's indecision?

The Narmada water Disputes Tribunal took 10 years (1969-79) to solve the dispute relating to inter-state sharing of water of the Narmada, Godavari and Krishna rivers. In the meantime costs have escalated manifold and serious questions are being raised about human and environmental costs involved. In addition seismologists have warned that the entire Narmada Valley constitutes a seismic zone and the reservoir to be built on Narmada can create problems. There is also a difference of opinion about power generation from Narmada Sagar, projected increase in agricultural output, value of forests which will be submerged and the cost of afforestation and rehabilitation of displaced person. Availability of land for compensatory plantation and rehabilitation of oustees is becoming a major constraint.

In any case the natural forests which contain valuable sal and teak trees cannot be replaced. Revenue wastelands have hardly any soil cover and much of the land has already been usurped by influential people. There are also competing claims on land by other development and anti-poverty programmes. In Khendwa district of Madhya Pradesh, the forest land under the submergence: zone contains best quality teak and is famous for kendu leaves. The area also has a large cattle population. These forests provide fuel and fodder to the population and to nearby towns. From kendu leaves alone the annual revenue is around one crore and total revenue is around 10 to 12 crores annually. Even some of the forest officials in the state are not convinced about compensatory plantations. There is no co-ordination between the State Forestry Department, the Narmada Valley Development Authority of Rural and Tribal Development Department.

The human costs of this project will be unprecedented, as according to a study by the Institute of Urban Affairs it will displace 1 million people. Since most of the tribal population have been cultivating forest land they do not have legal land titles and hence they will not be entitled to compensation, and will also be deprived of the very basis of their livelihood - the forest.

In addition to cold statistics on investment -and losses actual or potential - which affect the credibility of the project/s there is a more humane problem of rehabilitating millions of people who are termed as 'ecological refugees', the people displaced by these large irrigation projects.

Under the Land Acquisition Act 1890, the government can acquire any land for public purposes and pay cash compensation. Prior to the Narmada Tribunal award there was no provision for providing land for land as compensation.

The Narmada Tribunal's award -to give land to land owning families has been violated by both the states of Gujarat and Madhya Pradesh which have relied on cash compensation. The rehabilitation of villages as villages as suggested by the Tribunal has also not been implemented, instead the Status Report of the Madhya Pradesh Government on land acquisition and rehabilitation observes that the land will be bought by the displaced persons themselves with the compensation money. The Institute of Urban Affairs and the Centre for Social Studies, Surat, both had in their reports suggested against following the policy of expecting oustees to buy land in the open market. In addition to their chances of buying land with compensation money being very remote (as compensation is grossly underestimated and the land prices adjoining areas are high) there is also considerable ignorance among oustees about their rights

and claims. The situation of the landless-families is going to be worse, Land records have not been properly maintained and many cultivators do not have proper legal deeds for ownership and usufruct rights are not recognized for payment of compensation. Loss of common property resources are not recognized. Cash compensation given for land taken over does not ensure a livelihood and an income. The Maharashtra Resettlement Act which did provide for distribution of alternative land, but such attempts in the past were thwarted by big land owners. After passing of the 1980 Forest Conservation Act the conventional way of generating new land by clearing of forests has also stopped.¹⁰

A report on the resettlement experience of oustees from one such project (Srisailem Dam on Krishna river about 200 kms. from Hyderabad), reveals that about 106,925 acres of land and 100 villages were affected by the Dam's reservoir in Karnool and Mahboobnagar district, displacing over one lakh people. The study covered 344 households and found that only land privately owned was compensated for and those who farmed waste lands outside the villages received nothing. Under the Land Acquisition Act 1960 common land is not compensated. Land owners are required to submit their claims but if any one fails to respond to government notification he is not entitled to claim compensation. The whole procedure requires a knowledge of the Act and the study found that most of the village people affected by this project were not aware of the Act. The compensation prices did not recommend the real value of the land as it was grossly undervalued. Besides the mode of disbursement of compensation and widespread corruption, the eviction of villagers and the facilities at the resettlement site showed total lack of concern for human misery.¹¹

Another study of the resettlement of the oustees of the Sardar Sarovar project in Gujarat, covering only landholders who were promised land for land, found that they have been cheated by being sold lands on which the earlier owners had already borrowed substantial amounts still worse they were made to purchase lands which the same project was going to acquire for construction of canals. Almost all the inhabitants of Panchmuli village who used to cultivate government wastelands and forest lands before, they were evicted have not been paid any compensation. Many landless households earned their livelihood collecting forest produce but the resettlement officers have no idea of how they are going to earn their livelihood.¹²

A CWDS study on minor irrigation projects in Madhya Pradesh revealed that the Bindusara irrigation project which was completed in 1965-66, submerged an area of 242 hectares and 117 families of the village their agricultural land. The project was irrigating 40 per cent of the land in the village chosen for the study. Since 1978-79 the water from this project

has been diverted to provide water for households and industries in the Beed city and for irrigating the Shantiniketan forest the project which is now coming up, depriving village people of the water for their crop land.¹³

Irrigation is central to agricultural development. The shift in cultivation from rain-fed crops producing coarse grains to water intensive cash crops like sugar cane, has meant increasing use of groundwater. Indiscriminate mining of ground water has led to a decline of the water table as the withdrawals exceed the recharge. Vohra argues that ground water which has already surpassed major and medium projects as a source of irrigation in terms of acreage served, offer as incomparably cheaper and a far more efficient and manageable source. It demands no investments by the Government for its storage or transport requires no big and inevitably corrupt bureaucracies for its management and creates no problem of water logging nor does it face heavy losses - amounting to 50% of the water released at head works.¹⁴ The phenomenal growth of tube well irrigation in the alluvial plains of the North-West and the South (where the green-revolution took roots) and the over exploitation of ground water has led to a serious drinking water problem. There has thus been an increase in the number of problem, villages with no source of drinking water. Proper management and use of ground water and land, along with afforestation in watershed to store water, are a must to prevent the run off of rain water and prevent premature siltation of irrigation projects. Recurrent drought and floods, which bring untold miseries to people, can be tackled by a more holistic and efficient management of land, water and forests along with rural development programmes. Vohra observes that the two tasks of water management - the prevention of premature siltation of reservoirs and maximizing of ground water recharge - which are beyond the capacity of irrigation department to handle, actually relate to afforestation and better land management. The solution lies in the restoration of permanent vegetal cover - whether of trees or grass - or non-agricultural land the treatment of all vulnerable lands for soil and water conservation.¹⁵

Such a strategy constitutes our best insurance against recurring droughts and floods. Now the Union Ministry of Irrigation has been renamed as the Minister of Water Resource and a National Water Resource Council has been set up to prepare a National Water Policy. It is expected that amore integrated approach will be developed to water resource management. However, land management remains divided between the Ministry of Agriculture, Rural Development, Department of Environment and Forests and the National Wasteland Development Board, which was created in 1985 to regenerated wastelands. Ironically the big irrigation projects which have been amongst the major factors in the lose of forests areas have claimed a major share of investment of about Rs.15,000 crores during the VIth Plant period. For

forestry and soil conservation programmes only 27 and 23 crores respectively were made available during the same period. The lop-sided priorities need to be corrected to yield better results.

The threat to declining groundwater and subsequently agricultural production, submergence of forests land, siltation of reservoirs and waterlogging of land, are not the only by products of lop-sided development policies. Pollution of surface and groundwater by numerous industrial units such as textile printing and dyeing units in Rajasthan, tanneries in UP and Tamil Nadu, coir processing units in Kerala, polyfibre factories in Karnataka and paper industries in Madhya Pradesh are serious problems. This has affected the quality of drinking water, inland fisheries through reduced flow in the rivers due to construction of big dams and the whole economy of small fisher folks.

Forest Management, Forest Dwellers and Programmes of Afforestation

Rebuilding India's forest resources has become a major preoccupation today and the strategies for regeneration of degraded forests and wastelands have run into several problems. Forests are multifunctional natural resources, satisfying diverse human needs. The official forest management practices viewed them as a source for raw material ignoring that they satisfied the minimum basic needs of the rural population. The community management of forests ensured its conservation. The destruction of forests as a common resource through fencing of forests and consequent changes in the attitudes of policy makers and people to 'forests as a resource', due to changed market conditions, clearly indicates how market demands have dominated over basic needs in our resources utilization strategies.

Forestry management practices were always concerned with revenue and raw material needs of the industries rather than the basic needs of the forest dwellers. The destruction of forest resources for meeting the so called developmental needs such as communication, large dams for irrigation and power generation, commercialization of forest produce for export earnings and for industrialization, have all led to an unprecedented crisis. India's largest programme of afforestation, launched during the VIth Plan period with support from international agencies, to meet the fuel and fodder needs of the village community, has run into problems. These related to people's involvement, management, protection and distribution of resources generated on common land. The competing demand for land under various developmental and anti-poverty programmes put physical constraints for large scale

programmes of afforestation on common property resources. At the same time, the vested interests are ready to usurp whatever common property resources are left for the poor.

Of the total land area of 329 million hectares in the country, about 74.8 million hectares are classified as forests which is about 23%. Alternative estimate claim that by 1982 the forest cover of India had gone down to 14 per cent. The National Remote Sensing Agency data indicates that maximum deforestation has occurred in the most forest rich state in Madhya Pradesh which alone has yet lost nearly 2 million hectares of forests during 1975-82.

According to latest officially corrected data, India's forest cover in relation to total landmass in 19.52 per cent rather than 14.10, estimated earlier. The minimum stipulation according to the National Commission for Agriculture is 33 per cent of the country's total landmass in order to maintain ecological and environmental balance. Of the 19.52 per cent forests cover 10 per cent is represented by closed forest, 8 per cent open forest, 0.12 per cent from mangrove forest, and 1.10 per cent are coffee plantations. The present official estimates also show that about 53 per cent of India's total landmass (329 million hectares) have been turned into wasteland and the state of Rajasthan, Madhya Pradesh and Maharashtra each have degraded land above 10 million hectares. Uttar Pradesh, Gujarat, Karnataka and Andhra Pradesh each have degraded land above 5 million hectares. In the post-independence period between 1950-80, 15 million hectares land under tree crops and groves and 5 million hectares of cultivable wasteland which were the main source fuel wood and small timber were brought under cultivation. The country has been losing 1.5 million hectares of forest cover annual due to soil and wind erosion, water logging, salinity and shifting cultivation etc. As against this the total area planted during 1950-80 was only 3.7 million hectares and there are not realistic estimates as to how much of it has survived. The Parliamentary Committee in its 13th report to the Lok Sabha expressed concern at the constant increase in demand for forest land for non-forest purposes and observed that about 33,000 hectares of forest land has already been diverted for non-forest purposes.

Forest area lost due to various developmental activities in different states is as follows:

State Area list (1000 hectares)	
Andhra Pradesh	202.2
Assam	72.6
Bihar	67.6
Gujarat	108.4

Jammu & Kashmir	90.8
Karnataka	308.4
Kerala	189.0
Madhya Pradesh	180.8
Maharashtra	215.5
Orissa	109.3
Rajasthan	85.8
Tamil Nadu	65.6
Uttar Pradesh	221.8
West Bengal	324.8

Source: Central Forestry Commission, Ministry of Agriculture, 1980.

The Minister for environment and forests, in a meeting of the Consultative Committee of the members of Parliament attached to the ministry, declared that forest land would not be leased out to the industrialists for plantation and it would be afforested only by the forest department.

One of the central issues in the debate on forestry policy has been the commercial aspect of forestry operations in India and its implications for forest conservation and the plight of forest dependent communities in India. The dominant viewpoint within the government and forest bureaucracy, continues to blame the population pressure and the subsistence needs of the poor (clearing of forest for cultivation, collection of fuel, fodder and minor forest produce) as the major cause of depletion of the forests. In contrast, environmentalists blame the short-sighted policies of the Government and over exploitation of forests for industrial and commercial purposes without an effective programme for regeneration of forests developmental activities (irrigation, communication, mining) and neglect of village commons and grazing lands, forcing people to encroach on forests, as the major factors contributing to the denudation of forests.

In the post-independence period the paper industry increased its production from 92,800 tones to over one million tones during 1948-78. Similarly the production of pulp wood has shown a fourfold increase. The selected forest based industries whose production has gone up substantially are paper board, plywood and rayon grade pulp. The gross revenue of the forest has gone up from 24 crores in 1951 to about Rs.473 crores in 1981. The annual requirement of industrial wood is 23.31 million cubic meters as against the supply of 13.50 million centimeters. The widening gap between the growing demand and supply results in illegal removal of wood from the forest.

A recent report of the Indian Law Institute emphasize that the 1927 Forest Act which is still in force today, was a mere instrument of controlling and exploiting common land property. Through Forest Acts the British could acquire all forest land, village forests land, other common property resources which constituted 70 per cent of India' s land through simple notifications and without paying any compensation. Consequently the administration built up through Forest Acts has been designed solely to administer acquisition of forests and other common lands and exploit them, not to carry out afforestation. The report says that the main policy embodied in the Indian Forest Act 1927, has been of deforestation.¹⁶

It has been argued that the basic reason for rural and tribal poverty is the privatization of common property resources in an inequitable manner. The process which began during the colonial period with permanent settlements on Common Property Resources, declaring many areas as reserved forests, protected forests and revenue land, continued in the post-independence period. The common property resources were usurped by private interest and the state through various Land laws, Forest Acts, laws concerning Minor Forest Produce, laws relating to water resources etc.. The consequences were magnetization of a non-cash economy in rural areas; commercialization of primary resources, earlier obtained free, (fuel, fodder, timber, minor forest produce). Unless we, tackle the problem of use and management of common property resources and the distribution of benefits following out of it, ecological problems cannot be solved. The report of the Committee on Tribals and Forests, laments the fact that the tribal economy has figured very little in the parameters of the nation's forest policy.¹⁷

Tribal populations were always closely linked with forests. When the demands of forest resources by industries and railways located outside the tribal areas increased, forests became an important source of revenue. Tribal communities residing near or inside forests were either evicted or denied access by designating large forest areas as reserved. The conflict between the traditional tribal ownership and the states claim to forest wealth, led to numerous revolts. As B.D. Sharma observed "As the ownership of the state gets consolidated and formalized and the decision making recedes further away from the field, the special relationship of the tribals with the forest is not appreciated. Their rights are viewed as a 'burden' on the forest and an impediment in the scientific and economic exploitation of forests."¹⁸

Haimendorf has described the process of Gonds' gradual displacement from land in Adilabad district of Andhra Pradesh. They had free access to land till the beginning of the 20th century when changes in the administrative system and the introduction of the forest conservancy laws forced them to abandon their traditional agricultural methods. They used to

shift their fields every two or three years, abandoning each agricultural plot before it showed signs of exhaustion. The practice of shifting the fields in rotation became a problem once agricultural populations from neighbouring areas moved into this area due to encouragement by the government to provide pattas to settlers who claimed the abandoned land. Some Gonds were also given patta documents, however, most of the tribals did not have the concept of permanent right of proprietorship and hence they were slow to realize the necessity to obtain legal titles to land. They always considered land and forests as common property. When the pressure on land came they were not equipped to compete with outsiders or to deal with revenue and forest officials. Within a few decades most of the Gonds became a floating population of landless agricultural labourers and sub-tenants devoid of any occupancy rights of the land they tilled.¹⁹

The Committee on Forests and Tribal in India (1982), emphasizing the significance of developing an environment management and integrated land use system, states that issues of land use patterns, assume urgency in the context of industrial and defence needs of the country. People in Chota Nagpur area have an interesting saying that 'Sal is for the people, Teak is for Patna and the Pine and Eucalyptus is for Delhi. B.D. Sharma while narrating the tribal's perception of the use of natural resources, pointed out that the basic question which needs to be answered before any viable policy can be formulated, is not only the 'relationship between the forest and people' but also the 'relationship between the people and the state'. He argues that "While we have accepted the concept of individual ownership of land, what is the alternative before the tribals?... Unless we review our policies about forests and create an interest in favour of people in the natural resources of the area in which they live the battle of wits will continue at the cost of forests and ecology."²⁰

A study undertaken by the Centre for Women's Development Studies in a tribal area in Bankura District of West Bengal, traces the history of land alienation and dispossession of tribals of their resource base. This occurred with penetration of colonial administration, organized arrival of non-tribals and laying of railway lines and opening of weekly markets. The study indicates that like most other tribal areas in the country, Common Property Resources (CPR) prevailed in different forms and enjoyed different degrees of recognition in statutes and in actual practice..... In the pre-colonial period people's perception of CPRs extended over wide areas but they were forced to limit their perception with the introduction of various land settlements, land laws and land use patterns. In the exploitation of the CPRs the women of the region had always played an important and decisive role. A whole range of forests' produce were used for sale, for example fruits, flowers, shoots, tubers, mushroom,

animals, fish etc. and land, soil, water, fuel, fodder, raw materials for craft and production. With the disappearance of the forests and increasing restriction on the use of CPR's, the women lost their cushion against drought and scarcities which the CPRs provided.²¹

In a country where roughly half the population lives below the poverty line & depends for its subsistence on common resources, exploitation of land and forest resources increases poverty degradation of common resources.

It is common knowledge that the decline in common property resources (village woodlots, grazing pastures etc.) have led to deterioration in living condition of assetless households due to privatization of land, extension of government control over forests and water resources, penetration of market forces. These have hanged the non-monetized economy of the villages which provided for basic needs of the non-land owning households. The Centre for Science and Environment (CSE) Report points out that with the degradation of common resources, villagers have four options to travel to resource rich areas, or reduce herdsizе, change the composition of animal holdings to gain more from common lands or reduce dependence on common resources. The worst affected are millions of tribals cattle, breeders who have to migrate during scarcity or drought or given up their traditional livelihood.²²

The report of the National Commission on Agriculture (1976) and the National Committee on Development of Backward (1981) recommended curtailment of rights of tribal communities over forest land and produce.

Is Social Forestry Anti - Poor ?

The concept of Social Forestry which is now so much in current usage, was first elaborated by the National Commission on Agriculture. The NCA stated that by taking up programmes of raising trees, grasses and fodder on farmers' land, village common, wasteland and degraded forest close to habitations, it would be possible to meet the communities' requirement for fuel, fodder and small timber. Social Forestry was visualized both for satisfying basic needs of rural households and for reducing pressures on forests by generating resources for community needs outside the forest land. During the VIth Plan period, the programme got financial support from International Agencies and inputs from other rural programmes i.e. NREP, RLEGP, Tribal Subplans, horticulture, DPAP, DDP etc.

The social forestry programme has been launched in several states with funding from International Aids Agencies, to promote afforestation on non-forest lands, i.e., private farms, village commons, government revenue lands. The way the programme was conceptualized it

had a definite slant for meeting the critical needs of the poor and the landless households, e.g., fuel, fodder and small timber. However, very soon it developed a slant in favour of the larger farmers, urban markets and industries while the fuel, fodder crisis continued to grow. The CSE Report unequivocally states that "the very same process of commercializing the forest resource base that has led to widespread deforestation in the country, it today the motive force behind the government's afforestation programme being carried out with full support of foreign aid agencies. India's afforestation is, thus, as anti-people as its deforestation. Rural women for instance, whose lives revolve around the collection of fuel and fodder, have almost nowhere been involved in these programmes."²³

Critics of social forestry programmes, strongly contend that it has been diverted from its initial objectives, of meeting the basic needs of the rural households particularly the assetless poor. The biggest impediment to all community forestry are the local social and economic institutions. It is acknowledged that of various types of land resources - private, government owned and community owned - it is the last category which is the most degraded and which plays a more significant role in the life of the rural poor households. Government policies in the last few decades have hastened degradation and privatization of the common property resources through land allotment policy. Illegal encroachment by large farmers and penetration of market forces have further worsened the state of common lands. The 'tragedy of commons' was brought about by acquisition of land under various Land Acts and a whole set of regulations enacted under various Forest Laws.

In India's biggest afforestation programme, several controversies have cropped up. Data from some evaluation studies indicate that large farmers are the main beneficiaries of the seedling distribution programme, and the achievement under community forestry have been modest. What is most disturbing are the reports from several states that large tracts of agricultural lands are being diverted from food crops to tree-farming for commercial gains. This means that critical biomass needs of the poor have not been met. Under farm forestry it is alleged that some of the earlier which used to provide employment to the rural poor have been replaced and eucalyptus farming has increased the income gaps between rich and poor farmers. It is argued that this may also affect the country's self-sufficiency in food grains. The other camp argues that the charges leveled against farm forestry and eucalyptus farming are unsubstantiated.

The raging controversy on monoculture being promoted under social forestry programmes and food crop and labour displacing aspect of eucalyptus has been noted by several studies. Shiva and Bandopadhyay point that the "the labour displacing potential was the

first motivating force for large landowners to transfer land from food crops to Eucalyptus farming. In Karnataka alone, 36,433 hectare was under eucalyptus plantation in 1979 in one district alone and it is assessed that the labour displacing potential of eucalyptus is around 250 mandays per hectare per year".²⁴

Another controversy currently raging is about leasing of public land to industries for their raw material needs as they have the resources to regenerate wastelands. Despite the proclaimed objectives of the Social Forestry programmes, it has become yet another way of generating raw material for industries from farm land and waste lands. The monoculture being promoted under the Social Forestry programme and the large scale eucalyptus plantations on farm lands have come in for increasing criticism from scholars and environmentalists. So also the arguments that the latter provides more biomass than other species. The most severe criticism against eucalyptus has been its affect on ground water resources particularly. In arid and semi-arid regions and on soil nutrients. Besides ecological costs, it has deprived poor, landless people of employment, drinking water, manure and fodder.

Throughout the country environmental action groups have focused on the linkages between state policies, ecology, environment and the plight of millions of tribals and forest dweller dependent on forests. Commercial exploitation of timber from forests, increasing commercial potential of Minor Forest Produce (MFP) and monopoly marketing of some of these produce by the government, river valley projects,, mining aerations, construction of roads, public offices etc. have all displaced self-reliant communities and turned women into casual labourers, construction workers, domestic and even prostitutes. Crafts workers and artisans have been proletarianised due a crisis of raw material. Deforestation has not only meant depletion of natural resources but also disruption in the life and living of those integrated with the forest for minor forest produce, employment, cultivation, fuel and fodder, fruits, food, herbs and raw material for crafts.

Singh argues that the real issue with forest dwellers is not compensation but recognition of rights. Once their rights are recognized their entitlement to compensation is obvious. However, in view of the existing economic stratification and highly inequitable distribution of resources and wealth between those domiciled on private land and those on common lands, he advocates amending the compensation laws to apply differentially to the better off and the worse offs.²⁵

People's organisations have come up with their own solutions at meeting the basic needs of the people. They have organised to protest and to protect and regenerate their environment. While the Government claims spectacular success in achieving targets under

social forestry programmes, doubts and criticisms seem to be mounting about the nature of the programme and the actual-benefits of India's multicore social forestry project.

In the meantime a number of factors have been identified which hinder developing viable community forestry programme, the only hope of the poor. For example, the hierarchical nature of village society, or incapacity of village panchayats (which have been given responsibility in many states to implement community forestry programme) to manage community woodlots and organise distribution of produce. Lack of collaborative effort characterizes most such experiments. Based on our experience from 2 case studies in Madhya Pradesh and Rajasthan it appears that the woodlots developed by the Forest Department at their cost and with their technical supervision are viewed like any other government programme and few panchayats and people have shown interest and enthusiasm. Jha argues that "the serious imbalance between the achievements on private and public lands reflects to some extent the different levels of motivation of farmers who seek profit and the Panchayats and Forest Department which gain little from such projects. It also reflects that so called common lands are not really common as the villages notable have already acquired users rights by tacit consent."²⁶ Saxena argues that during the last 15 years to land based programmes have been tried on a large scale to help the rural poor, i.e., land reforms and cattle distribution programmes and both failed as anti-poverty programme.²⁷ The CSE Report claims that "few in government have the imagination to realize that afforestation of India's degraded public lands could form the core of India's largest land reform, anti-poverty and employment generation programme."²⁸

The lack of a rational land-use policy which takes into account in a more integrated manner, the potential for different development activities and the existing social structures and resource use patterns, is a major constrain for any land-based programme. The dimensions of the afforestation programme in India are complex and it is rightly being said, that it does not only mean planting of trees on crop land, village commons, revenue wasteland or degraded forest land, but involves a whole process of change in current land use systems and in patterns of interaction between the landed and the landless; the village institutions; the bureaucracy and the assetless poor. Clearly it involves a major effort in terms of social engineering through the participation of village communities in planning, protecting, managing and sharing of resources in an equitable manner.

Another important issue which needs emphasis is that land is the primary resource base of the rural economy. While agricultural land has received lots of attention under our planned development, fuel, fodder and pasture development and common property resources have not

received the same attention from policy makers. The new assets base which is proposed to be generated through trees farming under the social forestry programme to meet the basic needs of the poorer households is under threat of being usurped by large farmers, industries and other commercial interests.

The Indian Law Institute report stresses that it is important to understand that land reform does not depend on ownership of possession rights, but how the land is used and who benefits from its use. In giving revenue, forest or other government land on patta or lease to farmers, industries or other private agencies, the state is privatizing and reforming the use of land. Hence, even if the legal ownership of such lands vests with the state, its temporary use by some one also in effect has the same consequences as land reform. Such massive transfer of land use demands a rational land use policy. The government has set up a separate Board to come up with an appropriate land use policy for India but no such policy has been worked out yet. In the meantime a new land use policy is being defined through afforestation programmes.²⁹

A three states study on "social forestry and law" by the Indian Law Institute found that the major problems faced by marginal and landless, farmers co-operatives, Scheduled Castes and Scheduled Tribes and Non-governmental Organisations are: non-availability of land, legal information, financial support etc. Moreover people are opposed to using community land for nongrazing purposes since this is the only land available to them for animal husbandry. The bulk of the wasteland available is for controlled with the Forest Department which is not governed by the Central Forest Conservation Act 1981. The Report also noted that various laws pertain to land use come into conflict with social forestry policies. The Bihar study found that most of the government owned wasteland is in fact in the control of rich landlords and politicians. There is no co-ordination between different departments. The Forest Department has issued notification to form village forest committees and give pattas to carry out forestry programmes. The Revenue Department also issued a notification under the Revenue Department's programme to give pattas to form different types of village committees. Both these notification totally ignored the Chotanagarpur Tenancy Act operative in South Bihar which has recorded rights of people on land as well as of the villagers, to jointly use the forest. In Tamil Nadu, the study found rules concerning 'royalty trees' which cannot be harvested without the permission of the Forest Department and most of the commercial trees are governed by these rules. They put restrictions on transporting timber, sale and transport of Minor Forestry Produce, and trees grown on private land. All these laws and restrictions kill people's initiative in using their own land for planting trees.³⁰

A study done by the CWDS in the two states of Madhya Pradesh and Rajasthan found that people's participation in afforestation programmes is confined to providing employment. The USAID supported 40.00 crores Social Forestry project in Madhya Pradesh was to help the Panchayats to develop long-term capability to manage community plantations on a sustained yield basis and develop mechanisms to distributed the produce equitably among their constituents particularly the poor. A Directorate, including a Training Institute, field units in 16 districts, a monitoring and evaluation unit research planning wines, extension wing, have been set up Inter-departmental Policy Committee is to co-ordinate the efforts and enlist the support of other departments. As per official figures, the project is estimated to have generated substantial employment to landless and small and marginal farmers.

A major problem faced by the Social Forestry Directorate is availability of good quality revenue land for community plantations which are not encroached upon or not claimed by other government programmes (20 point programmes, NREP, sericulture, horticulture, tribal sub-plan etc.) Panchayats, identified as key agencies for implementation of the programme, were quite reluctant to take over long-term management of the plantations. They were also suspicious of Social Forestry Department as they could not visualize these as service departments. The status report of the Social Forestry Project (1985) clearly says that village people are not normally consulted any and panchayats are only interested in passing a resolution for planning land under its jurisdiction. Sometimes areas proposed to be undertaken in subsequent years are not allowed to planning and the result is that each year some new panchayats are taken up to meet the target.³¹ The Indian Law Institute report deplores the whole scheme of afforestation through Rural Employment Programmes, which amount to exploiting the rural labour cheaply by using tax payers' money to finally benefit the industries. The report recommends that the forestry should be done on an equitable lease/ contact or patta basis and the wages must be commensurate with the total benefits derived when harvesting and marketing is done.³²

The fact that people's involvement is a critical factor in the regeneration of India's wastelands, needs no further argument. It is also increasingly being realized that it is not essentially a problem of management of resources and technology but the human dimension is important. In the first place, the belief that fuelwood, fruits and fodder from social forestry on common lands, would be available free of charge to the rural poor is naïve, as anyone familiar with the power structure in a village known that its gains will be monopolized by the village notables.

If the success of government sponsored community forestry programmes has not been spectacular, it is because of the lack of capacity of the poor to influence village institutes in an effective manner. Between the two green revolutions, the poor will be poorer and women will be deprived of whatever community resources, were left for them to meet the basic family requirements.

Decline in Common Property Resources, Deforestation, the Subsistence
Work-Load and Drudgery of Rural Assetless Poor Women

Discussions on poverty, inequalities, landlessness and unemployment in aggregative terms, often hide not only caste, class, ethnic and regional variations but also gender differentiations. Rural women's workload and work patterns reflect two major sets of determinants -

- (i) Survival strategy of the family/ household within the overall economic and developmental process
- (ii) Division of labour within the household and in the labour market and the options available to them.

It is known that poorer households depend for their subsistence needs on common resources of uncultivated area and the depletion of degradation of these resources further impoverish the quality of their life. A vicious circle operates where environmental degradation leads to poverty and poverty leads to environmental degradation. Poverty among tribal women has increased due to forced idleness with the denotation of forests and falling land productivity. Their biomass - based subsistence economy has been destroyed.

Women and Water Resources

In most developing countries, women of the poorer households spend hours in collecting fuel, fodder and water, The situation is grim in drought prone villages and semi-arid regions, where the provision of these necessities is now becoming a full day's job. Estimates indicate that about 18-20 percent of human labour is spent on fuelwood collection, 1981-91 was declared as the International Drinking Water Supply and Sanitation Decade. Available data indicates that only 56% of rural and 73% of urban population discovered with potable water supply. 2/5th of

all villages are officially stated to be having severe water problems, 158 thousand villages did not have a source of drinking water and in 26 thousand villages, the water supply was contaminated with toxic elements.

The distribution of costs and benefits of irrigation to the household, depend on the socioeconomic status of the household, their access to land and production relations. However, the major body of the literature does not explicitly say that costs and benefits are also conditioned by gender.

Policies and programmes for a management of water resources are biased towards centralized energy/ power networks and tend to ignore the user's perspective especially women and the poor. During the International Drinking Water Supply and Sanitation Decade strategies were drawn to involve women in planning, maintaining and operating drinking water schemes.

Women as carriers of water and collectors of fuelwood and affected by environmental degradation and have to spend time and energy in traveling long distances to collect these basic necessities. Despite their responsibility for collection and consumption of water, women hardly have any control over the sources of water or in the planning of new water supply schemes whether for irrigation or home consumption. A critical benefit for improving supplies of water is not only a reduction in time and physical energy spent by women in fetching water, but also increased health benefits by the checking of water borne diseases.

In a rural setting agriculture, forestry, livestock, horticulture, energy and water resources from an interconnected economic system. Policies which do not adequately respond to interconnected problems often do not achieve the desired objectives.

Women and Fuelwood Crisis

An ILO study on the "Rural Energy Crisis, Women's Work and Basic Needs" has documented the effects of the energy crisis and shortages of household fuel on rural women's workload, income-earning opportunities, family nutrition and health children's role in fuel procurement and fuel choice by households under conditions of energy scarcity. Further, the implications for planning and development of domestic energy strategies and technologies are also documented. The report argues that the rural energy crisis has added another dimension to rural women's work in meeting needs since the privatization of land and its produce including fuel and commercialization of the subsistence fuel economy has forced poorer households to use more household labour, reduce consumption, enter into barter or labour relationships with landlords

or to restore to illegal poaching and being subjected to harassment and penalties by landowners and forest officials.³³

Transition of fuelwood from free good to commercial commodity has aggravated the situation as the compulsions of subsistence override all other compulsions. The travails of women headloaders have been documented by a few studies. A study of 170 women headloaders in nine villages in Ranchi district, Bihar, indicates that in some villages as many as 48 percent of the households have been engaged in head-loading occupations and majority of them belong to scheduled tribes and backward communities. They collect not only firewood but also other minor forest produce, and travel 10-12 kms. from their villages to market these products. After spending hours in collecting fuelwood they travel by trains or trucks to the nearest urban centers in the evening, spend the night either at the railway station or public places while railway staff and police constable on duty take their share of payment. They return to their villages on the next day after buying essential items for their households. In certain villages a system of "Kautilya Tax" is prevalent, where each headloader has to pay Rs.2.50 per week to the village headman. Their survival needs drive them to exploit forests but to their mind if they do not use these resources then the contractors are going to grab them. The Bihar study suggests legalisation of these activities by issuing permits to headloaders against a token payment and assurance of usufruct rights. These would prevent the criminalisation of such activities, and harassment of women headloaders, who move in groups and travel by trains (termed as firewood specials) to nearby towns for selling fuelwood and other forest produce to eke out a living.³⁴

A study conducted by the National Council of Applied Economic Research (1986) on fuel use clearly indicates that 2/3rd of all non-commercial fuel for households is collected mostly by women and the cost of this labour is almost zero. The commodity which is collected free, will hardly be visualized by the farmers as important enough to be substituted by tree biomass for domestic consumption. Social forestry programmes have this inherent male bias deeply ingrained among decision-makers and village communities.³⁵

The shortage of fuel wood (what is termed as 'second energy' crisis) has assumed alarming proportions. The report of the Fuel Wood Committee (1982) warned that with rapidly dwindling sources of non-commercial energy sources in rural areas, i.e., firewood, animal dung and crop waste, very soon fuel will become a major constraint rather than the availability of food-grains itself. The report observed that as against the present annual requirement of about 133 million tones of fuelwood, the recorded annual production does not exceed 18 million tones. Data from the 28th round of NSS indicates that about 30 million tones of firewood is obtained

from private lands, gardens and trees around the houses. Another million tones of firewood is estimated from plantations under social forestry schemes. The consumption of non-commercial energy is as follows:

Consumption of Non-Commercial Energy

1953-54 to 1975-76

Year	Fuelwood	Agriculture	Animal	Dungs	Total	MTCR	
	M.T.	MTCR	M.T.	MTCR	M.T.	MTCR	
1953-54	86.3	82.2	26.4	25.1	46.4	18.6	125.9
1960-61	99.6	94.6	30.6	29.1	54.6	21.9	145.5
1965-66	109.3	103.8	33.6	31.9	59.9	23.9	159.6
1970-71	117.9	112.0	36.3	34.4	64.6	25.8	172.2
1975-76	133.1	26.5	41.0	38.9	73.0	29.2	194.6

Source: Report of the Working Group on Energy Policy 1979.

M.T. = Million Tonnes;

MTCR = Million Tonnes of Coal Replacement

The current consumption is estimated to be around 150 million tones and is likely to rise to 180-200 million tones by the turn of the century. No reliable estimates are available about the availability of agricultural wastes for fuel purposes. However, 68.5 per cent of energy requirements of rural India come from firewood, 8.3 from animal dung and only 21 per cent come from commercial sources.

Energy policy planning has largely ignored the central role of women in household fuel collection except in discussions on fuel-efficient cooking stoves. The diffusion of cost effective techniques, has been slow and problematic. One basic reasons is: the inadequate understanding of the patterns of fuel use in villages which are linked to social stratification. Secondly, a narrow view is taken of the energy/ labour substitution process in the subsistence sector.

Another issue that needs careful attention is an understanding of the factors that constrain the energy afforestation programme and the alternative energy technology programme such as bio-gas, solar energy, wind technologies and the relationships of women and the resources in the subsistence sector. Eco development camps organized by Chipko activists found sharp differences in the preferences of women and men in species selected for plantation programmes. Men are interested in trees which yield cash while women want fuel and fodder trees. The Energy Policy Report of the Government indicates that solar and wind

energy have yet to become viable options due to a variety of problems of costs and adaptability etc.

The 'user-involvement' is a necessary precondition for successful diffusion of alternative technology. Given the caste, class and gender hierarchies within village communities, the success of any energy afforestation programme will depend on the access and use rights of assetless poor women. The Energy Policy Report argues that if planners seriously wish to incorporate a viable energy policy in the VIIth Plan they should reduce allocation on oil. Instead, they should divert 2,000 crores in the agricultural sector to annually bring five million hectares of land under fuel wood trees and adopt the best technique of wood gasification to meet its energy needs. How does one bring 5 million hectares under fuelwood plantation and how will poor people, particularly women, benefit from it? Clearly a massive effort is needed both to change the focus of afforestation programmes to involve women in a much bigger and meaningful way.

Government data shows that between 1950-1980, a total area of 1.6 million hectares was brought under social forestry at an estimated cost of 127.18 crores while 2.2 million was brought under production forestry at a cost of 162.11. A centrally sponsored scheme of "Social Forestry including Rural Fuelwood Plantations" was launched during the Sixth Plan in 157 districts all over the country which were identified as fuel wood deficit districts. The Seventh Plan document indicates that as against a target of 2,60,000 hectares of fuelwood plantations and supply of 580 million seedlings free of cost, the achievements have been 3,00,000 hectares of plantation and distribution of 740 million seedlings. No data, however, is available on the survival rate and distributional aspects of the programme.

A noted agricultural scientist, M.S. Swaminathan says that since 40 percent of the total land area is under agriculture the only way to meet the fuel, fodder needs is to plant all "wasted land" with leguminous shrubs and trees which can provide people with fuel, fodder, feed and fertilizer through biological nitrogen fixation. The competing demands on land for forests produce food fodder, fuel etc. and other developmental needs means that any development strategy adopted for development in one sectors is going to affect other sectors and the access of different social categories to these resources particularly the poor and landless women.

M.S. Swaminathan talks about imparting a 'Women's user perspective' in Rural Development work in the fields of agriculture and rural development. However, he cautions that "science is not a magic wand with which sex inequalities in workload and economic returns can be made to vanish... In the ultimate analysis, it is only the concern, commitment and concerted action of agricultural research system and policy makers that can lead to meaningful

results in imparting 'women user's perspective' in research priorities and strategies.... To obtain a correct perception of priorities, scientists will have to listen and learn from resource - poor rural women'.³⁶ Has the process of listening and learning from poor women been initiated ?

In a recent workshop on "Women Social Forestry and Wasteland Development" organized by the CWDS,³⁷ the participants come to the conclusion that very little attention has been given to people's participation in the ongoing social forestry, land and watershed management programmes. The workshop stressed the need for women's representation on institutions such as Village Forest Committees, Panchayats, Standing Committee for Afforestation and Land Reforms

It was suggested that the participation and involvement of poor rural women in such programmes can only be achieved through sustained financial, technical, managerial inputs during the process of asset creation till these assets start giving returns. However, this calls for (a) organization (b) essential support services such as child care (c) training needs identified by women from time to time (d) developing women's awareness regarding their rights and responsibilities, and (e) making available information and technologies and socialized services for women's drudgery reduction. The workshop suggested that since existing programmes do not make provisions for the above services, the programme designs should either be drastically changed or modified to ensure proper co-ordination between different programmes and draw on these resources for providing essential support services.

It was also suggested that the basic aim of social forestry should be to create village woodlots on a sustained yield basis. The programmes of social forestry and wasteland development should build in adequate wage and other technical and managerial support during the period of raising maintenance and protection of plants since the poor cannot wait. Women's access to social forestry should be backed by state marketing supports. The workshop also observed that in all asset generating programmes, the issue of ownership, rights of disposal, choice of species rights of harvesting, marketing; and sharing of returns are extremely vague and unknown to people. A review of forest regulation is needed to push the basic strategy of community controlled and community managed social forestry and economic development system.

A number of experimental models have been developed with community participation. Some, micro ecological projects with components of afforestation - water shed development, soil conservation, water harvesting etc. - have shown good results.

Poverty Alleviation Programme and Poor Women

The State is politically committed to removal of poverty and development of a basic infrastructure for providing minimum needs and services (housing, communication, education, health care, nutrition, rural water supply, roads and environmental improvement). The new components added to the Minimum Needs Programmes are domestic cooking energy, public distribution and rural sanitation. This is an acknowledgment that economic growth does not ensure social justice and increased in the income levels of the poor, hence for a direct attack on poverty through programmes like Integrated Rural Development, National Rural Employment Programme, Rural Labour Employment Guarantee Programme, Minimum Needs Programme etc... Experience has shown that a sectoral approach for poverty alleviation programme does not bring in the desired results and a package approach is needed to deal with multidimensional needs and problems of specific areas and beneficiaries group. The VIIth Plan talks about Integrating Minimum Needs Programme with other rural development and anti-poverty programmes so as to create necessary linkages in the delivery services.

Why it has been so difficult to cover 30% of women under IRD programme as stipulated by the government? In fact much greater and co-ordinated effort is needed in terms of linkages, convergence of policies for rural poor women and organization of beneficiaries to strengthen their articulation and receiving and absorbing capacity. However, the concurrent evaluation of IRDP indicates that in about 96% cases supported under the programme, there was no organization of beneficiaries.

The VIIth Plan, while justifying the present strategy of a direct attack on poverty on account of "insufficient percolation of benefits to the poor", further states that in view of the deficiencies in the implementation of IRDP, greater priority should be given to the Rural Employment Programme by shifting resources away from IRDP. The reasons are twofold-first, the household enterprises of the type visualized under the programme are inherently uneconomic and handicapped for lack of necessary infrastructure. Secondly, owing to illiteracy and weak economic position of beneficiaries and existence of a chain of intermediaries and existing of a chain of intermediaries only a small portion of the benefit reaches actual beneficiaries. The employment programme it is argued would provide wage-income to the poor, through the creation of durable assets.

The household approach to target group oriented planning has come in for severe criticism in anti-poverty programmes. The loan/ subsidy distributed to beneficiaries under IRDP, covered only 7% women with a heavy emphasis on animal husbandry and stitching and

tailoring. With aggravated problems of fuel, fodder and water availability in certain areas, distribution of mulch cattle under the anti-poverty programme, seems ironical as it has added to the subsistence burden of poor women. A live-stock development strategy was never accompanied by rational land use and fodder development policies, particularly when it was included in anti-poverty measures. Similarly, plantation strategies have not been accompanied by watershed management strategies. For developing effective strategies for poorer households, the government will have to look into the interlinked nature of these programmes.

A study of the Employment Guarantee scheme in Maharashtra which had an overwhelming response from women, indicates that assets created under the programmes are not looked after by the authorities. The users are also unaware of the benefits they could derive from them. In most of the cases assets were not chosen to meet local needs and were not always of economic value. The study suggests that potential users should be consulted on location, design and planning to ensure the ultimate use of asset. Agencies should be identified to take charge of the assets created should also be ascertained. Since there is not skill component under the programme the workers remain unskilled labourers even after several years. The coverage of the Employment Guarantee Scheme needs to be broadened to improve the quality of human capital formation.³⁸

A basic problem with all anti-poverty programmes is lack of co-ordination. The target group planning needs to be integrated with sectoral planning. Studies have shown an overwhelming response from women to programmes of rural works. In self-employment programmes women are more handicapped due to lack of raw material, marketing, extension and infrastructural and information support.

The concept of integrating women's issues in public policies ignores existing class and gender inequalities. Suggestions are usually made in terms of improving the outreach of extension and training services or allocating a certain percentage of loans to women. Arguments are made about reducing the drudgery of women to release their energy for training and skill development. Targets set for such activities usually lag behind. A mere 'compensatory approach' does not 'empower' women (policy documents contain such ideological emphasis) as there is no redistribution of economic resources and opportunities. There is little prospect of state supported or state-mediated redistribution of resources by gender, unless the policies are combined with participatory approaches where women take control of resources and a system of accountability is developed to foster economic independence of rural women.

We know that problems of poverty, environmental degradation population growth and resource depletion are all interlinked and none of them can be addressed in isolation or without a holistic understanding of the interlinkages between development priorities and inequitable access of certain groups to resources. As inequalities sharpen; dominant interest acquire monopolistic control over resources; and the system reaches ecological limits, the poor suffer more because of their lesser access and capacity to control resources. Marginalisation of assetless and resourceless women is a symptom of a model of development that neglects the human dimension. Saxena argues that the neglect of the women's dimension in forestry policies is because development has concerned itself with producing surplus for the market economic and because natural forests are used by the poor tribals and women for their consumption needs and women remain involved in subsistence rather than cash sector of the economy. He thinks that government machinery, at best can be a delivery mechanism but it cannot function as a participatory mechanism nor can it mobilize people. Given the sex-segregated and hierarchical nature of Indian society, separate women's organizations would be needed in rural India until poor women acquire the confidence to articulate their needs. He also points out that the bureaucracy and local politicians are totally opposed to strengthening the position of women by giving them land rights. Hence the new policies for reform should not regard the interest of the family as identical with that of the head of the household.³⁹ Policy interventions do not operate in a vacuum and their effectiveness has to be understood in the context ongoing and underlying market forces which interact with village institutions and local power hierarchy. To counter such forces an organized pressure of those excluded from the decision-making process could form an important element of the strategy.

The social and economic development policies, should, in the final analysis, be assessed in terms of their impact on the quality of life of vulnerable groups. Unless 'poverty-creating' strategies are curbed, the 'poverty-alleviation strategies will not make any dent in improving the quality of life of millions of poor women who have been marginalized as traditional craft workers, artisans, fisher folk, forest dwellers and wage workers, have been alienated from their resources base and shoulder increased burden of subsistence.

Policy Implication and Recommendations

In conclusion one may argue that while controversies regarding policies for use and management of our life sustaining resources; land, water, soil, trees-multiply, arguments are put forward that these are being done in the larger interest of people in this country. However,

one should pause and ask whose interest are being sacrificed to meet the demands of industry and urban and rural elites? In whose favour is the 'resource conversion' taking place? The CSE report very appropriately put it... "every ecological niche is occupied by some occupational or cultural human group for its sustenance. Each time an ecological niche is degraded or its resource appropriated by the more powerful in the society, the deprived weaker section become further impoverished. The steady destruction of our natural forests, pasture lands, coastal waters, etc. has not only meant an increased economic poverty for millions of tribals, nomads and traditional fisherfolk but also a slow social and cultural death: a dismal change from self-sufficient human beings to abjectly dependent landless labourers and squalor ridden urban migrants. Current development can in fact be described as the process by which the rich and powerful reallocate the nations natural resources in their favour and modern technology is the tool that sub serves this process.

The regeneration of forests or raising agricultural productivity cannot be viewed separately as policies in one sector impinge on another. Similarly, the management of water resources for irrigation and power generation has meant large scale deforestation in catchment areas, soil erosion and salutation of canals and rivers affecting agricultural land and recurring drought and floods. As long as this contradiction lasts and policies in one sector run counter to the objectives in other and interests of more powerful groups dominate, people marginalized by the macro processes will suffer.

We have no comprehensive land use policy for the uncultivated land because it is divided between different departments, and there is no holistic thrust. Owing to lack of coordination between different departments and a custodial approach, their programmes sometimes run counter to each other. India's Dairy Development Programme and animal husbandry programme under IRDP, without a national fodder development policy, crates tensions between the people and forest officials. Some states who received a large quality of migratory animals, there have been violent conflicts between cattle breeders and forest officials or farmers. With deforestation, MFP collection has declined, food has diminished, herbal medicines have disappeared, creating considerable hardships for women who are the major gathers of these products. Policies, one should not forget, are an off shoot of existing development priorities and patterns geared to the needs of a dominant minority. The process of marginalisation of powerless, particularly women, cannot be halted unless their interests are integrated with national priorities for development.

A number of recommendations can be drawn from the above analysis of the problems of rural women vis-à-vis policies relating to management and use of natural resources. The paper does not deal with policies relating to urban development and changing land use patterns which also affect the rural hinter-land.

- (i) there is a need to develop an integrated approach to forestry, agriculture, animal husbandry, development of grazing pasture and water shed management. A rational land use system for the uncultivated land, controlled and managed by the people.
From the experience gained from social forestry programmes it is clear that women's interests are not taken care of automatically in general village based plans. Assets and resources in common control do not ensure equal participation of women.
- (ii) the experience has shown that the grass-root organizations of rural women with participatory approaches, have responded to women's needs to gain control over resources, participate in decision making and resist exploitation from both the family and the community. In asset distribution and asset generation programmes such approaches need to be sustained and used as a basis for incorporating women's issues in development projects.
- (iii) The main areas in which the government introduce policy measures through investment, pricing, subsidies, regulations and licensing etc., have decreased women's access to resources and services (land, forest, credit, technology etc.). Women's access to productive resources and credit affects their ability to choose technology and other services to effectively contribute to productive resources. For women's access to resources and services, policies relating to land reform registration of land titles and allocation of tenancies for irrigation, settlement schemes etc. should recognize women as farmers and not only as unpaid helpers but also to exercise their rights in acquiring a fair share of land, livestock, credit technology extension services and training. A review of policies and legislation (Land, Forest Act) is necessary to remove the constraints and disabilities women suffer from.
- (iv) A sound data base relating to gender - specific information and a conscious effort to use them in policy formation and programme planning is an important first step. All agricultural and economic surveys and censuses should provide gender differentiated information which should be fully taken into account in national planning. For example, information on women's contribution and needs in programmes of afforestation, drinking water supply, sanitation etc. and social and technological limitations of their

access to services and resources, will be essential to increase the sensitivity of the decision makers to the problems of rural women.

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