

LAND POLICIES/PROGRAMMES AND ENVIRONMENTAL DEGRADATION IN INDIA¹

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1. Introduction :

Coinciding of celebration of 40th year of country's independence and centenary celebrations of one who authored its post-independence development strategies, offers a unique occasion to look back on our performance in nation building and its sustainability. The country can take credit for its remarkable performance in the field of agriculture, industry, infrastructure and social services. However the introspection also reveals substantial gaps and failures in our performance and several visible and invisible costs in terms of negative side effects of development strategies. Environmental degradation is one of the side effects which represent a major component of cost of development gains.

Deterioration of the land resources is one of the key indicators of environmental degradation. Land or land resources could be broadly defined to cover not only physical surface, topography, and soil structure but also the complex system of interactions between soil, water and vegetation. Nature and degree of these interactions as well as soil structure, moisture retention level, fertility and overall potential for bio-mass production gradually change overtime as a part of natural process. The process of change especially in the negative direction is accentuated by man's interventions through a variety of land uses. This is more so in the environmentally fragile areas such as mountainous areas with steep slopes and arid/semi-arid lands, as they are slow and weak in their adaptation to pressures and interventions. India abounds in such areas. Sustained and productive use of these areas requires proper understanding of their limitation and greater care while using them. This seems to be lacking in India despite our planned approach to national resource management and repeated exercises in perspective planning during last four decades.

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Historically, land-extensive usage patterns in ecologically fragile areas got evolved in the context of lower population pressures and their relative isolation from the main stream market situations. However, of late the situation has reversed. The new pressures generated not only by population and market forces but also by public policies and programmes, have led to more intensive use of the land resources, which is beyond their usage capacities. The consequences include physical degradation of resource base reflected through increased land slides and soil erosion; silting of water courses and drying of ground water sources, and deterioration in quality and quantity of vegetative resources. Declined yield and increased instability of bio-mass production from the fragile areas are immediate consequences. This has not only disrupted the survival systems of direct dependents on these resources but have adversely affected other better off areas having physical, hydrological, botanical, and economic linkages with the fragile areas. (ICAR 1977)

The resource user i.e. farmer (including pastoralist) is often blamed as immediate agency responsible for over-exploitation and degradation of land resources. However, this ignores the policy and programme framework of the state - the ultimate custodian of nation's land resources - which directly or indirectly induces the land user's decisions and actions. In the following discussion I highlight some of the features of the above framework which seems to have contributed to degradation of land resources especially in the environmentally fragile areas of India. The paper attempts to raise some issues rather than present a statistical reportage.

For our purpose the land related public policies and programmes in India could be grouped into three categories.

- (i) Land distribution policies and programmes - which transfer ownership or usage rights to the land users.
- (ii) Policies and programmes to guide and enforce land usage as required.
- (iii) Development policies and programmes directed to upgrade and protect the production potential of land.

2. Land Distribution Policies and Programmes:

Following the introduction of land reforms in practically all the states during the early 1950s, public lands including rural common property resources, were distributed

to the people on large scale (Jodha 1986). The process continues even today. In the context of wide spread landlessness and state objective of land to the tiller, this was unavoidable. However, the key features of these programmes having direct relevance to land degradation are as follows.

- (i) The policies and programmes were strongly welfare oriented and completely insensitive to use capabilities of most of the sub-marginal lands which were indiscriminately privatised for crop production.
- (ii) The policies implied choice for easy option on two accounts. Firstly, having failed to get surplus land through enforcement of land ceiling laws, the state resorted to curtailment and distribution of mostly public lands which were sub-marginal lands, traditionally kept under forest, grass etc. Secondly, having failed to generate alternative sources of employment through industrialisation and other activities, the state found it easy (as much as possible) to help additional population by privatising public lands.
- (iii) The policies involved distribution of land rights without any provision of 'usage obligation' from the people. In other words, new land owners had no obligation to adopt land uses and practices suited to the conservation and protection of land. Consequently, the privatised lands were put to uses beyond their use capabilities.
- (iv) Finally, the land reforms were reforms more in welfare sense. There were no reforms in terms of new options and methods for using land and its protection against degradation. Neither technological nor institutional support were created to induce people to use lands according to their suitability and within the limits.

To conclude, the land distribution policies were insensitive to land itself. Moreover, land had to bear the brunt of both population growth and failure of state policies with respect to land ceilings and alternative employment opportunities. These factors contributed to land degradation significantly.

3. Usage Regulation:

Usage regulation is key to prevent degradation of land resources. However, the Indian situation in this respect is

characterised by the following:

- (i) Usage practices on private lands, as mentioned earlier, is a matter of free will of the land user. There is neither policy framework nor operational mechanisms to induce or enforce usage patterns which suit capabilities and health of land resources. There may be some exceptions such as the irrigation command area or some pilot project areas where attempts to regulate land use are made. Thus, by and large the key regulators of land use in India are market forces and subsistence pressures. They have led to increased use-intensity and reduced diversity in land use even in ecologically fragile zones.
- (ii) Regarding public lands including village commons, some legal framework involving formal and administrative arrangements to regulate the usage does exist in some areas. However, for the operational purposes, beyond giving some authority to village panchayats there are hardly any guidelines. For several political reasons, panchayats rarely enforce their authority, except when usage regulations are linked to receipt of grants from the state.
- (iii) The provisions wherever they exist, are too formal and administrative and they do not encourage people's participation.
- (iv) Finally, the introduction of formal and legal measures has disrupted the traditional, informal arrangements for regulated use of village common lands (Jodha 1985). This has led to over exploitation and degradation of these resources.

To sum up, the absence of usage regulation is a major gap of state policies regarding land in India. Its consequences hardly need mention.

4. Land Development Programmes :

By land development we mean upgrading the land resources for higher and sustained productivity. Accordingly land development programmes in India can be put under two categories, (i) creation of irrigation facilities, and (ii) soil conservation, reclamation programmes.

- (i) Irrigation Development: This is an age old approach to enhance land productivity all over the world. India is no exception to this. Without underrating the country's achievement in this field, it may be mentioned that in spite of the inseparable role of land and water in plant growth, the water development policies in India are largely insensitive to land component of the irrigation projects. This is reflected by indifference or inadequate understanding of land problems in both catchments and command areas of irrigation schemes. Soil erosion and silting of dams and waterlogging and salinisation (due to drainage problem) of command areas have been the consequences of above factors in several irrigation projects in the country (Irrigation Commission 1972) Emphasis on high intensity irrigation as against protective irrigation to cover larger areas especially in arid and semi-arid areas is another factor responsible for the above problems (Jodha 1979).

In a way present irrigation approach which ignores potential land problems (or second generation problems) is indicator of tendency for easy and partial options. By ignoring or de-emphasising these problems the potential gains from irrigation projects are deleberately inflated.

(ii) Land Resource Conservation : Approach and Strategies :

As it often happens, land resource degradation can be felt more (by users of land) than it could be externally observed, it can be observed more easily than it could be precisely measured, and finally it can be measured better than it could be understood fully. Consequently it often generates more emotion and concern than realistic remedial strategies. It often induces more planning and modeling than concrete action on the ground.

This scenario in one or the other way applies to land resource conservation strategies in India. There is no dearth of documents expressing concern for land resource degradation in different parts of the country. The statements like "Rajasthan desert advancing at the

rate of x-miles a year", "the Himalayan farmer losing x-cm of top-soil from his field every year", "the farmer in southern dry zone losing x-tonnes of soil every monsoon" etc. are made to dramatise the situation. The response to such concerns result into creation of superstructures including task forces to examine the official problem, creation of unenforceable laws and by-laws and establishment of research and extension institutes for soil conservation, setting up of task specific agencies (like wasteland development board) or specific pilot projects, especially in environmentally fragile zones. However, despite these efforts, the conservation programmes do not seem to have made their mark on Indian land surface. The reasons for this could be attributed to certain features of land resource conservation policies and programmes. They are elaborated below.

- (a) A case of generalised approach to marginal areas and marginal people:

Environmentally fragile areas are by and large marginal areas in terms of their contribution and impact on national main stream situation. Hence their problems do not register easily in the national planning charts (Blaikie 1985). These areas often receive attention when they pose threat to national economy (e.g. environment degradation wise) or when they could be 'used' by the main stream economy (e.g. mountains as source of timber and deserts for livestock products). Hence, they are usually bypassed by the development processes like other marginal areas and marginal people.

- (b) Invisibility and slow pace of impacts:

The impacts of resource degradation as well as resource conservation are slow to the extent of being invisible in the short run. In an environment where short-term and easily measurable gains dominate the cost-return calculus, this acts as a disincentive to the state for resource allocation for research and development activities directed to conservation of land resources. Huge imbalance between resource allocation to productivity enhancing research and 'maintenance research' (Ruttan 1982), including land resource conservation research in India will testify to this. Even the development activities for land resource conservation are limited to pilot projects. Resource Conservation is usually

considered as by-product of relief activities during droughts or floods (Jaiswal and Kolte 1981).

(c) Public interventions and problem of perception:

One of the key features of post independence situation in India is rapid growth in the extent of public interventions in different sectors including agriculture. Rather than inducing the people for appropriate decisions and actions, State seems to have taken over a number of tasks which historically belonged to the people. Micro-level resource management, traditional forms of rural cooperation etc. belong to this category. However, due to the absence of direct contact between state (or government) and micro-level realities and its formal approach to different issues, most of the public interventions take the form of legal and administrative provisions. In other words, as mentioned earlier, state perceives the problems and solution in terms of creation and operation of official superstructures. The latter are not only quite insensitive to grassroots level realities but also tend to marginalise the role of people in managing their own affairs. This in several ways applies to problem of resource degradation and their conservation. Furthermore, the superstructures to facilitate or promote land resources conservation absorb the bulk of investment allocated for the task.

(d) Domination of 'techniques':

A factor which in a way is a by-product of the preceding one, is the domination of 'techniques' in resource conservation strategy in India. Accordingly, state gives greater attention to generation and use of creation of technologies (i.e. mechanical and agronomic measures) to handle resource degradation problem. A large number of research/extension institutions with mandate for soil conservation, promotion of forestry, pastures development and environmental management, ranging from Central Arid Zone Research Institute created in late 1950s to G.B. Pant Institute of Himalayan Ecology and Development created in 1988, will testify to this. However, despite valuable work by most of them within the frame work of research stations or pilot project areas, their impact at field level is negligible.

The important reasons for this includes researchers' complete insensitivity to institutional or socio-economic realities while conceiving and developing the resource conservation technologies. This makes the technologies irrelevant and unadoptable at the field level. In the consequent processes of evaluations, again the technical components are reviewed and refined with little attention to their institutional inappropriateness. For instance the unequal distribution of costs of gains of these measures between the people separated spatially, temporally and economically, which obstructs the adoption of conservation technologies are never reviewed. There is hardly any, systematic research to handle these issues and highlight the need for policy frame work and programme contents to implement or revise the technologies.

Incidentally, it may be noted that resource conservation research also partly shares the situation of marginal areas and marginal people. Since its process is slow and results are not dramatic (at least in the short run) compared to say, crop yield enhancing genetic research, it suffers from the lack of resources and seriousness on the part of the government. (Blaikie 1985)

5. ISSUES FOR THE FUTURE

The brief discussion of some aspects of public policies and programmes relating to land resource degradation and conservation clearly shows the following.

- (i) The public interventions even when they relate to activities and programmes involving land, are insensitive to problems of land. Land distribution policies and irrigation development policies are two out of several examples of this tendency.
- (ii) The public interventions always emphasise easy options, be it distribution of sub-marginal lands in place of acquiring and distributing surplus land through land ceilings or ignoring complicated institutional issues while generation and spread of resource conservation technologies.
- (iii) Despite the turism like 'what happens to land' depends primarily on 'how it is used' the usage regulation

continues to be the major gap in India's land policies even in the ecologically fragile areas.

- (iv) Resource conservation strategies are too much dominated by "public sector responsibility" approach, where state-generated legal, formal, administrative 'super structure' is considered as key pre-requisite for achieving the goal. By implication the people's role in resource conservation is rendered secondary. This affects both the methods for assessing the problem as well as solutions to it.
- (v) Resource conservation programmes are also "technique dominated". This implies resource conservation as a purely ecological phenomenon excluding people's interactions with it. This makes them (conservation techniques) unadoptable and irrelevant in the context of micro-level institutional realities.

If the above assessment of the situation is accurate than the future strategies for land resource conservation should explicitly aim at the following:

- (i) Land resource degradation should be assessed with clearly verifiable and measurable indicators at micro and macro levels, rather than depend of emotionally surcharged wild guesses. As needed the approaches can make combined use of various methods as far ranging as oral history on the one hand and remote sensing on the other (ICIMOD, 1988).
- (ii) There is need for reduced emphasis and decentralisation of formal, administrative and legal measures and increased concentration on inducing and supporting people's initiatives for conservation orientation of resource use. Public interventions should act as support mechanisms rather than substitutes for people's initiatives.
- (iii) Resource conservation research and applications should reduce their obsession with "techniques" only. The relevance and effectiveness of this research could be improved by giving greater attention to institutional issues which obstruct the adoption of conservation technologies. In fact screening of these technologies through "institutional filters" can be a first useful step.
- (iv) Involvement of people and their perspectives in evolving resource conservation strategies should be encouraged. The people's participation through formal institutions like Panchayats does not help much as they

represent a small scale replica of the same administrative and legalistic superstructure operating at the higher level. One option in such situation could be formation of exclusive user groups for specific conservation problems. This will not only encourage participation of those directly affected by resource degradation but will help in ensuring input of farmers' traditional resource management methods.

- (v) Accepting most of the above suggestions would imply discarding a lot of things we have promoted in the name of land resource conservation in the past. This may be a difficult task in the immediate context. However, a beginning at this stage can be made at least by accepting this fact.

REFERENCES

- Chaikie, P. (1985) The Political Economy of Soil Erosion in Developing Countries. Longman, London and New York.
- Irrigation Commission (1972). Report of the Irrigation Commission, Government of India (Ministry of Irrigation and Power), New Delhi.
- ICAR (1977). Desertification and its Control Indian Council of Agricultural Research, New Delhi.
- Kishore, N.K. and Kolte, N.V. (1981) Development of Drought Prone Areas, National Institute of Rural Development, Hyderabad, India.
- Modha, N. S. (1979). Dry farming technology : Achievements and obstacles in Agricultural Development in India: Policy and Problems (eds.) C.H. Shah and C.N. Vakil. Orient Longman, Bombay.
- Modha N.S. (1985). Population growth and decline of common property resources in Rajasthan, India Population and Development Review Vol. 11(2).
- Modha N.S. (1986). Common property resource and rural poor in dry regions of India. Economic and Political Weekly Vol. 21 (26).
- Modha N.S. (1988). A framework for studying unsustainability problem of mountain agriculture (Internal working document of International Centre for Integrated Mountain Development (ICIMOD), Kathmandu, Nepal.
- Watt, V.W. (1982). Agricultural Research Policy, Department of Agricultural and Applied Economics; University of Minnesota, U.S.A.
- Modha, B.B. (1980). A Policy for Land and Water, Sardar Patel Memorial Lectures 1980, New Delhi.