The Problem and Causes of Environmental Disruption and its Political Economy

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Environmental disruption is a complex issue which has appeared rather suddenly on the horizon of public affairs. The environment is defined as a system comprising the earth's living things and the air, water and soil which is their habitat. This system, the ecosphere, is the product of the joint evolution of living things and of the physical and chemical constituents of the earth's surface. On the time scale of human life the evolutionary development of the ecosphere is irreplacable; if the system should be destroyed, it could never be reconstituted or replaced either by natural processes or by human effort. Human beings are dependent on the ecosphere not only for their biological requirements but also for resources which are essential to all their productive activities.

1. The Problem :

To begin with the problem of environmental degradation, we must recognise the self governing nature of the ecosystem. It is this basic property which ensures its stability and continued activity. It helps to define both the process of ecological degradation and the nature of the agencies that can induce it. We can define ecological or environmental degradation as a process which so stresses an ecosystem as to reduce its capability for self adjustment, and which therefore, if continued can impose an irreversible stress on the system and cause it to collapse.

Turning to possible environmental impacts that may result from human activity, we find the situation somewhat complicated by the special role of human beings on the earth. In one sense, human being is simply another animal in the earth's ecosystem, consuming organic stuff and producing organic wastes and more people. In this role the human being is a constituent part of an ecosystem and in terms of the previous definition exerts no adverse impact on it. If a population

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is separated from this cycle for example, by settling in a city with large scale industries, markets, housing complexes then the population is no longer a part of the soil ecosystem. Hence, the environmental impact is generated as the people become separated from the ecosystem to which terrestrial animals naturally belong.

All other environmental impacts are generated not by human biological activities but by human productive activities. They are generated by economic processes like certain economic gains are derived from an ecosystem by exploiting its biological productivity. In these cases, a constituent of ecosystem which has economic value for example, an agricultural crop, timber, fish is withdrawn from the ecosystem.

Man has been tampering with ecosphere for a very long time; one might almost define man as an animal that modifies its environment consciously. The great transformation occurred when man learned to convert forests into farms and to breed domesticated varieties of plants and animals. Over the time this settled civilization, altered the ecology of entire continents. Not all the environment changes engineered by man have been for the worse. Like enormous increase in food production, deserts and hills have been made habitable and much more has been achieved. But in the last few generations mankind's propensity to change his environment had itself been transformed. The power to use and adapt has become the power to destroy abruptly (Commoner, 1970).

I. Causes of environmental disruption

Going back to Adam Smith's "invisible hand", that competitive markets guide resources into the uses in which they will produce the things that consumer want most. But this argument applies only to resources that are privately owned and to commodities that consumers buy individually and use as they see fit. If any resource is not privately owned or if a consumer wants a commodity that he cannot procure and use individually then the "invisible hand" does not work. On the contrary, ordinary economic institutions do not provide any incentives for furnishing such resources or commodities or for using them efficiently if they occur naturally.

One explanation, then, of our environmental problems is that many vitally important resources are not owned by anyone and consequently lack the protection and guidance that a privately owner normally provides. The trouble with the environmental resources is that it is a "common property resources" and "every one's property is no one's property". This feature of environmental resources leads to its over exploitation.

It does not follow that more extensive private ownership is the solution to our environmental problems. The environmental resources are unsuitable for private ownership because they lack the "excludability property". That is it is not practical to exclude people from these resources or to prevent people from benefitting from them either because of physical impossibility or because controlling access would be socially unacceptable.

We have found that, so long as environmental resources are treated as unrestricted common property, there will be a tendency for individuals to use them excessively from the point of view of society at large. Question remains to answer is why the condition of the environment has become so critical in recent times. The roots of the problem of environmental degradation are searched in the cultural, political and technological conditions of modern society. Industrial growth lies somewhere close to the heart of the matter.

Commoner (1971) examines the growth rates of a large number of economic activities and places the blame on developments in technology which have promoted a variety of products and processes whose environmental impact are singularly noxious. Environmental impact is the function of growth of population, technology of production and per capita production. Commoner made the efforts to quantify the impact of particular unit of production. Clawson (1972) agrees, over time, total population, economic output per capita, techniques of resource conversion and utilization of other factors may change. Other factors remaining same, more people in an region mean more environmental impact likewise, more economic output per capita results in more environmental impact. But these relationships are neither linear nor proportionate. The effect of changing techniques of resource conversion may be either to increase or to decrease environmental impact, some new techniques may be environment conserving, while others may be relatively environmental destructive. The possible interactions of changing population, changing economic output per capita and new techniques of conversion are numerous and complex.

The deterioration of the environment and its cost in money, social distress and personal sufferings, is chiefly the result of ecologically faulty technology which has been employed to remake productive enterprises. But if we are to survive economically as well as biologically, much of the technological transformation will need to be redone in order to bring the nation's productive technology much more closely in the harmony with the inescapable demands of the ecosystem.

3. The Scenario of North-Eastern India

In the north-eastern part of India in particular and other hill regions of India in general are facing the problem of the deforestation. It would be inter-

esting to study the various purposes responsible for deforestation. The total forest area lost is far below in north eastern state than all India average (Table 1). With the north-eastern states Assam has highest area lost, followed by Tripura, Arunachal Pradesh and Nagaland. In Assam large amount of forest area lost due to housing and agricultural purposes and to satisfy other private needs of public, whereas river valley projects, construction of road and establishment of industries are other significantly relevant causes of deforestation. If we treat deforestation as one of the indices of environmental degradation, then it is clear that growing needs of public due to growth of population and desire to upgrade the standard of living of masses are mainly responsible for deforestation.

Table 1

Forest Area Lost for Various Purposes During 1951–52 to 1975–76

(In Thousands Hectares)

Sl. No.	*State*	*River Valley Projects*	*Agricultural Purposes*	*Construction of Roads*	*Establishment of Industries*	*Other Purposes*	*Total*
2	Arunachal Pradesh	0.1	26.3	0.4	7.1	6.1	4.0.
3	Assam	19.7	17.6	6.6	2.9	25.8	72.7
4	Manipur	—	—	—	—	—	—
5	Meghalaya	—	—	—	—	—	—
6	Mizoram	—	—	—	—	—	—
7	Nagaland	—	—	—	2.0	0.1	2.1
8	Tripura	7.1	11.2	0.2	—	19.7	39.0
9	All India	4791	2506.9	57.1	127.2	965.4	8447.6

Note : Forest area lost in Manipur, Meghalaya and Mizoram is found nil or negligible during 1951-52 to 1975-76.

Source : The report of the working group on Hill Area Development Programme for VIII Plan.

4. Political Economy of Environment Degradation

The environmental evolution constitutes a challenge to the social science in general. Tsuru (1970) emphasized that there a need to realise that a political economy of environment is distinct from an economics of environment. Ignancy (1970) argues that the political economy of environment raise the certain pertinent issues; like who is worried about environment and why ? Similarly, the political economy of environment should explore the consequences of insulating. for the purpose of economic decisions, a given subsystem and referring exclusively to this as a framework for economic rationality. This broadens its scope to the point of including both the economics of natural resources and social conditions of life.

The developing economies have some specific environmental problems. The massive destruction of environment brought about the mono cultural exploitation by natural resources due to transplantation of developed world's consumption patterns. Moreover, considerable damage to environment accompanies several big development projects. The environmental problems emergent in all forms of society must be comprehend as a function of ruling authority.

In the light of the above considerations, some suggestions are proposed to limit further environmental degradation.

(i) Adding to social indicators a set of environmental indicators in development planning system.

(ii) Evaluation of recent trends in long term planning, both with respect to methodologies and institutional arrangements aimed at integrating environment concern into planning procedures in an inter-disciplinary way.

(iii) The establishment of big development projects should be subject to environmental audit to identify its impact on environment and remedial measures.

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