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A Study on Environmental Management & Ecological System Development

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Abstract: ***Changes in the environment due to environmental degradation due to various reasons are creating adverse conditions in the natural system of the biological world. The tension in the relationship between man and nature is being held responsible for this. The decisions taken by the modern society in the name of economic-social development have proved to be suicidal because it has led to the decline in the quality of the environment, which is the main cause of the crisis. The increasing pressure of human responses, especially resource exploitation, use of inappropriate technology, unwise use of energy, luxurious lifestyle, inappropriate settlement expansion and political aloofness, etc. is crippling the organs of nature, due to which the crisis for the biological world including humans is increasing. Ignoring the elements of nature is the biggest tragedy of this era. Such environmental distortions are being born due to unwise decisions to accelerate cultural development, which are proving difficult for nature to compensate. Instead of taking from nature, the developed society has started plundering the resources. Naturally, its harmful effects can be seen in the form of pollution of various life-giving elements, natural calamities and social distortions.***
Keywords: Environmental Management, Planning, Human Society, Pollution, Knowledge, Science, Technology.

I. NEED FOR ENVIRONMENTAL MANAGEMENT

The decreasing sensitivity due to materialistic lifestyle is poisoning the relations between humans and nature. Problems arising from deforestation are proof of this. Increasing extremism in human life has now brought us to the era of 'stop and think'. Looking at such a dire situation, environmental scientists have started warning that if the factors of environmental degradation are not controlled immediately, it will be difficult to cross the twenty-first century. Environmental incidents that destroy the existence of human life have been identified in recent years. It is surprising that the modern society, well-versed in knowledge, science and technology, has not been able to understand even this much that it is cutting the very branch on which it is sitting? Kabir Das must have written his couplet for such a society-- "Why did you do what you used to do, why regret now, if you sow acacia tree, how will you get mangoes from it?" This dire background has forced us to find alternatives and protect the bio-world. For this, well-planned and well-thought management is the only way. To maintain the quality of life on earth, the time has come to understand the difference between development and destruction and accordingly find a way of sustainable and balanced development through management.

Revealing the need for environmental management, Postal has commented that "the ninth decade of this century has been a deceptive decade for the earth and its living beings, apart from happiness and sorrow. At the same time, in the scenario of environmental events, ozone depletion, atmospheric increase of carbon dioxide, unexpected increase in the temperature of the earth in the year 1990 and increase of 920 lakh people per year in the world population are heart-wrenching news".

It is clear that many such works have been done till now which are not appropriate from the point of view of environmental balance and in such a situation, selection of alternatives and management of factors responsible for the declining environment, especially development of appropriate technology, energy management, population control, balance between industry-urbanization and vehicle expansion, resource conservation and preservation, conservation of biological diversity and improvement in materialistic life-style are the priority aspects. Management, regulation and planning of the above aspects are the only way to maintain the safety and quality of life for ages.

II. CONCEPT OF ENVIRONMENTAL MANAGEMENT AND PLANNING

The concept of environmental management and planning is as old as it is new. The difference is only of the events. For thousands of years, environmental management had become a part of the lifestyle due to being behavioral, as a result, all socio-economic decisions were taken in a well-thought-out manner, due to which the incidence of environmental degradation was negligible. The relationship between man and nature was so sweet that nature itself controlled the small mistakes of man. But the change in the name of modern development is increasing the environmental crises, due to which the need of environmental management is being felt to move in the right direction.

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It is appropriate to mention here that management should not be of the environment but of the improper and irrational responses of man, due to which the quality of the environment has deteriorated. But to hide its mistake, the developed society is talking about managing the environment instead of saying that it is managing its own actions. Therefore, environmental management is the regulation of those activities and events due to which the environment is getting degraded. Thus, the concept of management lies in the control of improper activities of human society, search for alternative ways and protection and preservation of the elements of nature. To achieve this goal, a well-planned and well-thought-out program is required so that efforts can be made at national and international level. If this does not happen, the situation can become dire in Rio de Janeiro, 1992. Save Earth Conference is a proof of this. The developed society is still not ready to accept its mistake with an open mind.

Therefore, the concept of environmental management is the regulation of the causes of degrading environment and the creation of short and long term measures in the perspective of future possibilities on the basis of past experiences so that the quality of the environment can be restored and the crisis present for living beings can be overcome. Management is an action plan to improve the quality of life and maintain it continuously. For this, short term and long term measures are followed. There is a difference in the objectives and programmes of management in both the situations. Short term management is only related to the alleviation of present problems like pollution control, but long term planning is a well thought out action plan for the entire biological world incorporating the past, present and future. Environmental management has two basic aspects:

1) Considering various options for the all-round development of human society and selecting the most suitable method so that harmony can be maintained between development and quality of life and

2) Balance in the relationship between man and nature which is the basis of the efficiency of the biosphere. The main objectives of management are to determine socio-economic policies to maintain a happy life for a long time and to make the values of life-style natural. Thus, through management, plans are made to reduce or control environmental distortions (pollution, inappropriate technology, social mismanagement etc.), and for future good management, balanced use and conservation of resources is done through environmental assessment, scientific-intellectual adjustment, political-administrative cooperation, education-training system for social new consciousness and appropriate technical development. Thus environmental management is a multi-dimensional complex process which extends from the regulation of human activities to the restoration of the natural quality of the elements of the environment.

Outlining environmental management, Riordan has written that "the essence of management is the judicious selection of the appropriate proposal from various alternative proposals so that it can fulfill the determined and desired objectives. In management, one or more strategies are adopted to achieve short-term and long-term objectives, but adequate arrangements are required to fulfill long-term objectives."

In the World Development Report, two bases have been given for environmental management & development-

a) Formulation of such a policy which establishes a positive correlation between production and environment and paves the way for improvement in inappropriate and unsuccessful policies, balance in resources and technology and growth in profitable income.

b) Goal-oriented policy which can become the basis of management on environmental grounds in the evaluation of problems, systems and facilities related to specific aspects of the environment.

Therefore, to make environmental management effective, action plans are made by setting priorities in a planned manner so that misuse of time and resources is reduced and the goal of a progressive sustainable society is achieved. In this way, while planning-based methodology helps in overcoming the current crises, the pace of development also remains intact. Cooperation of developed and developing countries is required to reach the destination of this goal because there is a difference in the approaches of both in environmental management and planning. It came to light in the Earth Summit of Rio de Janeiro that due to their arrogance, developed countries are not ready to consider the legitimate demands of developing countries.

It is pertinent to mention here that the grave situation of environmental crisis is in those areas where a conflict has arisen between socio-economic development and environment. This has complicated the problem of ecology.

Getting rid of this conflict or reducing it as much as possible is the social need of environmental management. Human society engaged in its economic activities has become accustomed to a specific way of life. In adjusting with nature, its technological achievements and behavioral beliefs resulting in ecological imbalance are the biggest obstacles. The increasing difficulties have forced us to think that a way should be found to improve and preserve the environment.

It is known that there is a limit to development and excess causes crisis. Population growth is a natural process, but when a situation of population explosion arises, then population growth becomes a difficult problem. With the increase in population, it becomes necessary to increase the production of food as well.

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But the food production does not increase at the pace at which the population grows. Scientific development makes human life safe, due to which the death rate decreases but not the birth rate. The human society engaged in industrial production starts producing more other goods than food material. As a result, it fulfills its food supply by importing from other areas. But when agricultural countries also get involved in industrial development, the problem of food arises. As a result, intensive agriculture has to be promoted to solve the problem. In this way, the burden on environmental resources such as soil, water etc. increases due to advanced agriculture, due to which the relationship between man and nature becomes unbalanced. Man either suppresses the wrath of nature with new techniques, such as the use of pesticides, or uses fertilizers and water to increase productivity through artificial means. This effect is temporary and disrupts the self-regulating nature of nature. As a result, environmental problems arise for which environmental management has to be done for its solution. Good behavior with nature is the main objective of environmental management.

An integrated approach should be adopted towards environmental management because the elements of nature are very complex and sensitive. Environmental management is not in the control of a mere scientist or engineer because the problems arising from environmental imbalance are very wide, in which man's role is somewhere at the center. Therefore, it is the subject matter of combined efforts of Physical Sciences and Human Sciences. That is why the role of a geographer is important because he uses both the disciplines. Management of social environment in a broad sense also comes under this. Discrimination, tension, riots, war, religious fanaticism etc. in society are somewhere connected to the environment. Most of the wars are fought for control over natural resources. The contribution of multinational forces in the recent Gulf War is proof of this. Therefore, in environmental management, the technical and scientific aspect is on one side and the human aspect is on the other. The environment is important for man because the earth is his abode. Therefore, the strategy for the environment should be made by considering man as the base.

III. SOCIAL DIMENSIONS OF ENVIRONMENTAL CHANGE

In the first phase of human-environment interaction, primary activities of humans must have inspired them to change the environment. In this sequence, the creation of new landscapes was started by making the land devoid of vegetation for agriculture and settlements. Over time, the pace of environmental change accelerated with the creation of large-scale farms and gardens, commercial agriculture, means of irrigation, excavation, etc. Compared to the initial human settlements, with social upliftment, there was a difference in the form of settlements and their effects. Industry and urbanization brought about extensive changes in many natural elements, but these were ignored.

In historical perspective, humans were also affected by environmental changes. For example, immigration started due to climate change. There are also examples of population destruction due to cold and very hot climate. Similarly, humans were also affected by epidemics like cholera, plague, malaria, smallpox, dysentery, etc. Due to natural calamities, the population was either destroyed or forced to migrate. Hence, human society could not get rid of natural changes, although it has been making continuous efforts.

In the present times, the effect of man-made environmental changes has become more pronounced. Environmental changes caused by Narmada Valley Project, Tehri Dam Project, Bhakra Nangal Dam Project etc. have led to population displacement, violation of rights over traditional property, social tension etc. In this way, environmental changes become both the result and cause of social changes. From this point of view, the importance of environmental study, monitoring, environmental policies and environmental education is indisputable.

IV. ASSESSMENT OF ENVIRONMENTAL IMBALANCE

Environmental imbalance gives rise to the need for environmental management. Geography has well-structured methods of studying environmental processes and man-environment relations. Its knowledge is essential to understand the geographical perspective of environmental management. The following are the approaches to the study of environmental processes-

(i) Catastrophism & Gradualism
(ii) Determinism and Possibilism
(iii) Equilibrium and Chaos
(iv) Long term and short term

Apart from environmental processes, the approaches to the study of man-environment relationship are as follows-

(i) Cultural and Historical Approach
(ii) Ecological and Consumerism Perspective
(iii) Bio-regionalism
(iv) Risk Assessment Approach

The above approaches to environmental changes can be applied at different levels. For example-
(a) Studying and preparing models of landscape dynamics at global, continental, regional and local levels on the basis of long-term changes.
(b) Aspects of man-made environmental changes.

1) Macro level aspects

Depletion of ozone layer, increase in earth's temperature, extinction of biological species, reduction in biodiversity, artificial changes in biological lineage etc.

2) Micro level aspects

deforestation, desertification, soil erosion, depletion of water level, depletion of minerals, air, soil, water and surface pollution, deterioration in human health, religious fanaticism, political revenge etc.

3) Identification of crisis-affected areas

On the basis of these assessments and studies, action plans can be made at regional, regional, national and international levels which will give concrete form to environmental management.

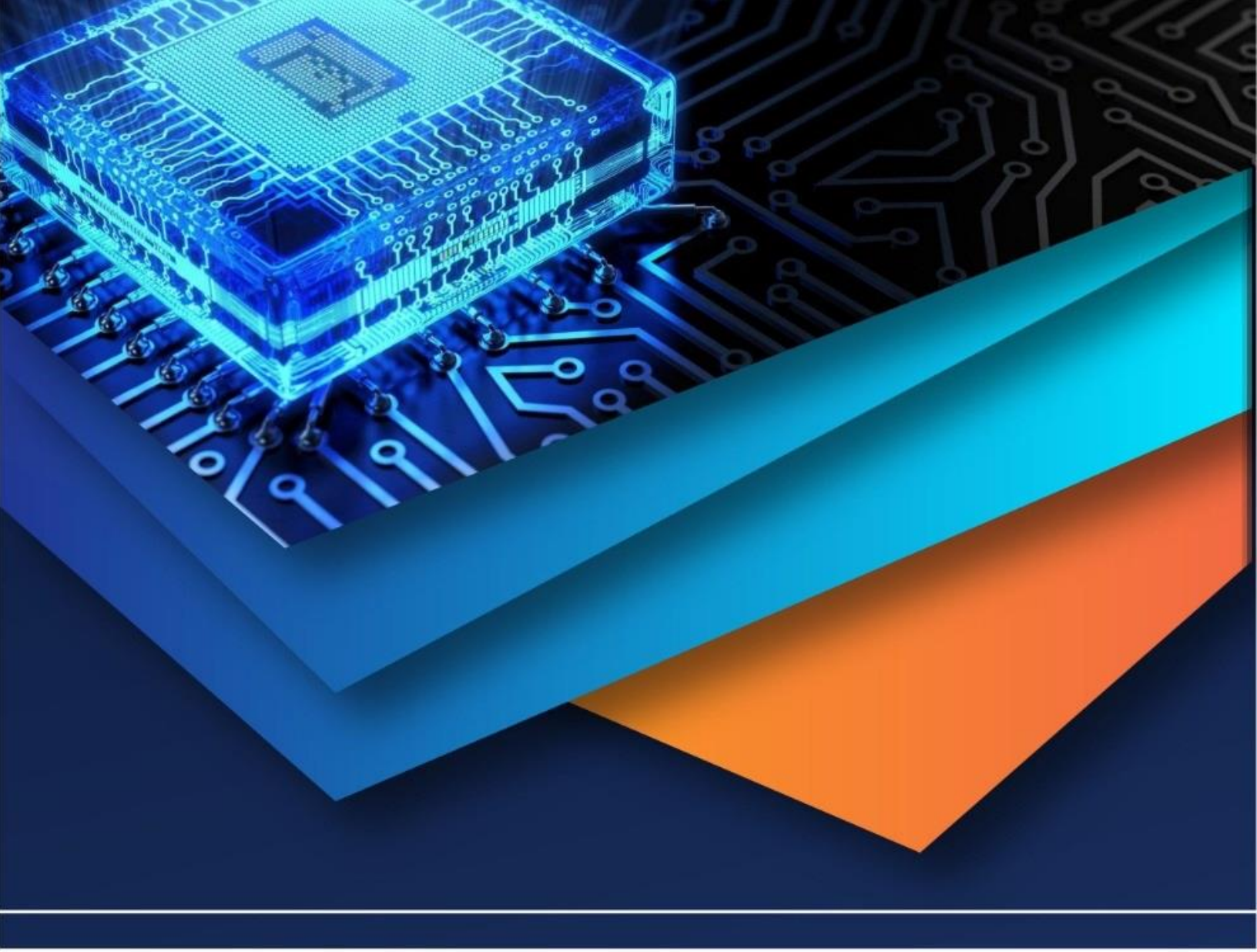
V. CONCLUSION

As indicated above, environmental management is a multilateral and multi-level action plan through which on one hand the causes of degrading environment are regulated and on the other hand the laws of nature are made behavioral. The natural quality of life can be maintained by reducing environmental crises. The quality of life lies in the well-being of the ecosystem. Therefore, two basic aspects are mainly included under environmental management of the ecosystem - (a) human actions, especially those related to socio-economic development and (b) ecological system which is necessary for a balanced ecosystem. Necessary measures or management for maintaining environmental quality have to be done on many bases and methods such as pollution control, proper management of resource exploitation, improvement in production technology, development of sustainable economy, proper management of wastes, assessment of future crises, measures for restoration of degrading environment, arrangement to face natural crises, legal system for environmental protection, measures for making environmental information accessible to public and behaviour oriented, national and world level programmes for environmental maintenance etc. Environmental management is a multidimensional programme whose ultimate aim is protection and maintenance of biosphere so that it can fulfill its responsibilities as Earth. Achievement of this objective is the contemporary need of today.

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