

Ilangovan, Er. M.E. "Eco System Approaches To Planning And Management" in Martin J. Bunch, V. Madha Suresh and T. Vasantha Kumaran, eds., *Proceedings of the Third International Conference on Environment and Health, Chennai, India, 15-17 December, 2003*. Chennai: Department of Geography, University of Madras and Faculty of Environmental Studies, York University. Pages 164 – 168.

ECO SYSTEM APPROACHES TO PLANNING AND MANAGEMENT

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Abstract

Planning is essential for any social development activities. Management is a powerful tool to monitor the planning programme. Planning and management are both sides of a coin useful for any individual development as well Social development. Planning and management so far undertaken by any Government or firm or individual has made positive and negative impacts in our Environment and Natural Resources. The exploitation of natural resources and the environment are being carried out in the name of economic and social development. Conventional planning and management has severely spoiled our water resources, air, land and forests etc. which are the basic resources for the well being of the Earth. But today the damages that have occurred on natural resources and the environment raise the following questions. What is wrong in the existing planning and management programme?, why the rivers and streams are affected?, What is the reason that hundreds of species of plants and animals are disappearing every day? And so on. The continuous degradation of environmental resources has made people more aware of the susceptibility of the Biosphere to human interventions. Hence a new environmental behavior is necessary in which quantitative demands and confrontation must be replaced by qualitative appreciation and co-ordination.

The Ecosystem approach will help in the planning and management programme as a balance must exist between technological development, and the conservation and improvement of the environment. The concepts of sustainable development are generally met with broad international acceptance, insisting us to pay attention to economic efficiency and equity, both with in and between generations. It is possible that both objectives – social and economical development, and conservation and protection of natural eco-systems can be achieved for future generations use with a new broad, scientific, socialistic and environmental planning and management approach in all sectors.

Introduction

For any Social development activities planning is very important. From a village to modern city every sector needs planning. Whether it be a Government Department, entrepreneur, farmer or the public, planning is essential for implementing the schemes for laying roads, construction of building and dams, digging bore wells, launching satellites, operating

transportation, producing food grains or for running an industry. Planning is a fundamental component for any implementation programme.

Management and Development

Management is a powerful tool to monitor, and for the success of, any planning programme. Periodical monitoring, review, sorting out the hurdles, co-coordinating with different disciplines and directing the persons involved in the implementing programme are certainly needed, and this is called Management. So planning and management are both sides of a coin most useful for the social and individual developments.

Here again when we say development of a nation or individual, it generally represents the economic growth rather than any other development. One individual or nation may have economic developments, technological development and social development.

The economic development is revealed in food production and the economic growth related development. The technological development may represent the development in medical, space, transportation, computerization and industrialization. The social development represents the equality among gender and people, the general status of the people with respect to education and other standard of the cultural heritage.

Traditional Approaches to Planning

All this planning, management and development are Possible if natural resources viz, good land, water, healthy forests, and good health of people are available. But today after 55 years of independence many villages and major cities are suffering for want of pure water, and pure air. The international and national news, scientific data from researchers are warning that if the same trend continues, after 10 years or 15 years India or major states of this country will suffer for want of water, food and other basic amenities, because of the uncontrolled damages and depletion of our natural resources.

At this juncture the question arises, what is wrong with our policies? What is wrong with the traditional planning, management and implementation programme? After independence our priorities were mainly to create infrastructure facilities such as irrigation dams, heavy industries and transportation facilities. Then in late seventies our target was mainly to eradicate poverty and encourage equality.

Being an agriculture country, the green revolution programme was launched in the late 1960's which resulted in more food production, and after 30 years we achieved self sufficiency. But today with this so called development, more production begs the question of whether these developments will be useful or will be enjoyed by the future generation. Whatever the resources today's generation enjoy is gift from our forefathers. Can the same status be maintained for the future generation?

So negative impacts were observed on land, water, air and human health, which are the basic resources. The developmental activities exploited the natural resources indiscriminately

and the results, pollution. How to find the solution to these pollution problems, ozone layer depletion, water pollution, air pollution, land degradation, deforestation, Global warming and green house effect which contribute ill effects to the people.

Ecosystem and Environment

Lack of understanding about the natural eco system resulted in the degradation of the natural resources. There are many definitions available for the Ecosystem.

Ecosystem was coined in 1935 by the Oxford Ecologist Arthur Tansley to encompass the interactions between Biotic and abiotic components of the environment at a given site. It was defined in its presently accepted form by Eugene Odum as follows:

Any unit that includes all of the organisms (i.e. the community) in a given area interacting with the physical environment, so that a flow of energy leads to the defined tropic structure, biotic diversity and material cycles (i.e. exchange of materials between living and nonliving parts) within the system.

Combination of Hydrosphere, Lithosphere and Atmosphere is called as Biosphere where living organisms can exist. The Biosphere has many number of eco systems. Each Ecosystem has its own boundaries, structures and functions which are compiled by a series of partially independent environmental factors, climate, soil parent material, topography, and the plants and animals available to colonize a given site.

Earth is a giant Ecosystem consisting of forest, grass land, desert and terrestrial eco systems and fresh water systems such as river eco systems, pond eco systems, marine eco systems, and aquatic eco systems.

Until some 40 years back all the above Eco systems were not disturbed by man. Man is a part of the biosphere and depends on its continued out coming for its own existence. He can modify or even destroy any one of the Eco systems.

Green plants capture sunlight and combine it with chemical raw materials from soil, water and air. The food produced supports all animal life including the decay organisms which return it to the soil for plants use once more.

Thus the continued production of plant materials, whether wild or cultivated is the basis for the nutritional support of man as well as all other animals. The continued functioning of green plants is the source of atmospheric oxygen on which man and other animals depend. The continued functioning of the reducer organisms is the means by which the chemicals in human wastes or in the bodies of plants and animals eaten are made available for further use by living things. A breakdown in any of these biospheric systems would imperil human survival. Man

has been able to take major risks in modifying local ecosystems and he cannot afford major risks in dealing with the functioning of the Biosphere.

Ecosystem Management

Ecosystem Management (EM) is a new concept that has germinated within the past decade has increased in popularity across the United States and Canada. The definitions that have been given for EM, though varied, fall into two distinct groups. One group emphasizes long term ecosystem integrity, while the other group emphasis an intention to address all concerns equally, be it the economic, ecological, political or social, by actively engaging and incorporating a multitude of stakeholders in the decision making process.

EM is a new way to make decisions about how we humans should live with each other and with the environment that supports us. The traditional resource management style was to focus on mainly species with economic value, its exclusion of the public from the decision-making process, and its reliance on outdated ecological beliefs. The traditional management has its own demerits within the State and Central agencies, academia and environmental organizations. EM, as its name makes clear, concentrates on managing at the scale of an ecosystem. Alternately traditional resource management has tended to focus only on one or a handful of species, especially those species that have a utilization or more specifically economic value. In EM all significant biotic and abiotic components of the system, as well as aspects such as economical factors, are ideally reversed and the important ecological data is incorporated into the decision making process.

EM is Holistic Approach

The Ecosystem Management approach of more collaborative and inclusive decision making style ideally fosters a wiser and more effective decision. This happens because, as the decision team works towards consensus, personal relationships are established, trust may form between parties and ultimately people are more likely to support a decision or plan that they helped to create. Ecosystem Management attempts to transcend the traditional antagonistic relationship between authorities and the public. The Ecosystem Management approaches are adaptive in nature to meet the changing requirements of dynamic ecosystems. The ability to adaptively manage is a crucial aspect of Ecosystem Management, one that is not incorporated in traditional resource management. As stated, the traditional management style emphasizes one or a few species and believes that ecosystems are more stable. So, one only needs to view how a particular species fares to determine the necessary management practices. Little monitoring is conducted and previous management practices are rarely altered. In Ecosystem Management, management practices are constantly reviewed and adjusted as a result of ongoing data gathering and the goals articulated by the decision as planning team.

Any country is comprised of mini ecosystems and macro ecosystems. The Ecosystem Management always paves the ways for the sustainable development. Even the change in the ecosystem with respect to the space and time will not be degrading the ecosystem. The liveliness of the ecosystem will always exist. In this Ecosystem Management approaches always consists of stable, logical and sustainable approaches. In the traditional management approaches the

planning programme is in an isolated form. But Ecosystem Management approaches the planning in collaborative, adaptive, flexible, logistic and sustainable ways.

In short, the traditional management approaches insists only economical growth matters, and they don't bother about the conservation of the environment and ecosystem. But the ecosystem management approach paves ways for both objectives - social economical development and conservation and protection of natural ecosystems for future generation in a sustainable manner.

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