



COMMUNITY PARTICIPATION ON RESTORATION AND PROTECTION OF LAKE TO PROMOTE ENVIRONMENT SUSTAINABILITY

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KEYWORDS :

INTRODUCTION:

Every individual is a part of the environment, and is connected to something else. Realization that man himself is only a threat in a vast universe is the beginning to understanding how insignificant he really is and yet how his actions have a capacity to upset the balance of the restoration and protection condition in which he may thrive or perish. Man has influenced the environment for as long as he lived throughout much of history. Lakes are life supporting system of the society. Some of the lakes have water only during the rainy season called as rain fed tanks and some lakes have water throughout the year called as system tanks. Lakes pollution is a common scenario due to urbanization and industrialization, so the water quality of lakes becomes unfit for the purpose assigned. Lake restoration is being practiced for several years by central and state governance and local bodies. Even many NGO and private firms are also involving in the restoration programme of polluted lakes. Some popular lakes in India viz Katchrali lake, Ooty lake, Kodaikanal lake and Hussain Sagar lakes restoration programme have been implemented in the past years. The restoration of polluted lake is easy in the rain fed tanks and seasonal lakes. From the past experience it has been observed that the restoration action plan consisting of desilting of lakes and strengthening of weirs and bunds. The present restoration approach adopted to restore the lakes as to be changed because of highly complicated pollution problems.

Review of Literature

Due to industrialization and urbanization, many problems such as alcohol related problems, drug abuse are increasing rapidly. Prostitution, sexually transmitted diseases, illegitimate pregnancy, marital discord and crimes of violence including child-battering has increased. Lack of parental love will result in juvenile delinquency." The suicide rate among the old age people had increased (R. Kumar, 1987). Culture or civilization, taken in its wide ethnographic sense, is that complex whole which includes knowledge, belief, art, morals, law, custom and any other capabilities and habits acquired by man as a member of society (Taylor, 1871). In recent years organic farming has gaining considerable importance. Several of them had begun switching to this and switching to this traditional method of cultivation as a means to produce safe foodstuffs and preserve the environment. The concept of sustainable farming has caught on in India. Since organic foods are free from chemical contaminants. India grows over 50 species. Total production is around 2.7 million tones, of this about 0.25 million tones (8 to 10 percent) is exported to more than 150 countries (National Institute of Industrial Research, 2001). The Green Revolution which occurred in India in the 1960s and 1970s was a major event in the world history. India not only became self-sufficient in food, but had also exported food. The farmers are now harvesting five tons per hectare. Fishing: As a result of restoration in the Parthipattu Lake in Avadi, the upper zone of the lake is more available for fish life, while the lower zone had some fishes. Therefore the fishing was possible in the lake. Several countries in Africa are in the "hunger-belt" has suffered from severe food shortage due to land degradation during the last two decades. Through desertification, humanity is rapidly losing ground in its struggle to feed the billions of people that are hungry (VK Prabhakar, 2002). The Sembadavan re-fishermen who fish only in inland waters such as rivers, lakes and freshwater tanks (ponds). They are mainly distributed in the Thanjavur, South Arcot and Madras Districts. Since aquaculture being intimately associated with agriculture and irrigation, the most serious threat to fishes comes from pesticides which are lethal both to the fish food organisms and the fish (National Institute of Industrial Research, 2001). The washer men communities in Tamil Nadu are called Vannan. The Vannan are the

people who render service to various groups of the society. But now a day in towns and cities, they are selective about their patrons. According to the survey carried out by several workers on selected stretches of some of the important lakes, it has been observed that the water of the most of the our rivers is polluted (S.K. Agarwal 2002). The organic salts present in the geologic materials of arid region can move into waterways and will be deposited on farms that use irrigated water and the salinity of the soil can buildup unless effective drainage is provided. This adversely affects the agriculture. Soil cannot last forever, by being blown by wind and eroded by rain sterilized by salts, poisoned by chemicals, leached of nutrients, or buried under "swamps" of buildings. Every year, soil erosion cause major food problem. The world's farmers lose about 24tonnes of top soil from their farms every year (VK Prabhakar, 2002). The use of pesticides had mainly affected the aquatic environment and it had entered the food chain (S.K. Agarwal, 2002). The contamination of air has caused many disease such as chronic non-specific respiratory disease, emphysema, lung cancer, Asthma and Coronary artery disease (R.Kumar, 1987). The water-borne disease causes four-fifth of all illness in the developing countries, with forty percent caused by infections and parasitic disease (V.K.Prabhakar, 2002). "Water-borne "diseases are those in which infection agent remains alive in drinking water. E.g. typhoid, Paratyphoid, gastro-enteritis. "Water-washed" disease includes infection of outer body surfaces. Eg. Tranchema, skin ulcers, scabies, typhus, bacillary and amoebic dysentery. "Water-based" infection occurs when the skin is in contact with water. E.g.: Schistosomiasis, swimmers itch and some 20 million people experience the agonies of guinea worm infestation. Water breeding or water proximity diseases are caused by mosquitoes or flies living near aquatic conditions. Eg: Liver blindness or Onchocerciasis, Yellow fever or sleeping sickness, Malaria and filaria which affect more than 250 million people all over the world (R. Kumar, 1987). High fluoride concentration in water causes humped back. The concentration of lead in water causes neurophysiological effects influencing hearing ability and general behavior in children. The concentration of nitrate in water causes infantile methaemoglobinaemia; It is a blood disease. Hardness of drinking water is invariably correlated with death rate from cardiovascular diseases. Excessive levels of pesticides affect the functioning of liver, could affect cholesterol level and might impair the development and functioning of nervous system (S.K Agarwal, 2002).

Ways of Pollution Control in Lake Restoration:

The slogan "Polluters Pay" is quiet an effective approach in environmental management. Deterrents in the form of efficient charges, payments, taxes, etc. Can be included within the economic policies world (V.K.Prabhakar, 2002). Pollution control is costless. labor and capital go into the making and operation of antipollution devices, and resources so used are not available to produce other goods and service. The cost of pollution control is a straight forward application of the alternative cost principle. (D.P. Tripathy, 2002). The environmental education is being carried by National Council of Educational Research and Training (NCERT) and University Grants Commission (UGC), both at school and college level respectively (T.M. Joseph, 2002).

People Participation:

People participation can be defined as a continuous, two-way communication process, which involves promoting full public understanding of the processes and mechanisms through which environmental problems and need are investigated and solved by the responsible agency, keeping the public fully informed about the status

and progress of plan formulation and evaluation activities and actively soliciting from all concerned citizens their opinions and perceptions of objectives and needs and their preferences regarding resource use and alternative development or management strategies and any other information and assistance relative to plan formulation and evaluation. Public participation is important because it involves both information feed-forward and feedback. Public involvement is an effective way of avoiding confrontation and the early involvement of the public in planning proposals can lead to improved project design, public may provide useful information to decision makers, especially when some values or factors cannot be easily quantified. This increases public confidence in the agency. Public participation can also serve as a safety value by providing a forum for pent up feelings. Finally, through public participation the agency is forced to be responsible to issues beyond those of the immediate project. (VK Prabhakar, 2002)

Various Methods of Lake Water Restoration and Protection:

Rain is perhaps the most primal source of water but has unfortunately lost its place as an option to meet water needs. The simple technology of using rainwater has declined, and in its place exploitation of rivers and groundwater through dams and tube wells have become the source of water. There have been revival initiatives, but interest in this resource need to be regenerated.

Recharge Pits: Roof top water collected can be directed to a pit excavated just under a drain pipe. It is filled with stone jelly and coarse/fine sand. It is suitable for sandy soil.

Recharge through Open Dug Wells:

All the drain pipes of a house/building can be connected by a pipe and the roof water may be directed this pipe to open dug well. Existing used/unused open dug wells can be used for this purpose. The collected water has to be filtered through a sand filter tank before letting into well.

Irrigation Tank: It is a reservoir to store water for irrigation constructed using the locally available materials. It is generally located at a place of natural depression. It may be as well along a stream or close to a river course.

Recharge Ponds: It is a pond constructed to store water at an identified suitable place by excavation. The excavated soil is used to form a close bund around the pond. It is smaller than irrigation tank, since the quality of water to be stored is small. The stored water may be used for drinking or bathing or for religious purposes as in the case of a temple tank.

Farm Pond: It is a small pond excavated at a suitable location of a farm to store water for irrigation. The capacity is decided on the basis of its requirement; may be store water for life saving irrigation or may be to store water for completely irrigating a crop of low water requirements.

Weir: It is a bund constructed along an identified contour line of suitable height to hold back the overland flow. The held water will help to increase the soil moisture of the area. It will help to reduce soil erosion otherwise taking place in catchment. It is highly suited for forest catchments and dry farming rural areas.

Afforestation: Afforestation is to increase the forest cover of a place by planting trees. It will retard the surface runoff to a great extent and hence will hold back the water for a longer duration, to increase the soil moisture, eliminate the soil erosion and to restore and maintain the natural ecology.

Role of Social Work in Lake Restoration and Protection:

"Humanity has no money to extract water from dry lands but it has money to look for water in mars"

Social Work Profession, over a period of time has undergone and still is undergoing changes in its philosophy, approaches and ethics. Its goal of addressing the problems of individuals, group, community and society at large is being addressed in a variegated manner in keeping with changing scenario of present times and in view of changing complexity of problems. One such new dimension is to understand the desirability and possibility of associating problems of human beings vis-s-vis physical environment. Environment Social Work is an emerging field, as social workers like other environmentalists can work towards addressing the problems confronted by human beings as a consequence of environmental degradation and other related issues. Thus social work has a role to play in ensuring environmental

protection as environmental protection is necessary for sustainable development. Social Work having the objectives of facilitating and empowering people for their development strongly believes in sustainable development. Mary Richmond way back in 1922 itself acknowledged the physical environment as an important contextual consideration for Social Work practice.

The observations and declarations made in the Conferences and by Social Work Associations have highlighted the role that social work has to play in protecting environment and equally focusing on all components/ dimensions of environment, and not just social aspect. For example the National Association of Social workers (NASW) delegate assembly in 1999 proclaimed that 'Environmental exploitation violates the principle of social justice and is a direct violation of the NASW code of ethics' which led to further deliberations on policy for Social Work interventions in this sector, the improved and better environment is a pre requisite for quality of life. The deterioration of environment should be the concern of social workers as the detonation affects the quality of life.

Social workers can serve as catalysts, - as by definition, catalyst means 'an event or a person causing a change'. Social workers have worked and are working to effect a positive change in the lives of people by facilitating change in them. What is required now is, they should use the environment for positive change and work on in building/incorporation environmentalism in social work profession and in development sector. Social workers can be involved in the following

- a) Creating awareness: Social workers can play an important role in advocating the cause of Environment protection and Sustainable Development. They can do it by sensitizing the public, policy makers and all stake holders of development sector (including social work activist) on various positive dimensions of environmental protection specially its relative relevance and to some extent its inevitability for sustainable development.
- b) Social Workers are expected to address social issues related to development and environment. They can effectively do it by creating critical awareness on the importance of protection of natural resources and biological diversities and control of environmental pollution, and finally stabilization of human population and environment. Welfare and development of people is associated with the utilization of resources.
- c) Social workers can/may develop familiarity with protection issues and programmes both at micro and macro level. For example, over the past three decades the Government of India has launched a large number of environmental health programmes like

- Ganga Action Plan – reducing water pollution in the ganga
- Malaria Control Programme – using bio-organic techniques in Malaria eradication
- Water Technology Mission – Providing safe drinking water to water scarce villages.

The Social Workers can mobilize community resources, participation for these programmes by not only creating awareness about the importance of these programmes but also by making them partners of such development initiatives.

- d) Many of the problems and ill effects of environmental degradation can be effectively addressed/ mitigated by adopting a policy of sustainable development. Sustainable development is defined as 'the development that meets the needs of the present without compromising the ability of future generation to meet their needs (UN 1990). According to Odette (1993) to achieve sustainable development involves a judicious use of natural resources such that the carrying capacity and the productive capacity are not overexploited.
- e) Interventions based on social work principles can be developed and implemented to deal with environmental issues like destruction of natural resources, global warming and climate change, toxic materials production and waste disposes and also air and water pollution. The intervention can be both for micro levels and macro levels problems (Chandrashekara, 2015).

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