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A sociological analysis of wetlands: A review of literature

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A sociological analysis of wetlands: A review of literature

1. Introduction

The relationship between the man and the environment or the ecological system is a pre-historic phenomenon that needs to be understood in order to grasp the nature of present environmental crisis. Since the very beginning of human social history, natural environment maintained a thorough integration with cultures and livelihoods of people. The ecological system was regarded a part of human life and humans in turn became a part of the environment and as a result, the early communities were particularly concerned in maintaining an environmentally friendly life style. This ongoing social interaction made people highly concerned about the environment and venerate nature with a great devotion. However, environment today no longer continues this harmonious relationship with the human society but poses a great danger to the life of people due to rapidly increasing environmental pollution and environmental crisis in the pathway to development adopted by the modern man creating a contradictory relationship between the man and the environment.

Sociologists are very much concerned about the interaction between the society and the environment. The concept of environment is studied by two sub-disciplines in sociology, environmental sociology and sociology of natural resources (Belsky, 2002). Throughout the history of humankind, human-being has been taking utmost effort to make his/her life more comfortable. In

this process human-being paved the path for an inconceivable level of environmental degradation. It is believed that both "over development" and underdevelopment" conditions have got direct or indirect link with most of the environmental issues (Jayakody, 2000). According to this argument the developed nations often try to make their life increasingly luxurious by consuming whatever they could obtain from the environment. Nevertheless, the poor nations damage the earth due to poverty and its effects on them. Therefore, both the luxury cultures and poverty conditions are important in understanding ecological systems like wetlands. According to Kotagama and Bambaradeniya (2006), The RAMSAR Convention defines wetlands as: "areas of marsh, fen, Peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed the 6 meters"

The Wetlands of Sri Lanka that fits into the definition given by the RAMSAR Convention could be divided into three broad categories:

- Inland fresh water wetlands (eg. rivers, stream, marshes, swamp forests, and "Villus").
 - Salt water wetlands (eg. lagoons, estuaries, mangroves, sea grass beds and coral reefs).
 - Man-made wetlands (eg. tanks, reservoirs, rice fields, salterns).
- Wetlands help maintain and im-

prove the water quality of our nation's streams, rivers, lakes, and estuaries. Since wetlands are located between uplands and water resources, many can intercept runoff from the land before it reaches open water. As runoff and surface water pass through, wetlands remove or transform pollutants through physical, chemical, and biological processes. Wetlands help protect adjacent and downstream properties from potential flood damage. The ability of wetlands to control erosion is so valuable that states and landowners are restoring wetlands to control shoreline erosion in coastal areas. Diverse species of plants, insects, amphibians, reptiles, birds, fish, and mammals depend on wetlands for food, habitat, or temporary shelter (Ramsar Convention on Wetland).

Although wetland is considered to be a natural eco-system made of habitants with permanent or temporary accumulation of water with associated floral and faunal communities, the socio-cultural, economic and political aspects of wetland is much more important than ecological system in the present scenario. Thus, sociological understanding and analysis is much needed not only for social scientists but for natural scientists and policy makers with regard to wetlands. The sociological analysis of socio-economic and political factors in terms of functions as well as threat of wetlands is crucial.



2. What is environmental Sociology

Environmental sociology is a study of societal-environmental sociologists typically place special emphasis on studying the social factors that cause environmental problems, the societal impacts of those problems, and efforts to solve the problems

(Dunlap and Catton, 1994). Most environmental problems have a real ontological status despite our knowledge and awareness of them stemming from social process by which various conditions are constructed as problems by scientists, activists, media and other social actors (Hannigan, 2006). As results, environmental problems must be understood via social process; despite any material basis they have external to humans. An important development of this sub-discipline was shifted from "sociology of environment" (study of environmental issues through the lens of traditions of sociology) to an "environmental sociology" (study of the reciprocal interaction between the physical environment, social organization and social behavior).

Human-environment (culture-nature) relations are central focus of what is generally known as ecological anthropology. Ecological anthropology investigates the ways that a population shapes its environment and the subsequent manners in which these relations form the population's social, economic, and political life. It applies a systems approach to the study of the interrelationship between culture and the environment (Milton, 1996). The human-environment relations are mediated by culture has been fundamental to ecological anthropology. The nature of relation and role of mediation of culture can be conceptualized into three principles. They are: first, human beings adapt to and are shaped by their environment; second, human beings adapt their environment to suit their own needs

and determine or shape those environments; third, human beings interact with their environments in such a way that they shape each other (Ingold, 1992). When the culture is shaped by environment, it is known as environmental determinism on the other hand when environment is shaped by culture it is called as cultural determinism. Ecological anthropology was dominated by the view that environment shape cultures; it is not only that environmental factors determine cultural characteristics, but also that environments act on culture. Environmental determinism addresses the questions of how culture and cultural features originate, change, adapt and function (Milton, 1996).

3. Sociology of Natural Resources

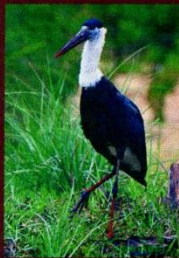
Although environmental sociology and sociology of natural resources seem to be much more equal, they are two different sub-fields of sociology originated and developed in two different historical paths. The divide between environmental sociology and the sociology of natural resources has been a long-standing one, reflecting the relatively distinct origins of the two branches used to study about environment (Benton, 1989; Dunlap, 1997; Murphy, 1994). The sociology of natural resources was a relatively well established area of work by the mid-1960s. The sociology of natural resources held at this time consisted of three very closely related groups of scholars. First, there was the growing cadre of social scientists (among whom sociologists were well represented) who were increasingly being employed by natural resource management agencies such as the U.S. Park Service, U.S. Forest Service, Bureau of Reclamation, Corps of Engineers and wetlands. Second, there was a sizable community of scholars interested in outdoor recreation, many of whom would become active in editing

and publishing in the *Journal of Leisure Research and Leisure Sciences*. Third, there was a significant group of rural sociologists interested in the sociology of resource-oriented rural communities and in rural natural resource issues; these rural sociologists, along with many resource agency social scientists and social scientists interested in outdoor recreation, joined groups such as the Natural Resources Research Group of the Rural Sociological Society (Buttel, 2002).

These sociologists of natural resources were interested in matters pertaining to effective resource management, in more rational and socially responsive policymaking by resource agencies, in enhancing the cause of resource conservation, and, in the mid-1970s and after, in social impact assessment of natural resource development projects. Later, these sociologists of natural resources would expand their institutional networks to include the International Association for Impact Assessment and the International Symposia on Society and Resource Management. Most present sociologists of natural resources engage in fields such as forestry, wetlands, wildlife, range management, fisheries, environmental studies and development studies. On the other hand, environmental sociologist, mostly as academic engage in studies related to environmental attitude of people, environmental movements, environmentalism and environmental risk and health problems. Therefore, the theoretical perspective that are found in environmental sociology as well as sociology of natural resources are very useful to understand the socio-cultural, economic and political aspects of wetlands and the socio-environmental problems of wetlands.

4. Livelihood and wetland

Wetlands are vital to life - they provide water for our basic needs and our economic prosperity. In the developing world millions of people rely entirely on wetlands for their livelihood



decision makers often lack awareness of the interconnection between functioning ecosystems and people's livelihoods and between environmental degradation and poverty. Wetland management has to integrate environmental perspectives with livelihood benefits, especially the sustainable production of food. These approaches are seldom integrated in decision-making processes that establish management procedures. Socio-economic and biodiversity data are often not available to support decision making.

In large part world, the livelihoods of the rural poor are disproportionately dependent on crop and animal agriculture and other natural resources – notably, forests, fisheries and genetic diversity – as well as the underlying environmental services that sustain these resources. Recent reports from the World Resources Institute (2005). Household income that is dependent on natural resources – “environmental income” – comes from a wide diversity of agricultural sources, both in cultivated settings (cropland and some grazing) and “wild” or uncultivated sources, including forests, fisheries (marine and inland), wetlands, and natural grasslands. More than 90 percent of African agricultural production is estimated to come from small-scale producers. At least 90 percent of the world's poor have been estimated to be dependent on forests and wetlands for at least some of their income (World Bank, 2002).

Common property resources are typically allocated under customary property rights and tenure systems that provide rules governing the rights to and use of resources. Open access resources lack such rights and rules and are open to all. Common property resources have, in many cases, been sustainably managed for generations, but where tenure systems are weakened or where governance and enforcement mechanisms are ineffective, they may be used and exploited in a *de facto* open access manner. Access to these resources – including many forests, fisheries, marine resources, grasslands, etc. – is important to the livelihoods of the poor in many countries. Common property resources were found to contribute 15–25 percent of household income in India (Jodha, 1986). But it is these same resources that are often under

the greatest threat in many countries as a result of population growth, intensification of production and resulting environmental degradation, resource appropriation for state or private use, and the frequent lack of effective governance systems. Poor households dependent on these resources thus face an additional challenge to sustaining their livelihoods due to the lack of ownership and control they enjoy over these resources on which they are so dependent (World Resources Institute, 2005).

5. Socio-cultural aspects of wetlands

The socio-cultural aspects of human life are closely related to nature. Sometime we find it difficult to separate culture from nature because culture is an integral part of nature. According to cultural anthropologists, it is the environment (climate) that influence in the advancement of civilization, religious beliefs, rituals, kinship pattern marriage and political system of a community who live within a particular geographic area (Huntinton, 1924). This way of conceptualizing the relationship between environment and culture, often referred to as ‘possibilism’, appeared to offer an acceptable alternative to the view that the environment directly causes cultural features (Milton, 1996).

The natural beauty as well as the diversity of animal and plant life in many wetlands makes them ideal locations for recreational activities and, in the best-known places, (eco) tourism. Many of the finest sites are protected as National Parks or World Heritage Sites and are able to generate considerable income from tourism and the array of activities available. In some countries the resulting revenue is a significant component of the national economy (Ramsar Convention on wetlands). Many countries in the world make billions of income and provide thousand of employment opportunities by wetland base tourism and make use these profits for even the conservation of those wetlands. However, unsustainable tourism and recreation developments are a significant cause of wetland loss and degradation in many parts of the world. Sri Lanka is found no exception in this regard. For example, wetlands such as Madu ganga estuary, Mahaweli river basin and

some lagoon areas are being damaged due to unsustainable tourism.

In Sri Lanka, wetlands such as rivers and floodplains have been the cradle of historic civilizations. The man-made wetlands in Sri Lanka, especially the ancient irrigation tanks and rice fields, clearly highlights the rich cultural heritage associated with wetlands. It is generally believed that Indo-Aryan immigrants started rice cultivation in Sri Lanka more than 2500 years ago (Hearath, 2009). This was a period at which a settled civilization developed in the dry zone and an elaborate irrigation system was established for rice cultivation. Rice fields are characterized by the presence of a standing water body, which is temporary and seasonal. Hence, flooded rice fields can be considered agronomically managed marshes. They are temporary and seasonal aquatic habitats, managed with a variable degree of intensity (Bambaradeniya, 2002).

6 Politics and wetlands

In the present world, the site of natural resources such as water bodies, forest and wetlands have become the places of conflicts and social discrimination due to politicization of natural resources. Whenever we come across disputes over the natural resources which are collectively enjoyed by people in the past, there is a link of power relation or connection of politically manipulated power structure planted in the society (Mahees, 2010).

Third world political ecology examines the political dynamics surrounding material and discursive struggle over the environment in third world. The role of unequal power relations in constituting a politicized environment is a central theme. Particular attention is given to the ways in which conflict over access to environment is linked to system of political and political and economic control first elaborated during the colonial era. Studies emphasize the increased marginality and vulnerability of the poor as an outcome of such conflict. The impact of perception and discourses on the specification of environmental problems and intervention is also explored leading to debates about the relative merits of indigenous and western scientific knowledge (Bryant, 1992). It is important

to study the nature of state of third world in order to understand political ecology as well as the impact of third world democracy on environmental problems. According to 'Soft State Theory' by the famous Swedish economist Gunnar Myrdal (1968), a state passes laws, but does not put them into practice, not only because of loopholes therein, but because nobody in the Soft State accepts the rule of law. The flabbiness of the State encourages corruption and rampant corruption adds to softness. The soft state conditions of Sri Lanka also have been responsible for many life-long environmental problems. The misuse or abuse of wetlands is leading issue in our country. The violation of environmental rules of Muthurajawela wetland and construction of building in the reservation area of it is timely example for political patronage of loss of wetland in Sri Lanka. Some theorists (political sociology) claim that democracy reduces environmental degradation. Others argue that democracy may reduce environmental degradation or may even harm the environment (Li and Reuveny, 2006). Although, there are no proper empirical studies done on the democracy and its negative impact on Sri Lankan forester and wetlands, the popular democratic practices beads on electoral party politics, there are enough of cases where people have been settled with the indirect support of politicians in the reservation or buffer zones of wetlands in Sri Lanka.

According to Spencer (2007), the third world has seriously disorganized every aspect of human society and the politics by the name of democracy itself playing supportive role for many violation and corruption to happen in every social life. There is a kind of patron-client political relationship prevailing in Sri Lanka. People at both rural and urban set up maintain this patron-client relationship with politicians for all their day-to-day activities (Mahees et al, 2009). This kind of political power relationship based on the democratic party politics always negatively impact on sustainable use of natural resources such as wetlands, forest and other water bodies.

7 Conclusion

Wetland is an important eco-system which is closely linked with the socio-economic and political aspects of people. Wetland and its functions have to be understood in terms of socio-economic and political perspective equal to the ecological functions.

The interaction between the community and wetland is very important to comprehend the functions and dysfunctions of wetland in a broader and subjective manner. It is important to emphasize the socially constructed realities in connection with wetlands more than the scientific reality that brings out ecological significance of wetlands. Although we have ecologically determined culture, it is always reproduced by mass society with support of media. The symbolic consumption patterns, the poor knowledge about life supporting ecological system, the environmentally less sensitive popular culture and changing political power relationships have damaged the subaltern relationship between the people and wetland.

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