SOCIOLOGICAL ISSUES IN SUSTAINABLE FOREST MANAGEMENT

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ABSTRACT

In recent times a lot of attention has been focused upon how to improve the environment which has suffered severe degradation due to neglect and misuse. Concentration upon the natural resource base without due consideration of the human population that depends upon those resources, however, has led to interventions that were not sustainable. Development efforts to reverse the trend of deforestation, among other environmental problems, must be sensitive to the fact that people, especially in the rural areas, are dependent upon the forest resources that they exploit for ensuring household food and economic security. There is a tradition of forest resource exploitation in rural African communities for the benefit of the local residents, based upon social norms and beliefs leading to land tenure systems, gender relationships and social stratification systems. In addition to these social factors is the present lack of viable alternatives to these traditionally used resources. At the same time, environmental degradation has had serious consequences upon the lives of the rural inhabitants, particularly women, who spend more time and effort securing these critical resources. Population growth has similarly affected the demand for more timber and non-timber forest resources. Interventions to improve forest management must take these social issues into consideration for a sustainable solution to environmental problems.

Key words: Environmental degradation, population, forest resources, socio-cultural.

INTRODUCTION

Sustainable development, in terms of environmental considerations, is "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Rodda, 1991). The emphasis in this view of sustainable development is upon people's needs and whether the environment can meet those needs at an acceptable level at the present time as well as in the future.

Importance of socio-cultural factors in natural resource management

Investigations have shown that rather than viewing natural resources as "theirs for the taking", rural people recognize that the land, and what goes with it, is their sustainer of life. Although they depend upon land and its trees, plants and animals for food and income, they do not consider the land to be a "commodity" which can be bought or sold in an impersonal market. They view land as a substance with sacred meanings in social relations which define people's existence and identity" (Davis, 1993). It is not unusual for rural African land owners to look with surprise at a researcher who asks about land sales. Often such a question as "Have you ever sold any of your land?" will receive a response like, "How could I sell my children's inheritance?" At the same time, however, they face severe stresses in meeting their needs and still maintain their traditional land use and natural resource management strategies (Davis, 1993).

Before considering what interventions are needed, it is important to recognize the fact that traditionally, natural resources and their management have always been part of the

African way of life. A complex web of social norms (what is generally practised), social beliefs (what is generally accepted to be so) and social values (what is generally held to be important) interwoven with survival requirements define the pattern of action to be taken. Indigenous knowledge about natural resources management has enabled rural residents to survive what appears to the outsider to be a harsh and fragile environment. The unfortunate reality is that conditions such as abundant land, which gave rise to the indigenous practices, have been altered so that traditional practices such as fallow and shifting cultivation can no longer be followed in the way that made them previously quite successful.

Farmers may view the same trees as potentially useful or harmful depending on the field type and crops of the area. For example, farmers may weigh the benefits of trees conserving moisture in the dry season against the costs of attracting pests and diseases in the rainy season and decide to remove the trees from the field. At the same time, as Osakuade (1989) writes, the majority of farms still have native trees planted by forefathers or occurring naturally which have been spared for fruits, medicinal value, fodder or fuelwood, but very few farmers have intentionally planted trees at an officially acceptable rate.

The type and impact of social factors that affect forest management may vary from one ecological zone to another as well as among ethnic groups. People adjust their way of life and pattern of interaction relative to the environment in which they reside, particularly in the case of rural dwellers who are dependent upon that environment. Each society, however, develops its own distinct responses to natural challenges, formulating a socio-cultural framework, sometimes resembling aspects of neighbouring communities or different ethnic groups, but often demonstrating its own unique social character.

The cultural and ecological diversity in Nigeria is far greater than most other nations, particularly on the African continent. For this reason, efforts to develop strategies to encourage sustainable forest management must be sensitive to the social elements in the locality to ensure that they will not encounter cultural resistance in the implementation stage. Contrary to the often practised generalised plan for development which treats all localities as similar entities, the reality of social diversity requires flexibility in programme design and implementation.

Social factors affecting land tenure

Land use is affected by a variety of social factors that interact with each other, including population, land characteristics, land tenure, level of technology and users' ideas. The pattern of use tends to change in response to variations in any of these arrangements.

The basic factor that determines and guides people's access to land in contemporary African communities is the land tenure system. Prior to the emergence of the modern states in West Africa, the land tenure system in operation in most communities was `customary tenure'. The characteristic feature of this tenurial system was the absence of the concept of land as a marketable commodity, as discussed above, and the distinction between community's ownership of land at any given point within the framework of the rights of the community as a whole.

Traditional community control over individual land use, in the context of a subsistence type of agriculture, is one of the most important underlying objectives of this tenure system. The concept of customary tenure does not provide security of tenure to land users. It results in unequal distribution of land such that land shortages occur side-by-side with poor utilization of available lands.

Land tenure, or the societal arrangements over short or long term use of land by the members of the community, was traditionally guided by the view that land was owned by the community, allocated under the supervision of the community leaders and was based on the assumption that "land has no scarcity". The traditional land tenurial system has been undergoing many changes over the last few

decades due to commercialisation of agriculture, land degradation, increased population pressure upon the land and competing forms of authority over land allocation.

Governments in many developing countries have responded to the pressures upon traditional land tenure systems by nationalising the ownership of land and then allowing customary law to guide the use of some land with other lands allocated to private investors, political elites and public projects (Cleaver and Schreiber, 1990). This arrangement has been followed in Nigeria since the enactment of the Land Use Decree of 1978. Cleaver and Schreiber (1990) maintain that in many countries, this pattern has reduced, rather than increased tenurial security and incentives to invest in land conservation.

Land tenure is closely related to the social stratification system in a community (Olawoye, 1993). Each community is differentiated into social strata based upon indicators such as wealth, authority or influence, occupation, education, age, gender, ethnic origins, religion, and so on. The indicators of greatest significance may vary from one locality to another given the socio-cultural and historical characteristics inherent in each. In nearly all societies, particularly on the African continent, gender is an important determiner of the rights and conditions concerning the use of land and planting of trees.

An understanding of the social complexities affecting people's ability to use natural resources in particular ways is important. It is not sufficient to educate rural inhabitants about the need to plant trees if they are prevented from doing so by societal norms.

Reliance upon non-timber forest products (NTFP) by rural households

Rural households benefit in many ways from the forest. Randev (1988) lists six categories of benefits derived from forest products as follows: food, energy, shelter, cash income, raw materials for household industries and community integration through ceremonies and festivals performed in forest areas.

In the case of providing food, many of the forest products found in the forest areas are important nutritional additions for ensuring balanced diets and household food security. Fruits, nuts, leafy vegetables, honey, bush animals, mushrooms and so on are all significant for family welfare and providing some cash income as well, particularly for rural women who gather more than necessary for household consumption to sell the excess. Raw materials which will be woven into baskets and mats, shea nuts or locust beans that will be processed into oil and food seasoning, wood that will be used to make charcoal, as well as many other products will be sold to traders for urban consumers.

Selling forest products is an important source of income for rural households, providing a supplement to the economic status. In the lives of the generality of rural residents, dependence upon several combined and seasonal activities is the only way to ensure household food and economic security (Olawoye et al, 1994).

Both men and women obtain income in some manner from forest and common land, but in different proportions of their total earnings. Poorer women rely most heavily upon "free" resources and are the most severely affected when their access to forest products is restricted (FAO, 1990). The socio-economic status of the members of the household is significant in determining the types of activities already engaged in, as well as the impact that different types of interventions would have on poorer or better-off rural households.

The case of fuelwood is of special importance due to the amount of deforestation caused by its exploitation and to the attention it has received by researchers and development agencies. Ouattara et al (1989) report that since cooking fires account for much of the wood consumed in Africa, many believe that trees can be saved if women have more fuel-efficient ways to cook. This has led to promoting the use of fuel-efficient stoves which are based on the principle of concentrating heat in the stove instead of allowing it to escape, thereby requiring less fuel to cook a meal. Floor and Gorse (1988) estimate that open fires burn wood at only 13%

efficiency while some researchers give efficiency estimates of as low as 5-8%. Charcoal burned in an open fire operates at about 18% efficiency (Floor and Gorse, 1988). The urgency of reducing this waste is, therefore, clearly understood.

Use of fuel-efficient cooking stoves has, however, been received with mixed reactions, somewhat caused by lack of consideration for social factors and social motivations of potential users. Some of the reasons for the lack of enthusiasm over adoption of the stoves have been identified by Floor and Gorse (1988) as:

- Little attention has been given to the size and material of the pots used by the women;
- The role and perception of the consumer has not been clearly understood;
- An insufficient number of stoves have been disseminated within a given period of time to really have an impact upon reducing deforestation; and
- Most programmes have been started in rural areas, where there is no perception of an energy crisis, while neglecting the urban consumers.

While the message for persuading women to use the stoves has usually centred upon saving energy, the message should rather focus upon convenience, comfort or time-saving. This is further illustrated by a study of the women's programme of the EEC supported Katsina Afforestation Project (KAP). Rural Muslim Hausa women in Purdah were encouraged to use fuel efficient cooking stoves, but upon investigation it was found that the stoves given to them for trial were unused. It was determined that the fuelwood saving incentive had little appeal to these women because their husbands were responsible for providing fuelwood for the household (NARDES, 1991).

Deforestation with its consequent shortage of fuelwood manifests itself in several ways in rural lives including increased requirements of time and labour to procure fuelwood and changes in dietary or cooking habits (Bagchi, 1987). The effect has been felt especially by poorer women. One adjustment has been to use fuels other than firewood. Bagchi (1987) maintains, however, that as the quality of fuel decreases, more time is required for preparation and tending of the fire, so women would rather go farther in search of better fuels. At the same time, when alternative fuel sources such as cow dung and crop residues are used for cooking, farms are deprived of an important source of organic fertilizer (Molnar and Schreiber, 1989).

Population dynamics and natural resources management

The characteristics of a population are of great significance to the use of natural resources in a locality. Population dynamics denotes a changing structure in characteristics such as population density and migration patterns. Demographers are interested in the causes and consequences of the population changes as well as the changes themselves. For example, high population density may cause some people in a locality to migrate out due to land scarcity, leading to changes in the number of people in the place of origin in addition to the place of destination. Such a move may also affect the ethnic composition of both areas, thereby altering social relationships depending upon the volume of migration.

The interrelated and mutually reinforcing conditions of rapid population growth, agricultural stagnation and severe environmental degradation have been identified as the major problems of Sub-Saharan Africa, according to Cleaver and Schreiber (1990). They maintain that the traditional land use patterns have not changed rapidly enough to handle the "dramatically intensifying pressure of more people on finite stocks of natural resources". More people require more food so that use of land for agricultural production must be intensified, leading to a deteriorating condition of the land and increased deforestation. As cleared land erodes or becomes less productive, less land is suitable for production resulting in increased population pressure upon better lands,

again causing them to be used more intensively (Cleaver and Schreiber, 1990).

Excessive population growth and densities are generally regarded as the main cause of deforestation in the tropics. A study by FAO (1993) has shown a strong similarity in the pattern of deforestation and land use pressure in Latin America, Africa and South East Asia. They were all colonized by European powers until the middle of this century. Colonization disrupted traditional and indigenous systems of tree, woodland and forest management. Shifting cultivation may be directly traceable to the undermining of traditional systems of tenure with regards to trees, woodland, forest, pastures, water sources and other land resources.

Kio and Abu (1993) have outlined the causes of pressure on forest lands in the tropics with particular reference to Nigeria and other West African countries. Factors identified include:

- The creation of forest reserves which led to the alienation of local communities from such reserves with the lack of proper management of the `free area'; and

- Shifting cultivation farming practised by the people and the prevailing land tenure system.

In most tropical countries, shifting cultivation is the main agricultural practice of subsistence farmers. In Nigeria, as much as 80% of the population live in the rural areas and are engaged in shifting cultivation. The situation is not much different in other West African countries. The practice of shifting cultivation is a vital factor that causes deforestation in West Africa and is still the major threat to the remaining forest land in the sub-region. This farming practice is said to havesocio-cultural linkages in all of the tropics, hence it will be quite difficult to curtail it. As long as the rural people remain poor and practice subsistence farming, they will continue to look for fertile lands to grow their crops to feed the family as well as for cash to meet other family needs. Governments in West Africa will find it difficult to sacrifice feeding their teeming population for conservation.

As population density increases, greater competition occurs for land and natural resources, including water, sometimes leading to conflicts between users such as nomadic pastoralists and indigenous cultivators. The reaction of the local population to conservation strategies is somewhat conditioned by demographic characteristics. Where there is perceived land scarcity due to the population/land ratio, the people resent that their land has been taken away from them, such as in the area of the Okomu Forest Reserve of Edo State where population density is very high. On the other hand, the residents near the Gashaka-Gumpti National Park in Taraba and Adamawa States are happy about the development of the park even though they can no longer farm or hunt in restricted areas. Land is plentiful in this sparsely populated locality and the people hope for improved roads and transportation to accompany the government intervention.

CONCLUSION

Experience has shown that without intervention to ensure their proper management, natural resources will continue to be used at a rate and in a manner that will deny future generations accessibility to the resources. With this consideration in mind, sociological issues are of great significance in finding appropriate and lasting solutions for sustainable forest management.

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