

Local Communities Involvement in Forest Policy Implementation: Case from Sudan

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Abstract: The aim of this study, was to provide for review, identification and discussion of opportunities and constraints facing community based natural resource management in the Sudan. Forest resources, excluding the protected area, cover over 25% of the total area of the country. These resources are however, not managed sustainably and have been subject to intense deforestation pressure. This situation has resulted, from neglecting community involvement, community basic needs in addition to inadequate funding of the forestry sector. In an effort to manage the forest resources sustainably, involvement of local communities is now being tried in a variety of collaborative forest management approaches thus empowering the communities. In this study, village-based forest management is described and case studies are cited. These case studies show that; empowerment of local communities has improved forest management considerably and has dealt effectively with other land use problems. The approaches are cheap and sustainable.

Key words: Community-based management, collaboration, forest policy, sustainable management

INTRODUCTION

General: Sudan is the largest country in Africa with a total area of approximately 2.5 million km². Equal to one-tenth of Africa. Sudan borders Egypt, Libya, Chad, Central Africa Republic, Democratic Republic of Congo, Uganda, Kenya, Ethiopia and Eritrea.

The population of Sudan is more than 29.5 million (1998). More than half of the population lives in about 15% of the country area. The population growth is nearly 2.7% per annum. The population density is higher in the north (72%) than south (28%), while the forest cover is in contrast with this, 32% in the north, and 68% in the south.

According to Harison and Jackson (1958), Sudan is divided ecologically into the following zones:

The desert: This zone covers the northern part of the Sudan with a total area of approximately 29% of the country. The rainfall is less than 75 mm per annum.

The semi-desert: The semi-desert zone lies south of the desert, covering about 19% of the country area. The rainfall ranges between 75-300 mm per annum.

Low rainfall woodland savannah: This zone covers nearly 27% of the country. The rainfall ranges between 300-800 mm per annum. This zone stretches from east to west between latitudes 10°-14° N in clay and sandy soils in addition to some hill catenas.

High rainfall woodland savannah: The high rainfall woodland savannah covers 13% of the area of the country. The rainfall ranges between 800-1300 mm per annum.

Montane forests: Four important montane masses occur in Sudan. These are; the Red Sea Hills, Jebel Marra, Imatong Mountains and Didinga Mountains, occupying less than 1% of the total area of the country.

The forests: According to land settlement and Legislation ordinance 1925, that all waste, forest and unoccupied lands were deemed to be the property of the government until the contrary was proved, while the right of use is not prohibited. The land Acquisition Ordinance of 1930 states more details on the acquisition right of use.

Almost all forests in Sudan either reserved or not are owned and administered by the State, but the latest introduced forest laws give room for the establishment of private or community forests.

The natural forest cover decreased from about 40% (Harison and Jackson, 1958) to 19.3% (FAO, 1990). According to (Warag *et al.*, 1998) the Forest National Inventory (1997) estimated the forest cover as 12%. However this inventory was confined to the low rainfall woodland savannah (Table 1).

The reserved forests constitute 3.6% of the total area of the country, while the reserved forests under sustainable management represents only 0.2% of the total natural forests (Mirghani, 2002, 1999). The plantation is

Table 1: Overall statistics of national forest inventory, FAO/FNC (1997)

Sector	Area inventoried (000) ha	Forest area (trees+shrubs) (000) ha	Area of forest with crown closure>10%	Average total volume of all veg.Cu-m/ha (000)ha	Total volume of all veg. Wood cu.m/ha	Average no. of trees/ha
Central	16,730	4,680	1,160	6.31	29,53	140
Eastern	6,310	2,100	240	1.54	3,234	41
River Nile	1,690	640	50	1.05	672	19
Darfur	18,320	13,180	4,310	6.76	89,096	62
Kordofan	19,650	10,780	1,730	2.26	44,218	32
Total	62,700	30,820	7,490		156,267	39

restricted to small areas in irrigated schemes, Jebel Mara area and small patches in Kordofan.

The Forest Consumption Survey (1995) showed that the total annual consumption of wood in Sudan is about 15.8 million m³. Most of this quantity is removed from the natural forests.

Forest management working plans were first started in 1928 in Sunt (*Acacia nilotica*) reverain forest reserves. This was followed by other working plans, but all were limited to reserved forests. In fact there is no concrete forest management plans for natural forests.

National policies: Prior to 1977 the issue of conservation of the natural resources was handled through establishment of protected areas as an activity rather than been part of holistic planning process. In 1986 the national economic conference recommended for the adoption of policies on natural resources, conservation, ecological balance, desertification control and environment planning. In 1991 The Higher Council for Environment and Natural Resources has been established with main mandate as co-ordinator in the field of environment and natural resources.

The national comprehensive strategy (1992-2002) represents a real progress in national planning towards integration of environment and development on national and regional levels.

In 1991 Sudan adopted the federal system where 26 states were established, followed by the 4th constitutional decree, which laid down the responsibility for the environment and natural resource under the new federal system. The aim was, to develop responsibilities and benefits sharing among the states, but still there were difficulties concerning co-ordination of activities of national nature (Mirghani, 2002, 1999)

Forest policy development in Sudan: The department of Wild land and Forests was first established in 1902. The main task was the protection and reservation of the riverine *Acacia nilotica* forests. The first forest policy statement was issued in 1932. This policy divided the forest into state and provincial forests. It calls for reservation of 15% of the country as forested area. The policy was followed by Royalties Order 1939 that regulates the exploitation of unreserved forests (Elsiddig, 2001).

The second forest policy was issued in 1986. In addition to the main objectives of reservation of the natural forests and protection of the environment, the stated policy includes establishment of community, private and institutional forest. This policy raised the goal of forest reserves to 20% of the country area (Forest Policy, 1986). The latest law was enacted in 1989 to enforce the policy of 1986.

In 1987 an extension services were introduced in Sudan by Forest National Corporation to develop awareness and to involve local people in the forestry activities. (Elmahadi, 2000)

Due to national and international agreements especially the Rio declaration, there is a proposal for new policy raised in 1997, which is now under process. This proposed policy calls for assignment of 25% of the country area as natural resources mainly forests, and to limit felling and use of trees to areas where regeneration is assured.

During the period since early 1980s international assistance introduced management practices inside the natural forest reserves based on projects concepts and local people participation with the objective of the forest rehabilitation and sustainable management considering people needs (Kobbail, 2005). Various organizations were involved including FAO, UNSO, SOS, and many other NGOS. Through the period from 1980 towards the end of 1990s, many experiences and lessons have been gained from development of projects activities in some forest reserves in central Sudan.

The experiences are presently known in connection with the names of the forest resources such as:

- Elrawashda natural forest reserve and the FAO project from 1980 to 1990 followed by the experience of the Agriculture Development for East Sudan from 1994 to 1999
- Elain natural forest reserve and SOS/FNC project in Kordofan (Western Sudan) 1990-1999, and others (Elsiddig, 2004)

Problem statement: More than 90% of the forest area in Sudan is natural. Many people with different interests and perceptions are living around these forests. Practically they are the main beneficiaries, that legally or illegally

using the forest resources. All the management activities executed within the natural forest reserves were based on forest legislation that prevent local communities from access to the forest and use of forest resources. This resulted in public misuses and consequently failure in achieving the objectives of the forestry development programs.

The forest policy started to call for sustainable forest management which considers collaboration with the local people. As a result of that, many attempts for management of the forests were made and new approaches have appeared (Osman, 2000).

Involvement of the local communities in the conservation, rehabilitation and management of forests is then becoming more acceptable way in bringing the national objectives into reality (Sulieman, 1995). Although the process of community involvement has already started but it is still at the piloting stage and the process has many failures and success which justify investigation for further development.

The objective: The objective is to examine the issue of involving local communities in the forest policy process to reveal the strengths, weakness, and opportunities for development.

DISCUSSION

As stated before, the forest policy issued in 1932 was mainly directed towards protection and reservation, with no room for involving local communities in policy formulation or implementation. This was attributed to the reason that, the government at that time didn't feel the need for this because:

- The forest resources was rich enough
- The utilisation levels at that time was limited

In Sudan, the population density is concentrated in the central part of the country, which imposed heavy burden on the existing forest resources. This area is a low rainfall savannah dominated mainly by natural forest stands varying in density from north to south according to rainfall amount and distribution. Ninety percent of the energy consumed in the country is biomass-based either fuel wood or charcoal. The increasing consumption of these resources resulted in deforestation, soil degradation and desertification. Later the growing issue of environmental conservation, protection, and biodiversity starts to come up due to the exponential increase in population size accompanied with an exponential increase in consumption of forest resources.

Local communities in rural areas have already recognised the value of natural resources and their vital role as livelihood capital for them and their livestock. This is witnessed by the existence of traditional and local rules and laws that regulate the use of resource and some times setting penalties for misuses (Kobbail, 1996).

After the introduction of the new policies 1986 which permit the establishment of community, private and institutional forests, the situation changed giving chance to:

- Involving communities in policy formulation.
- Communities can be involved in policy implementation through laws applications. As a result, local leaders and public committees are recognized as tools in policy implementation through local supervision and laws application. Even community local courts are recognized by forest law as authorised bodies.
- The communities and individuals make use of the new policy through establishment of community woodlots, which were mainly limited to areas with possibility of irrigation, growing Eucalyptus species (because it is characterised by a short rotation, in addition to that the timber has a good demand as building poles earning good prices). On the other hand private forests were starting to develop as business in the country.

Following the policy of 1986, the extension services were introduced in Sudan in 1987 to increase awareness of local communities towards forest activities, and it has been added as a subject in University curricula (Sulieman, 1995).

Mohammed (2000) stated that during the period of early 1980s management practices inside the natural forest reserves based on local people participation were introduced as pilot projects, with the objective of forest rehabilitation and sustainable resource management considering people needs. These experiences faced many failures and success.

The analysis of the following selected experiences may reveal some points to be considered.

Example 1:

Elrawashda natural forest reserve (East Sudan experience): The FAO (1990) fuel-wood development project in Sudan clearly defines the objective of rehabilitation of the forest through involving the local villagers. According to the plan the forest has been divided into five working circles, these are the village working circle, *Acacia senegal* working circle, protection working circle, Fuelwood working circle and fodder working circle.

The forest committee which was formulated by local villagers was involved in planning for rehabilitation of the Elrawashda forest, through replanting of trees in a taungia system inside the village Working Circle (WC), protection of the reserved forest against illicit felling, illegal grazing .etc. They have also access to grazing, water points and to collect forest products as agreed within the plan. Although the rehabilitation process was

based on mutual benefits between Forest National Corporation (FNC) and the community but the relationship did not consider the protection of the reforestation block after the end of the cultivation season.

Strengths: Communities were involved. Raised the awareness of the local community towards participatory forest management. It laid down a system for benefit sharing

Weaknesses: The area allotted for the village working circle is so small that it discourages full community participation.

The reluctance of nomads to stay in the fodder working circle lead to the failure in regeneration in other working circles.

Example 2:

Model I: A collaborative system with the local villagers based on a contract between the two partners (Forest National Corporation (FNC), ADES and local people) for the use of the forest land property.

The contract clearly defines acceptable criteria for land cultivation by the local people provided that they will replant trees. On the basis of the contract each farmer is offered a piece of land inside the forest such that 75% of it is used for crop cultivation and the remaining 25% for raising forest crop. The farmers are obliged to protect the young regeneration. This continued annually for four years until the whole piece of land is reforested.

Model II: Farmers are allowed to grow their crops within the forest reserve according to special contract approved by the forestry service and they pay rental cost, which used by the forest services for rehabilitation of forest reserves. This continued for 4 years then another piece of bare land within the forest reserve will be targeted.

Strengths:

- Communities were involved in the rehabilitation process.
- Involvement of people in tree planting raised their awareness towards trees and environment.
- Creation of Mechanism of benefit sharing.

Weakness: The model was an individual based rather than community based collaboration.

Example 3:

Elain natural forest reserve (Western Sudan): The FNC Elain natural forest resource project is a forest conservation system based on local community involvement. It incorporated the local people on participatory approaches with the objective of organizing people in the management process in order to minimize destructive illegal felling and to satisfy people needs from the forest products. The success of this system is reflected in a comparison between Elain where local people were

involved and Habile natural forest reserve which is under government control that prevents people access.

Elain forest has been put under management plan conducted as joint activities between FNC/SOS in collaboration with the local people. Habile forest on the other hand did not receive attention towards management other than the traditional management practices based on guarding, patrolling and policing executed by forest guards and officers to prevent access of the local people to the forest. In Elain forest, the management activities involving people is based on extension programmes and awareness raising, associated with the prescription of activities. Village forest societies, local leaders and village committees are among the most efficient local institutions that collaborated with FNC and SOS. The role of FNC is to facilitate extension service and technical supervision. Recent studies indicated that the majority of the people in Elain know that the local leaders are responsible for forest conservation and management compared with Habile where people showed lack of awareness and complete ignorance towards the managerial responsibility of forest conservation and management. Accessibility to enter Elain forest is efficiently organized in collaboration between local leaders, village forest society and FNC. At Habile forest this is not based on a system.

Strengths: Local communities were involved throughout the process.

Awareness raising

Local people were involved in organizing the right of use.

Weakness: Extension was not strong enough to meet the objectives of the plan.

Example 4:

Eldabba community forestry project: Edebba is located in the Northern region where all land use activities are confined on strip along the river Nile bank. The aim of this project was to involve local people to grow shelterbelts, wind breaks, to stabilize sand dunes and to protect farm lands and homes from burial by sand. Communities were involved in various stages of project such as planning, identification, feasibility study, project designing, project implementation and evaluation.

Strengths: The introduction of protective shelter belts through community participation.

Weakness: The issue of sustainability was not considered, mainly the irrigation cost.

Example 5:

Um Sunta model: Um Sunta is located in the White Nile State. The main activity of people is crop farming and livestock raising. This proposed model is based on integrated sustainable management system adopted by FNC, Plan-international, and the community. The people

inside and surrounding the forest are with different perspectives towards the environment, economic, social and cultural values of the forest. All stakeholders have to integrate their own interests towards the common goal of developing approaches to sustainable forest management.

The management objectives are to protect and maintain environmental stability, provide open grazing area for livestock and provide local people with their basic needs for forest/tree products. The forest area is divided into management blocks equal to the number of villages. The forest is divided into working circles: The protection working circle: where the main objective is to maintain a good ground cover. The fodder working circle: where the management objective is to provide grazing and dry season fodder.

CONCLUSION

Although recently local communities were involved in the new introduced policies still this new experience encountered some stories of failures and success which may require more development

- Local communities should be involved throughout the whole process, as involvement of local people in policy formulation is still weak.
- The mentioned models raised the awareness of the local communities, and encourage them towards development, and sustainable utilisation of forests resources. They were used as pilot project and not expanded to other natural forests.
- No flexible approach to meet the community needs as means towards participatory sustainable use of the forest resource, hence such approaches will need to be developed.
- Lack of integrated land use plans, within the policy context to involve different users of different perceptions and conflicting interests, make the involvement of local communities in policy formulation and implementation problematic.
- More training and extension campaigns among local communities to upgrade their capacities and to empower them to participate in forest policy process is required.

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