



The Contribution of Community Forestry Programmes to the Fulfilment of Local and National Goals in Sudan Case Study of Sennar State

Kouthur M.O. Abass^{1*}, Hag hamad Abdelasis², Mahir S.S. Khaleel¹

1. College of Forestry and Range Science, Sudan University of Science and Technology
2. College of Agricultural Studies, Sudan University of Science and Technology

*Corresponding Author: Kwthar mohammed@yahoo.com

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Abstract

The aim of this paper was to define the role and objectives of community forests establishment in Sudan, focusing on the expertise and experiences from development projects in the field forests. The study was conducted in Sennar State where different community forestry projects exist. A social survey was carried out in the study area and respondents were selected through simple random selection. A total of 56 respondents were interviewed in the study area. The data were analyzed by using the Statistical Package for Social Sciences (SPSS) for windows, version 18. The result of the study showed that private and village forests owners' are highly aware of forests cultivation. Results also showed that community forestry in the study area provides services to the community (water, electricity, and building of schools, health care centers). The study reveals that the forests were a source of income and all community members were involved in their management.

Keywords: community forests –participatory forest – social forestry

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Introduction

Community forestry started in the late 1970s, when the development strategies of the 1950s and 1960s that focused on industrial development were being criticized for overlooking rural development and not meeting the basic needs of the rural poor (FAO, 1978). The basis for what is now, the community forestry program, the program now represents arguably the most advanced and progressive Model worldwide for the participatory management of natural resources. Community forestry is defined as a situation, which intimately involves

local people in forestry activities (FAO, 1978). Defined community forestry in terms of control and management of forest resources by the rural people who use them especially for domestic purposes and as an integral part of their farming systems.

In Sudan, there are different options of the forest management, with special interest in the role of the community forestry .In the last few decades the forest land degradation, which is a result of misuse, led to increasing poverty in rural areas that led to increased pressure on forest resource. Forest fires, pests, and climate change are other causes of

degradation. Sennar State faces negative impacts on natural resources, particularly forest land. Abdallah and Ali, (2005) found that community Forestry (in its different forms) contributes significantly to the economy of the farmers. Farmers prefer exotic tree species like eucalypts at the expense of the indigenous trees due to their high market demand, fast growth and relatively small area needed by a tree compared to that needed by indigenous tree species. Sarre, (1994) reported that community forestry also offers opportunity to local people, who are often blamed for the destruction of the forest, to establish a long-term source of income.

The concept of community forestry or "forestry for local communities " aims at is a forestry contribution to rural development. This contribution is by furnishing the forest products and services required for rural development as biomass for energy, wood for construction and tools, food, for human nutrition, livestock, fodder and raw materials for small - sale industries. In the study area, the community forests play an important role in the income and life style of the households.

In the study area community forests established under the objective of involving the rural dwellers in decision-making processes of all forestry activities, these activities affect rural communities existence and raise the standard of their living in equilibrium with the environment. It also aims at transforming the local people into a dynamic citizen capable of contributing to a large range of activities (Sony, 2008). The aim of this paper is to study the role and objectives of community forests establishment in Sennar state

where different community forestry projects exist.

Material and Methods

The study was undertaken in Sennar State where different community forestry projects exist. The area is a part of the Savannah, mostly in the low rain-fall savannah sub- zone (low rain- fall savannah on sand) with annual precipitation of 300-600 mm/year in the northern parts, the southern part and some south western parts reach up to 800 mm or more. The rainy season starts in June and ends in October with a savannah type of distribution reaching its peak in August. The main physiognomic vegetation type is woodland savannah which generally reflects the semiarid climate. The vegetation is characterized by several *Acacia species* with important multi-purposes species. The area is inhabited both by settled and nomadic population, their economy is dominated by mechanized agriculture and seasonal wages.

Data sources: The data were collected from both primary and secondary sources. Primary data were obtained through both formal and informal interviews. The primary data were principally collected as assessment of community forestry activities in Sinner State, more specifically; the data covered the main items of the objectives of the study. The primary data were collected by using a questionnaire as well as group discussion to gather information from village leaders and key informants. The questionnaire was designed to obtain information on forest type, objectives of community forests, uses of returns and participation of gender. The questionnaire was administered to 56 respondents from the selected villages. Selection of villages was done according

to the distribution of the existing community forestry (village and private forests). 56 villages were covered and they represent 4 localities in Sennar State. The respondents were informed that, their contribution was on a voluntary basis and it was to support the community forests projects in the area.

Sources of the secondary data used in this study included previous inventories, projects documents, researches, published and unpublished papers, references, statistics and internet web sites of relevant studies. The secondary data were also collected from the reports, records and archives of the relevant institutions such as forest national commission (FNC) head office in Khartoum, Faculty of Forestry Sciences, Khartoum University and (FNC) office in Singa.

Sample size and selection of respondents in this study: Random sampling technique was employed for this study. This technique has the advantage of maintaining the representation of the desired variables. Besides, it makes it easier to compare variables and helps reduce the sampling error. Since a representative sample could be obtained from the accessible population, findings from the sample could be generalized (Glover, 2005). For statistically adequate sample size, the study followed what is mentioned by (Roscoe, 1975) who stated that selecting a sample size of 30 ensures the benefits of central limits of theorem (the phenomenon in which sample values village and private forests tend to be normally distributed around the population mean value). He argues that for most behavioral researches a sample size of 30 will be adequate. In this study 33 forests represent 10% of the total

village forests in study area, And 23 from forest represent 10 % of the total private forest, were selected.

Data analysis: The statistical analysis initiated through exploratory manipulations of the data obtained in the study area. This process was accomplished by critically examining the data through the use of simple techniques of analysis. The main tools are the construction of simple tables and selected cross-tabulation which allows tentative answers for many questions of the survey. Data collected were coded, computerized and analyzed on a personal computer (lap top) using the Statistical Package for Social Sciences (SPSS) for windows, version 18. Descriptive statistics is a useful analytical tool which enables the researcher to examine the characteristics, behaviour and experiences of the study participant (Harrison *et al*, 2004). In this study descriptive statistics including frequencies and cross tabulations were used to obtain the percentages to interpret the qualitative information collected from the respondents.

Chi-square test: This is a statistical tool used to compare observed sample frequency with expected frequency, to determine whether or not the difference between them is statistically significant.

Results and Discussion

Types of community and private forests: The results in Table (1) reveal that, in the private forests, there were no significant differences in types, where 17.4% were natural forests, 52.2% cultivated forests and 30.4% were mixture forests. While in the village forests, it was found that 28.1% natural forests, 31.1% cultivated forests and 40.6% mixture forests.

Table 1: Types in private and village forests

Forest types	Private forests (%)	Village forests (%)
Natural	17.4	29.1
Cultivated	52.1	32.3
Mixture	30.4	38.7
Total	100.1	100.0
Sig	Not sig	Not sig

The higher percentage of cultivated forest in case of private forests compared to village forests may be attributed to private forests owners' awareness toward forests cultivation. Raising the awareness of forests cultivation in private and village forests in the study area is essential, because they are the main sources of wood, food, forage etc.

Objectives of villages and private forests establishment in the study area:

Figure (1) shows that the objectives of villages and private forests establishment as perceived by the local people in the study area. 77% of the respondents' stated that the main objective of village and private forests was rural development, through provision of services (water, electricity, and building of schools, health care and centres). 80% of respondents said that their objective was income generation, 74.4% fire wood, 64% protection from wind, 64.5% for employment and 74% as source of forage. Awareness and skills in the

participatory and co-operation approaches in village communities help local people to build their capacities and help them to manage village and private forests by themselves. FAO (2006) reported that the aim of villages and private forests should involve the rural dwellers in decision making processes of all activates that affects their existence and raise their standard of living in balance with the environment. The objectives should aim at transforming the local people into dynamic citizens capable of contributing to a large range of activities particularly the management of their resources. Kobbail, (2011) and Bakheit *et al.*, (2005) added that the objectives of community forests fall into three main categories, economic, social, and environmental objectives. This agrees with FAO (2004) which stated that the involvement of local community in development activities strengthen their social relations due to mutual exchange of roles and work in group.

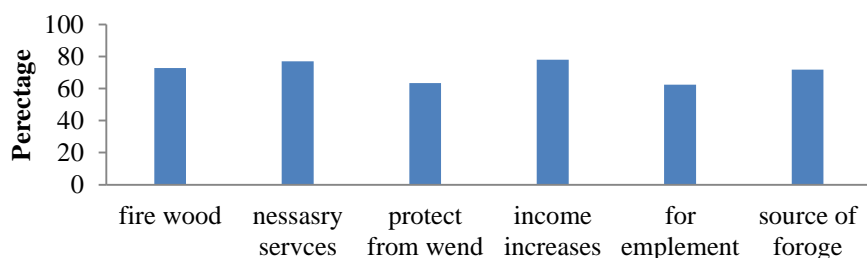


Figure 1: Objectives of village and private forests establishment in the study area

Uses of returns from the village and private forests: The respondents (Forest

owners) asserted that the decision of forests harvesting is always based on the

cash to solve problems in the village with special consideration to the age and volume of trees. Only under exceptional cases, the FNC allows harvesting before reaching their rotation cycle. Some respondents indicated that usually the trees are harvested when reaching their rotation age.

The majority of the respondents in the village forests said they use the income from forests in improving essential services for the society such as building

schools, founder's water station, electricity, selling up health centres, opening road. More than 70% of the respondents said they use most of the return for opening road and 55% for schools this explains the great importance of road and school in the life of local communities. Moreover the road can facilitate the movement and help to revive the economic situation; also some of the revenue is given to poor families (Figure 2).

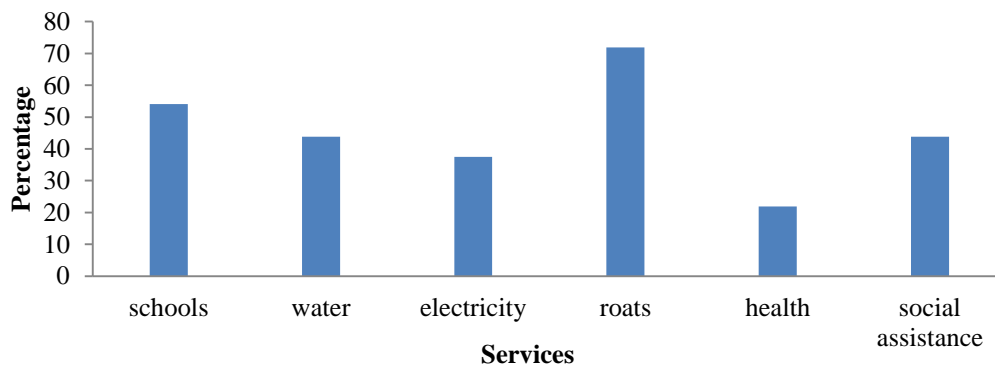


Figure 2: uses of returns in the villages forests

The results in Figure (3) reveal the uses of private forests income, 80% of the respondents in private forests said they use the income for reforestation, cultivating other land, orchards, animal

husbandry, improving standard of living of family, education and trade. These were the main objectives of investment in forests.

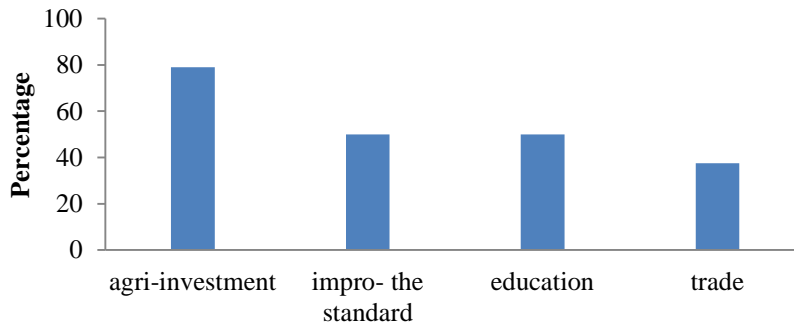


Figure 3: Uses of returns in the private forests

The participation of gender in private and villages forests: Figure (4) shows a very high significant difference at

$P < 0.001$ that most respondents 97% and 86.2% in private and village forests respectively, said that the participation

of men was high in silvicultural operations. In the rural areas of the Sudan, man is the main supplier of income and responsible for supply of food and most essential requirements of living for his family and he also took the responsibility of land cultivation. The role of women in the rural areas is to supply water, collection of fuel wood, cooking, looking after children and carrying out other domestic affairs (Kobbail, 2011) and Mustafa *et al*, (2001). The low contribution of women group in participation in forestry activities may be mainly due to the nature of activities like silvicultural

operation, guarding and harvesting. The children also have their contribution in both private and village forests activities, but in the past few years the number decreased because many of them go to school for education. Headly (2003) and Abdel Magid, (2008), reported that, it has been widely accepted that participation of local people is a prerequisite for sustainable forest management and it is recognized that the involvement of local people in forests management must provide real benefits based on their local and national participation.

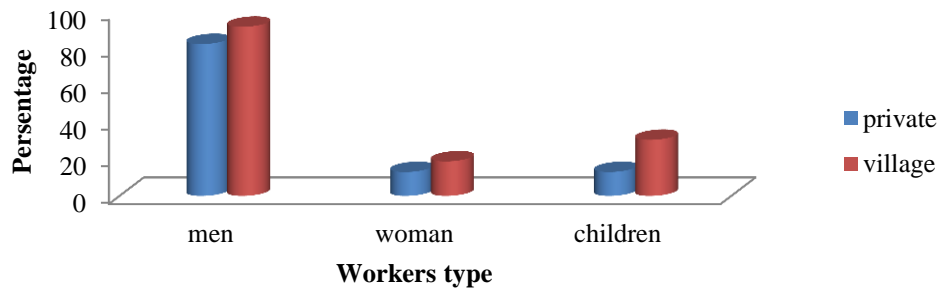


Figure 4: Participation of gender in private and village forests

The results of the study show that private and village forests owners are highly aware of forests cultivation. Results also show that community forestry in the study area provides fund for many services like (water, electricity, and building of schools, health care and centres and is a source of income and all community members were involved in the management of these forests.

Conclusions

This study showed community dependence on the forest in providing their needs and essential services. It also showed the effect of transforming the local people into dynamic citizens capable of contributing to a large range of activities. This study has also

indicated the preferences and actual needs of local people from their forests.

Recommendations

- Income generation activities, as they provide immediate and considerable income of basic services in the community, should be taken into account. Emphasis should be given to management of commercial products.
- Involvement of forest users in income generation activities should be encouraged. It contributes to create employment opportunities and reduce poverty.
- Further studies investigating total indirect benefits including ecosystem services and multiplier effects of community forests as well as respective

impacts on rural livelihoods and poverty alleviation are suggested.

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مساهمة غابات المجتمعات في تحقيق الأهداف المحلية والقومية في السودان : دراسة حالة – ولاية سنار

كوثر محمد عثمان عباس^{1*} و حاج حمد عبد العزيز² و ماهر صالح سليمان خليل¹

1. كلية علوم الغابات والمراعي، جامعة السودان للعلوم والتكنولوجيا

2. كلية الدراسات الزراعية، جامعة السودان للعلوم والتكنولوجيا

المستخلص:-

هدفت هذه الورقة الى تحديد دور و مرامي إنشاء غابات المجتمعات في السودان، مع التركيز على التجارب والخبرات المستفادة من مشاريع التنمية في مجال الغابات .أختيرت ولاية سنار لهذا الدراسة لوجود مشاريع مختلفة من غابات المجتمعات. أجري المسح الاجتماعي في منطقة الدراسة وتم اختيار المشاركين من خلال اختيار عينة عشوائية بسيطة. أجريت المقابلات مع مجموعة من أصحاب هذه الغابات (الخاصة - القرى) و كان عددهم 56 استبياناً. و قد تم تحليل البيانات باستخدام برنامج الحزمة الإحصائية للعلوم الاجتماعية (SPSS)، الإصدار 18. أظهرت نتائج الدراسة أن أصحاب الغابات الخاصة والقرى يدركون بشدة أهمية زراعة غابات المجتمعات. أيضا أظهرت النتائج أن غابات المجتمعات في منطقة الدراسة تقدم خدمات للمجتمع (الماء، الكهرباء، بناء المدارس، الطرق و مراكز الصحية). اوضحت الدراسة أن غابات المجتمعات مصدر لزيادة الدخل شارك جميع أفراد المجتمع في إدارتها.