

Opportunities and Constraints to Community Forests for Local Income Generation and Livelihood in Singa Locality, Sennar State, Sudan

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Abstract: *The objective of this paper is to examine the actual contribution of community forests to rural livelihoods in Singa locality including the relatively new goal of income generation to alleviate rural poverty. The researcher has adopted a range of methods to collect data like, structural face to face interviews, records and reports and observations. The data were collected from participants and non-participants in community forestry programmes. The study was carried in Sennar state (Singa locality). descriptive statistics were done for data analysis using statistical programme for social science software (SPSS). The study concluded that the majority of participants and non-participants in the study area obtained food and income from the farms and the sale of agricultural products. The study confirmed that the majority of participants are getting firewood from the market and the community forest provide part of the firewood and building materials, as well as the provision of loans from the forest money when people need it. For the non-participants they get their needs of firewood from the nearby markets. The study concluded that the majority of participants see the future benefit of the forest is in providing public services, protection, providing firewood and construction materials, protection of water resources, tourism, grazing animal and get a loan from the money of the forest. The non participants also confirmed the benefit of having the community forests in the future.*

Keywords: *Opportunities, Constraints, Community, Livelihood, Income, Generation, Singa Participants, Non-Participants, Strategy, Fuelwood, Benefits, Sennar, Sudan.*

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I. Introduction:

FAO (2016) defines community forestry as “any situation which intimately involves local people in a forestry activity”. This definition includes a wide spectrum of activities such as allowing local communities to completely manage their forests for local needs; giving them only token access to the economic benefits derived from the forest; protecting forest area for water; and processing of forest products to generate income for rural communities (Wangchuk, 2011). Community forestry generally involves three major activities including local decision making and control of an area (not volume) or forest land; local control of benefits including revenue and forest products and increasing local value added manufacturing; and maintenance of the long term ecological integrity of the forest ecosystem (Burda, 1997). Sudan rich in natural resources and has vast areas of natural forests. Despite this vast amount of forests, the pressure on forest resources remains high. In the past, forest resources were managed locally by rural communities for centuries. All forests were then seized in the (1930) and placed under the control of the Government of Sudan (Kobbail, 1996). Due to changing climatic and environmental conditions and pressure on resources, emphasis has been placed on participatory approaches and local benefits in forest management and has become apparent throughout the world, including Sudan and the study area. The process of reintroduction of rural forest management communities with supporting legislation began in the (1970) and early (1980) and the implementation of grass-roots forestry programs in rural areas began to become a key element in the country's environmental sustainability efforts and also led to improved livelihoods in rural areas (Kobbail, 1996). Grassland has a major role in increasing income and alleviating poverty in rural communities in the country. Most of Sudan's rural population live below the poverty line and depend directly on natural resources for their livelihoods. We find that popular forests are one of the ways that promise to solve the problems of poverty and therefore were among the strategies of the National Forestry

Commission. Many studies in the management of public forests have shown that public forests can contribute to increasing income for rural people through the sale of non-timber products as well as the sale of timber. Surveys and inventory suggest that the surplus timber can be sold in some rural forests in rural Sudan. However, there is little experimental information on the actual sale of timber and non-timber products from the public forests and their contribution to income generation and poverty alleviation (Younis at all, 2013). Furthermore, there is little in-depth information on household livelihood strategies for participants in general, or the reasons why some rural households are not involved in grass-roots forestry activities and what are the benefits of participation in popular forests. This paper attempts to cover these aspects (Mohammed, 2002). Third-world grassland emerged in the early (1970) after rural people suffered from fuel shortages, environmental degradation and food shortages caused by deforestation, known as community forests. In Sudan, in (1978) the United Nations Food and Agriculture Organization (FAO) established the People's Forests in order to raise the standard of living of rural people and to involve them in making decisions that affect their lives in Sudan. Guiding the forest and the harsh environmental conditions of droughts and the lack of abundance in the life requirements of the rural people after the rapid growth of the population during the last decades and their increasing aspirations, which led to increased exploitation of forests and thus led to the decline (Badi, at all, 2000).

II. Material and Methods:

In data collection several methods and tools were used where a questionnaire was designed to interview 60 (60 participant and non-participant households) from the total population of three selected villages; Massoudia, Tayibatan allhwyin and Khalil alkubraa. The questionnaire included information on personal data, the Socio-economic characteristics, livelihoods of participants and non-participants in the forest community and their perceptions of how to develop the forest Community in the area. Group discussion and oservation were used to supplement the information given by the respondents. The data analysed using statistical package of social science (SPSS) in addition to frequencies, percentages.

III. Results and Discussion

3.1 Socio-economic characteristics of the participant and non-participant respondents:

The results in (table 1) showed that, (73.3%) of the respondents were male while (26.7%) female. These results denoted to the prevailing social traditions and customs in which men have the leadership and cotrolover inside households in particular and in rural communities in general.

Table (1) Gender of the respondents:

| Sex | Frequency | Percentage |
|--------------|------------------|-------------------|
| Male | 44 | 73.3 |
| Female | 16 | 26.7 |
| Total | 60 | 100 |

Source: research survey 2013

The findings in (table 2) revealed that, agriculture, employees, free work, housewife and students were the main occupations of the respondents,(35%), (25%), (23.3%), (11.7%) and (5%) respectively. These results explained that, the majority of the respondents depend on agriculture as a main occupation to satisfy their needs particularly food security.

Table (2): Occupations of the respondents:

| Occupations | Frequency | Percentage |
|--------------------|------------------|-------------------|
| Farmer | 21 | 35 |
| Employee | 15 | 25 |
| Free work | 14 | 23.3 |
| House wife | 7 | 11.7 |
| Studant | 3 | 5 |
| Total | 60 | 100 |

Source: research survey 2013

3.2 Strategy of livelihood for participants:

Strategy of getting food for participated respondents:

The results in table (3) indicated that, (93.5%) of the respondents got their food from farms,(19.6%) from market,(6.5%) from trading, (6.5%) from household members and (4.3%) from salaries. These results showed that, the majority of the respondents rely on agriculture as a main source for food, and some of them selling some crops to get other needed products.

Table(3) strategy of getting food:

| Strategy of getting food | Frequency | Percentage |
|--------------------------|-----------|------------|
| From farms | 43 | 93.5 |
| From market | 9 | 19.6 |
| From trading | 3 | 6.5 |
| From household members | 3 | 6.5 |
| From salaries | 2 | 4.3 |

Source: research survey 2013

Strategy of getting food for whole a year for participated respondents:

The findings in table (4) revealed that, (65.2%) of the participated respondents have enough food for a year, (30.4%) having more than their needs while only (4.3%) have a shortage

Table (4) strategy of food for a year for participated respondents:

| Strategy of food security for a year | Frequency | Percentage |
|--------------------------------------|-----------|------------|
| Having enough food | 30 | 65.3 |
| Having more than their needed food | 14 | 30.4 |
| Having a shortage | 2 | 4.3 |
| Total | 46 | 100 |

Source: research survey 2013

Sources of income generation of the participated respondents:

The study in table (5) indicated that, (67.4%) of the respondents getting their income from crop selling, (37%) from hire,(32.6%) from free work, (15.2%) from abroad and (4.3%) from retired. These results dented to the agriculture as a main source of income generation.

Table (5) income generation of the participated respondents:

| Sources of income generation | Frequency | Percentage |
|------------------------------|-----------|------------|
| Crop saling | 31 | 67.4 |
| Hire | 17 | 37 |
| Free work | 15 | 32.6 |
| Abroad | 7 | 15.2 |
| Retired | 2 | 4.3 |

Source: research survey 2013

Ways of getting fuelwood to the participated respondents:

The rural communities depend completely on fuelwood as a source of energy. Meanwhile, (50%) of the respondents get the fuelwood from market, (34.8%) from community forest, (34.8%) depend on gas, (4.3%) from state forest and only (1%) from farms (table 6). These findings indicated to the essential role of the community forests in meeting the community's needs of energy

Table(6) ways of getting fuelwood to the participated respondents

| Ways of getting fuelwood | Frequency | Percentage |
|--------------------------|-----------|------------|
| From market | 23 | 50 |
| From community forest | 16 | 34.8 |
| From gas | 16 | 34.8 |
| From state forest | 2 | 4.3 |
| From farm | 1 | 2.2 |

Source: research survey 2013

Strategy of fuelwood needs for a year to the participated respondents:

The results in table (7) showed that, (58.7%) of the respondents have enough fuelwood for whole a year, (28.3%) have a shortage and (13%) have more than their needs.

Table (7) strategy of fuelwood needs for a year to the participated respondents:

| Ways of strategies | Frequency | Percentage |
|------------------------------|-----------|------------|
| Having the needed fuelwood | 27 | 58.7 |
| Having a shortage | 13 | 28.3 |
| Having more than their needs | 6 | 13 |
| Total | 46 | 100 |

Source: research survey 2013

Ways of getting wood building materials:

The study in table (8) revealed that, (91.3%) of the respondents get the needed wood for building from market, (15.2%) from community forest and (6.5%) from metals. According to the forest policy the local communities collect some forest products such as fuelwood, building materials and fruits through permission from FNC, in addition to building materials and other forest products from the community forest.

Table (8) ways of getting wood materials for building:

| Ways of getting wood for building | Frequency | Percentage |
|-----------------------------------|-----------|------------|
| From market | 42 | 91.3 |
| From community forest | 7 | 15.2 |
| From metals | 3 | 6.5 |

Source: research survey 2013

Benefits from participation of the respondents in community forest activities:

Table (9) showed that, (56.5%) of the respondents participated due to public services, (45.7%) to improve forest management, (28.3%) for fuelwood, (21.7%) for building materials, (21.7%) to protect community forest, (15.2%) to protect water sources and (4.5%) for loans. From group discussion the respondents mentioned that, they get the needed forest products through a permission from forest authority which need a long time, but the community forest represent a good alternative through a permission from a village committee and provided them with the needed forest products in kind of fuelwood, building materials, public services (establishing and maintenance of schools, clubs, water pipelines, mosques, and electricity etc), improving forest management and water sources and loans to local people from the community forest returns.

Table(9):Benefits form the participation of the respondents in community forest activities:

| Reasons for participation | Frequency | Percentage |
|--------------------------------|-----------|------------|
| Public services | 26 | 56.5 |
| Improveing forest management | 21 | 45.7 |
| Fuelwood | 13 | 28.3 |
| Wood building materials | 10 | 21.7 |
| Protection of community forest | 10 | 21.7 |
| Protection of water sources | 7 | 15.2 |
| Getting loans | 2 | 4.3 |

Source: research survey 2013

3.3 Strategy of livelihood for non-participants:

Strategy of food security and income generation for non-participants:

The findings indicated that, there is no difference regarding food security between the participants and non-participants, where (92.9%) of the non-participants getting their food from farms and (57.1%) from market. Moreover, (78.6%) of them generating income from selling crops, (65%) from free work and (40%) by hire. Mean while, (71.4%) having enough food, (21.4%) having more than their needs and (7.2%) having a shortage.

Strategy of fuelwood and building materials for non-participants:

The results in table (10) revealed that, (71.4%) of non-participants getting fuelwood from a market and (64.3%) from state forest and agricultural residues. In addition all of them getting building materials from the market and the state forest, Regarding the strategy of fuelwood, (50%) of the respondents mentioned that they have enough fuelwood,(35.7%) have more than their needs while only (14.3%) have a shortage.

Table (10): Strategy of fuelwood and building materials for non-participants:

| Strategy of fuelwood for a year | Frequency | Percentage |
|--|-----------|------------|
| Having enough fuelwood | 7 | 50 |
| Having more than their needed fuelwood | 5 | 35.7 |
| Having a shortage | 2 | 14.3 |
| Total | 14 | 100 |

Source: research survey 2013

The reasons of non-participant respondents in community forest activities:

According to an administrative plan there are criteria's for participation, where every family should be represented by a member otherwise it should be rejected. They should contribute in some activities such as: cleaning weeds, opening fire lines, establishing shelterbelts and protecting a forest. Mean while, (50%) of non-participants mentioned that, they were not participated due to their absence, (50%) to a nature of their work, (35.7%) to the programmer priorities, (35.7%) to other duties and (28.4%) to absence of job opportunity.

Benefits of the community forest to the non-participants:

The results in table (11) revealed that, the majority of the non-participants perceived that, the community forest provided them by public services such as: (electricity, shoolsand water etc), and potentially it can provide them by fuelwood, recreation and environmental stability.

Table (11) : Benefits from community forest as perceived by the non-participants:

| Benefits from community forest | Frequency | Percentage |
|--------------------------------|-----------|------------|
| Fuelwood | 12 | 85.7 |
| Public services | 2 | 14.3 |
| Recreation | 1 | 7.1 |
| Protection | 1 | 7.1 |

Source: research survey 2013

IV. Conclusions and recommendations:

The study found that The majority of the participants and non-participant respondents get their food and income from farms and selling of agricultural crops, The majority of the participants get fuelwood from a market in addition to part of fuelwood, building materials and loans from the community forest, the non-participants get them from markets, The majority of the non-participants not participated in community forest activities due to their absence, programmes priorities and other duties, In spite of that, they gained some benefits of forest products from the community forest and The majority of the participants get some benefits from the community forest including public services, fuelwood, building materials, protection of water sources, improving forest management, forest protection, forage and loans. The study recommends that The rural communities should make a good integration between agricultural and forestry activities and adopting agroforestry systems, The local people should have intensive and continuance training in community forest utilization based on their problems and needs and More researches should be done about challenges and opportunities of community forest to maximize income generation and improving livelihood of the local communities.

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