

# The Measurement of Women Contribution in Natural Resource Management Activities at Elshegaig Elgaalein Village, White Nile State, Sudan

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## Abstract

This study was conducted at Elshegaig Elgaalein village, White Nile state, Sudan. This paper aimed to measure the women contribution in natural resource management activities in the study area. Data were collected using questionnaire responded 90 headed households in the study area, then data were analysed. Statistical analysis was done using (SPSS). Statically data was tested chi-square test. The finding results included that most of householders in this study were men and few were women. This study concluded that there was no significant different between men and women in the area of study in main source of income, member of committee, own agricultural land, get finance, access to pastoral resources, benefit from pastoral resources, access appropriate consumption fodder, participate in editing system, participate in decision making and community empowerment at 0.05 level, but there was a significant different between men and women in participation in community management activities at 0.05 level. Recommendations proposed were, women are essential in natural resource management, they are able to play important role in conserving resource and reduce the consumption, so non-governmental organizations, governmental institutions and all relevant to management of natural resources had to strength women institutions and maximise women benefits from resource management, raise their knowledge and empowered them to participate in all resource management stages and activities.

## Keywords

Natural Resources, Women Role, Empowerment, Gender Equity, Sustainable Development

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## 1. Introduction

The rural poor in developing countries remain directly dependent mostly on raw natural resources for their food and livelihood security. However, dependence on natural resources is contextualised within socio-cultural parameters and shaped by differences embedded in societies, such as power, age and gender differences. Gender issues are

increasingly attracting attention in the community-based natural resource management (CBNRM), policy making or project implementation where stakeholders question the relevance of gender in natural resource conservation, especially about attitudes. For instance, CBNRM fails to recognize the roles and differences between men and women

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about demands, access and control of natural resources and knowledge capacities. [5]

Rural women are key agents for development. They play a catalytic role towards achievement of transformational economic, environmental and social changes required for sustainable development. But limited access to credit, health care and education are among the many challenges they face. [10]

Natural resources are natural assets (raw materials) occurring in nature that can be used for economic production or consumption. [9]

Among rural households in the developing world, women are typically the primary providers of water, food, and energy. [4]

A lack of access to natural resources, including minerals, water and land, is often the underlying cause of many conflicts around the world. When managed properly however, as part of a peacebuilding strategy, these same resources can also be utilized, and their benefits shared to generate sustainable livelihoods that help guarantee peace and achieve sustainable human development. Women have the potential to play a critical role in this process, as they use and manage land and other natural resources, while meeting water, food and energy needs in households and communities. [11]

It is increasingly being recognised that women can play a key role in natural resources management as they have the knowledge and experience gained from working closely with their environment, and their analytical skills in their community can play a vital role in developing water and forest resources in a sustainable . [3]

Women use natural resources differently than men, which sets the stage for a variety of structural barriers. Differentiated resource use makes women vulnerable to economic, social and external environmental influences, especially in rural areas. [14]

Studies have shown that women and men often have different knowledge of plants, seeds and natural resource use, and that women's knowledge is often overlooked by planners and policy makers. Various initiatives have tried to overcome this bias and recognize and building on women's work with natural resources. [7]

Women should be empowered to participate in dialogue, mediation, and conflict resolution efforts, governance and decision making at all levels, and economic recovery and sustainable development. [1]

The Platform for Action imagines a world where each woman and girl can exercise her freedoms and choices, and realize all her rights, such as to live free from violence, to go to school, to participate in decisions and to earn equal pay for

equal work. [8]

Gender disparities remain persistent in Sudan. Women comprise only 23 percent of the formal economy, but 70 percent of the informal economy, with a majority of them engaged in agricultural production. [6]

Lack of sex disaggregated data and gender sensitive indicators on natural resource access, management and use is an important challenge to measuring disparities, establishing baselines, monitoring progress and designing gender responsive policy and programmatic responses. [2]

Gender equity is the process of being fair to women and men. [12]

It's now generally accepted that development policy and practice need to be gender-sensitive. This can help to ensure that projects and programs recognize the different roles and needs of men and women as well as the importance of their equal roles in identifying relevant problems, solutions, management and decision-making. And it can increase the chances that women receive a share of the benefits of development. [13]

When a woman has a personal account to store her own income, she can also gain more agency in her life. [15]

### **1.1. Objective**

To define the power been developed to the rural women especially in relation to resource management.

### **1.2. Importance**

Decision makers may understand development situation and the factors which affect women participation to achieve sustainability.

### **1.3. The Study Question**

To what extent had power been devolved to the rural women especially in relation to resource management.

### **1.4. The Hypothesis**

Power has not been devolved to the rural women especially in relation to resource management.

### **1.5. The Study Structure**

The study structured in the following sections: section one is an introductory section represent objectives, study importance, questions, hypothesis and structure. Section two represents the methodology which specifically describes area of study, sampling techniques, data collection, and data analysis methods Section three results and discussion. Section four conclusion and five recommendations.

## 2. Material and Methods

In order to investigate the contribution of women in natural range resource management in Elshegaig Elgaalein village, this study adopted social survey methods.

### 2.1. Study Area

This study was conducted at Elshegaig Elgaalein area, White Nile state. It is one of the largest villages at the White Nile Located Northwest of Dweim province. Administratively belong to Um Rimtaha unit. Its land is sandy where the trees and herb grow Most of its people work in rained agriculture, grazing and trade between the markets of the region and modern crafts such as construction work had emerged. It is about 70 km away from Omdurman and is commercially connected to the market of Omdurman. Ecological zones ranging from sub-humid to semi-arid, Average annual rainfall ranges around 300 mm. The rain-fed agriculture planted with sorghum, millet, and seeds of watermelon as cash crops.

### 2.2. Sampling Technique

The study covered one region namely Um Rimta include 9 villages got benefits from Sudan Sustainable natural resource management project. For similar social and economic

conditions and to reduce the cost and effort one represented village has been chosen namely Elshegaig Elgaalein which consist of 800 households. Simple proportional sample technique was followed to select the respondents, 90 households were selected and surveyed.

### 2.3. Data Collection and Analysis

Study targeted the pastorals depend on based community who live a rural life. The survey sample suffered low educational level and were surveyed with a very simple survey instrument (questionnaire). They were directly interviewed and all questionnaires were filled perfectly. The data were analysed Statistical analysis was done using (SPSS). Chi-square test used to estimate significance of differences between means to measure the significant differences between men and women contribution in resource management activities.

## 3. Results and Discussion

Table 1. reflected that there was no significant different between men and women in main source of income at 0.05 level.

**Table 1.** Sex \* main\_source\_of\_income Cross tabulation.

Sex		main_source_of_income					Total	
		agriculture	grazing	trade	other free work	job		help
Male	frequency	35 <sub>a</sub>	10 <sub>a</sub>	12 <sub>a</sub>	24 <sub>a</sub>	0 <sub>b</sub>	1 <sub>a, b</sub>	82
	percent	87.5	100.0	85.7	100.0	0.0	100.0	91.1
Female	frequency	5 <sub>a</sub>	0 <sub>a</sub>	2 <sub>a</sub>	0 <sub>a</sub>	1 <sub>b</sub>	0 <sub>a, b</sub>	8
	percent	12.5	0.0	14.3	0.0	100.0	0.0	8.9
Total	frequency	40	10	14	24	1	1	90
	percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sig		.646						

Source (field survey, 2018)

Table 2. showed that there was no significant different between men and women in member of committee at 0.05 level.

**Table 2.** Sex \* member\_of\_committee Cross tabulation.

sex		member_of_committee		Total
		Yes	no	
male	frequency	2 <sub>a</sub>	80 <sub>a</sub>	82
	percent	100.0	90.9	91.1
female	frequency	0 <sub>a</sub>	8 <sub>a</sub>	8
	percent	0.0	9.1	8.9
Total	frequency	2	88	90
	percent	100.0	100.0	100.0
sig		.829		

Source (field survey, 2018)

Table 3. showed that there was no significant different between

men and women in own agricultural land at 0.05 level.

**Table 3.** Sex \* own\_agricultural\_land Cross tabulation.

sex		own_agricultural_land		Total
		Yes	no	
male	frequency	73 <sub>a</sub>	9 <sub>a</sub>	82
	percent	92.4	81.8	91.1
female	frequency	6 <sub>a</sub>	2 <sub>a</sub>	8
	percent	7.6	18.2	8.9
Total	frequency	79	11	90
	percent	100.0	100.0	100.0
sig		.252		

Source (field survey, 2018)

Table 4. showed that there was no significant different between men and women in get finance at 0.05 level.

**Table 4.** Sex \* get finance Cross tabulation.

sex		get finance				Total
		very much	Sometimes	scarcely	no	
male	frequency	1 <sub>a</sub>	2 <sub>a</sub>	2 <sub>a</sub>	77 <sub>a</sub>	82
	percent	100.0	100.0	100.0	90.6	91.1
female	frequency	0 <sub>a</sub>	0 <sub>a</sub>	0 <sub>a</sub>	8 <sub>a</sub>	8
	percent	0.0	0.0	0.0	9.4	8.9
Total	frequency	1	2	2	85	90
	percent	100.0	100.0	100.0	100.0	100.0
sig		.915				

Sources (field survey, 2018)

Table 5. showed that there was no significant different between men and women in access to pastoral resources at 0.05 level.

**Table 5.** Sex \* access\_to\_pastoral\_resources Cross tabulation.

sex		access_to_pastoral_resources					Total
		very much	much	Sometimes	scarcely	i do not have	
male	frequency	2 <sub>a</sub>	1 <sub>a</sub>	37 <sub>a</sub>	19 <sub>a</sub>	22 <sub>a</sub>	82
	percent	100.0	100.0	94.9	86.4	89.0	91.1
female	frequency	0 <sub>a</sub>	0 <sub>a</sub>	2 <sub>a</sub>	3 <sub>a</sub>	3 <sub>a</sub>	8
	percent	0.0	0.0	5.1	13.6	11.0	8.9
Total	frequency	2	1	39	22	25	90
	percent	100.0	100.0	100.0	100.0	100.0	100.0
sig		.852					

Sources (field survey, 2018)

Table 6. showed that there was no significant different between men and women in benefit from pastoral resources at 0.05 level..

**Table 6.** Sex \* benefit\_from\_management\_of\_pastoral\_resources Cross tabulation.

sex		benefit_from_management_of_pastoral_resources					Total
		very much	much	Sometimes	scarcely	no	
male	frequency	4 <sub>a</sub>	3 <sub>a</sub>	31 <sub>a</sub>	18 <sub>a</sub>	26 <sub>a</sub>	82
	percent	100.0	100.0	96.9	85.7	86.7	91.1
female	frequency	0 <sub>a</sub>	0 <sub>a</sub>	1 <sub>a</sub>	3 <sub>a</sub>	4 <sub>a</sub>	8
	percent	0.0	0.0	3.1	14.3	13.3	8.9
Total	frequency	4	3	32	21	30	90
	percent	100.0	100.0	100.0	100.0	100.0	100.0
sig		.481					

Sources (field survey, 2018)

Table 7. showed that there was significant different between men and women in participation in community management activities at 0.05 level.

**Table 7.** Sex \* participation\_in\_community\_management\_activities Cross tabulation.

sex		participation_in_community_management_activities					Total
		very much	much	sometimes	scarcely	no	
male	frequency	3 <sub>a,b</sub>	14 <sub>a,b</sub>	33 <sub>b</sub>	9 <sub>a</sub>	23 <sub>a</sub>	82
	percent	100.0	100.0	100.0	81.8	79.3	91.1
female	frequency	0 <sub>a,b</sub>	0 <sub>a,b</sub>	0 <sub>b</sub>	2 <sub>a</sub>	6 <sub>a</sub>	8
	percent	0.0	0.0	0.0	18.2	20.7	8.9
Total	frequency	3	14	33	11	29	90
	percent	100.0	100.0	100.0	100.0	100.0	100.0
sig		.026					

Table 8. showed that there was no significant different between men and women in access appropriate consumption fodder at 0.05 level.

**Table 8.** Sex \* access\_appropriate\_consumption\_fodder Cross tabulation.

sex		access appropriate consumption fodder					Total
		allways	often	Sometimes	alittle	no	
male	percent	6 <sub>a, b</sub>	1 <sub>a, b</sub>	46 <sub>b</sub>	21 <sub>a</sub>	8 <sub>a</sub>	82
	frequency	100.0	100.0	97.9	80.8%	80.0	91.1
female	percent	0 <sub>a, b</sub>	0 <sub>a, b</sub>	1 <sub>b</sub>	5 <sub>a</sub>	2 <sub>a</sub>	8
	frequency	0.0	0.0	2.1	19.2	20.0%	8.9
Total	percent	6	1	47	26	10	90
	frequency	100.0	100.0	100.0	100.0	100.0%	100.0
sig							.081

Table 9. showed that there was no significant different between men and women in participate in editing system at 0.05 level.

**Table 9.** Sex \* participate\_editing\_system Cross tabulation.

sex		participate editing system				Total
		very much	Much	sometimes	none	
male	percent	4 <sub>a</sub>	1 <sub>a</sub>	3 <sub>a</sub>	74 <sub>a</sub>	82
	frequency	100.0	100.0	100.0	90.2	91.1
female	percent	0 <sub>a</sub>	0 <sub>a</sub>	0 <sub>a</sub>	8 <sub>a</sub>	8
	frequency	0.0	0.0	0.0	9.8	8.9
Total	percent	4	1	3	82	90
	frequency	100.0	100.0	100.0	100.0	100.0
sig		.836				

Table 10. showed that there was no significant different between men and women in participate in decision making 0.05 level.

**Table 10.** Sex \* participate\_decission\_making Cross tabulation.

sex		participate decission making					Total
		very much	much	sometimes	scarcely	none	
male	percent	4 <sub>a</sub>	3 <sub>a</sub>	11 <sub>a</sub>	3 <sub>a</sub>	61 <sub>a</sub>	82
	frequency	100.0	100.0	100.0	100.0	88.4	91.1
female	percent	0 <sub>a</sub>	0 <sub>a</sub>	0 <sub>a</sub>	0 <sub>a</sub>	8 <sub>a</sub>	8
	frequency	0.0	0.0	0.0	0.0	11.6	8.9
Total	percent	4	3	11	3	69	90
	frequency	100.0	100.0	100.0	100.0	100.0	100.0
sig		.614					

Table 11. showed that there was no significant different between men and women in community empowerment at 0.05 level.

**Table 11.** Sex \* community empowerment Cross tabulation.

sex		community empowerment					Total
		very much	to great degree	little bit	a little	none	
male	percent	5 <sub>a</sub>	49 <sub>a</sub>	18 <sub>a</sub>	3 <sub>a</sub>	7 <sub>a</sub>	82
	frequency	100.0	90.7	90.0	75.0	100.0	91.1
female	percent	0 <sub>a</sub>	5 <sub>a</sub>	2 <sub>a</sub>	1 <sub>a</sub>	0 <sub>a</sub>	8
	frequency	0.0	9.3	10.0	25.0	0.0	8.9
Total	percent	5	54	20	4	7	90
	frequency	100.0	100.0	100.0	100.0	100.0	100.0
sig		.646					

The table 11. showed that there is strong significant relation between sex and participation in community management activities at 0.01 level.

## 4. Conclusion

Most of householders in this study were men and few were women. This study concluded that there was no significant different between men and women in the area of study in main source of income, member of committee, own agricultural land, get finance, access to pastoral resources, benefit from pastoral resources, access appropriate

consumption fodder, participate in editing system, participate in decision making and community empowerment at 0.05 level, but there was a significant different between men and women in participation in community management activities at 0.05 level.

## 5. Recommendation

Based on the study findings, researcher recommended that women are essential in natural resource management and they are able to play important role in conserving resource and reduce the consumption, so non-governmental

organizations, governmental institutions and all relevant to management of natural resources had to strength women institution, maximise women benefits from resource management, raise their knowledge and empowered them to participate in all resource management stages and activities. Increasing rural women's access to agricultural extension and training is one vital area in which the Government should make a concerted effort.

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