

## WOMEN'S INVOLVEMENT IN FORESTRY PRACTICES AS LIVELIHOOD OPTIONS IN IGALAMELA /ODOLU LOCAL GOVERNMENT AREA, KOGI STATE, NIGERIA

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### ABSTRACT

*The study evaluates the involvement of women in forestry practices as a means of livelihood in Igalamela/Odolu Local Government Area, Kogi State, Nigeria. One hundred women were interviewed; 20 each from the five communities were purposively selected for this study. The data were collected using structured questionnaires, focus group interview and personal observations. The data was analyzed using descriptive analysis. The study revealed that 46 respondents practiced forestry through woodlots management, 33 respondents practice Home gardens system of agroforestry; 9 respondents practiced forestry through nursery development, 10 respondents practice boundary trees, while 2 respondents practiced Apiculture. The study also revealed that the practice of forestry through woodlots management, nursery development and home garden empowered rural women through the sales of forest products; increases and improve household food security and economic stability; arrest the situation of land degradation and deforestation; increases crop yield, and develop forestry practices in the Study Area. Therefore, evaluating the involvement of women in forestry practices as a means of livelihood in the Study Area cannot be over emphasized.*

**Key Words:** Forestry, Nursery, Woodlots, and Home garden.

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### INTRODUCTION

Forestry can be defined as the application of scientific knowledge to the management of forests and forest trees that exists either in its wild state or planted by individuals, group of people, or by the government for the continuous production of goods and services. The involvement of rural women in forestry activities has been ignored by planners and policy makers not only in Nigeria but also all over Africa (Adedayo and Oyun, 2010). Throughout Africa,

efforts are needed to train more women in forestry and natural activities in order to enhance their participation at all levels from grassroots to international policies (Williams, 2009). In Zimbabwe, women's groups manage forest resources and development project through woodlots ownership, tree planting, nursery development and woodlot management (IUCN, 2006). Their involvement in these forest practices was motivated by the numerous benefits their respective

households had to generate from such practices. Thus, benefits of forests and forest trees to households and community members, particularly women, for fuel wood, staking materials, and management for fruits, vegetables, seeds, soup condiments, herbs and income can draw their attention into practicing forestry. Other forest benefits like production of timber, poles, ecological restoration and micro-enterprise development can motivate community members into plantation forestry and woodlot production.

Rural women make livelihood from the collection and sales of forest products such as vegetables, fruits, soup condiments, staking materials, fodder, fuel wood, medicinal herbs and other products for sponge, basket weaving, brooms, and rattans. Therefore, they have greater stake in forest rehabilitation and management (Agbogidi and Okonta, 2003). Women carry out silvicultural operations on trees around their homesteads and those on their husband's farms, thereby contributing to sustainable forest management, environmental protection, and biodiversity conservation. Harris, (1996) stated that women are very active in afforestation practices and therefore champion communal forest management and development (Anyakoha, 1999). Women

are also actively involved in nursery development programmes (Agbogidi et al, 2005).

Home garden is a traditional land-use system where a mixture of multiple plant species, woody trees, and shrubs are grown, and livestock and poultry are undertaken on the same small areas of land around a home. According to Adedire (2005), home gardens are a form of multiple cropping practices that are adopted globally for means of living, especially in developing countries where farmers seek maximum food production from small areas of land. The population of developing countries depends largely on forest products and agriculture for livelihood. They urgently need development, to improve food security, reduce poverty and provide an adequate standard of living for the growing population (Ekpo and Asuquo, 2012).

The foregoing discourse shows that woodlots management, Nursery development, and the practice of home garden have potentials for improving the livelihood of the rural poor, and particularly women. The collective name for the above forestry practices is known as agroforestry; and according to Adedire (2004), agroforestry help in creating microclimates favorable for crop growth and material recycling to provide a more

complete ground cover which could help to protect the soil from erosion and moderate extreme temperatures.

The increase in the requirement of forest trees for various uses has resulted in the destruction of forest cover. The use of inorganic fertilizers by the farmers to increase crop yield also has negative effects on human and other species through biomagnifications. However, the importance of forests and forest trees in soil enhancement and soil protection, food security and health, biodiversity conservation, and environmental protection are imperative. Thus, nursery development for afforestation program; woodlots management; and agro-forestry system have the potentials to reduce deforestation; increase woodlots products, crop yield; and farmers' income, if properly practiced.

The Success of woodlots management, nursery development, and agro-forestry practices depend largely on the involvement of women. Women tend to maximize the utilization of natural resources for the family more than the men, who in most cases are interested mainly on how resources could contribute to their personal welfare (Agrawal et al., 2006). Unless the contribution of women to environment and natural resources management is recognized, encouraged

and supported, sustainable development would remain elusive (Conserve Africa, 2009). This study hopes to create awareness on how the involvement of rural women in the practice of forestry in the Study Area can improve the livelihood of households as well as improve ecological and environmental sustainability and general welfare of the society.

## **METHODOLOGY**

### **Study Area**

The Study Area is in Igalamela/Odolu Local Government Area of Kogi State, Nigeria. It lies at latitude 7° 10' 16" N and Longitude 6° 49' 35" E. It has an area of 2, 175km<sup>2</sup> and a population of 148, 020 (2006 Census). It is bordered by the River Niger in the West and Enugu State in the East. The communities within the Study Area are into farming, and they have homogeneous farming practices. The local population is engaged in farming and trading palm produce, maize, guinea corn, cassava, melon, bennie-seed, and live-stocks. They also produce honey, ogbono seed, and locust bean seed, mortar with pestle, charcoal, cotton weaving, and black soap using ash from indigenous forest trees within the locality.

The indigenous forest tree species commonly found in the Study Area are: *Vitex doniana*, *Irvingia species* (*Bush*

*mango trees*), *Adansonia digitata* (*Baoba trees*), *Parkia biglobosa* (*Locust bean trees*), *Prosopis gabonensis*, *Tamarindus indica*, *Azelia Africana*, *Mangifera indica*, *Lophira lanceolata*, *Anarcadium occidentale*, *Chrysophyllum albidum* (*star apple trees*), *Vitellaria paradoxa* (*shear butter trees*), *Cocos nucifera* (*coconut trees*), *Raphia hookeri* (*palm wine tree*), *Milicia excelsa* (*Iroko trees*), *Khaya senegalensis* (*mahogany trees*), *Kigelia africana* and *Daniela oliveri* .

**Sampling Techniques:** Five (5) farming communities were purposively selected in the Study Area and a total number of 100 women farmers were randomly selected for interviewed making 20 women farmer respondents each from Ajaka, Odolu, Ogbagba, Ofarachi, and Egabada communities within the Study Area.

The primary data were collected through structured questionnaire, focus group

interview and personal observations. The data was analyzed using descriptive analysis.

**RESULTS AND DISCUSSIONS**

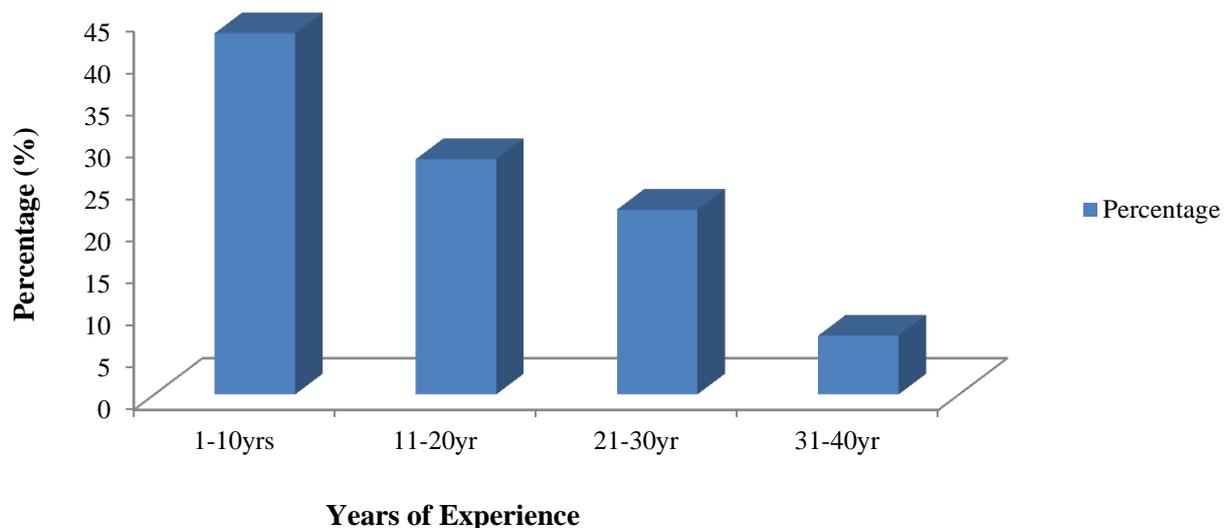
**Demographic Characteristics of the Respondents in the Study Area**

Demographic analysis was obtained through descriptive statistics which provides simple summaries about the sample and about the observations that have been made. According to Mann (1995), Descriptive statistics is the discipline of quantitatively describing the main features of information collected, or the quantitative description itself. Table 1 presents the summary of respondents' educational level, and age. Figure 1 presents farmers' years of forestry practices experience; Table 2 presents the kinds of forestry practices in the Study Area.

**Table 1:** Educational Level, and Age of the Respondents

Education	Respondents	Age	Respondent
Primary	74	21-30	16
Secondary	21	31-40	33
Tertiary	5	41-50	41
Total	100	51-75	10
		Total	100

**Sources:** Field Survey, 2014.



**Figure 1:** Years of Forestry Practices Experience of the Respondents

**Table 2: Descriptive Statistics of Forestry Practices in the Study Area**

		Woodlots Mgt.	Nursery Development	Home garden	Boundary trees	Apicultur e
N	Valid	5	5	5	5	5
	Missing	0	0	0	0	0
Mean		9.2000	1.8000	6.6000	2.0000	.4000
Std. Deviation		1.92354	.83666	1.67332	.70711	.54772
Minimum		7.00	1.00	5.00	1.00	.00
Maximum		12.00	3.00	9.00	3.00	1.00
Sum		46.00	9.00	33.00	10.00	2.00

**Sources:** Field Survey, 2014.

Table 1 show that 74 respondents had no formal education, 21 had primary education and 5 respondents had secondary education. The low level of education on the part of the women has made most of them to lack the knowledge of marketing strategies and as such reduces their profits to the middle men. It

also impaired them from getting adequate information needed to keep them aware of the latest development in forestry practices.

The age of the farmers ranges between 21-75 years. 16 respondents were between the ages of 21-30 years, 33 respondents were between the ages of 31-40 years, 41

respondents were between the age of 41-50years, and 10 respondents were between the ages of 51-75years. The result show that majority of the farmers (33+41=74 %) were between the ages of 31 and 50 years, which means forestry practices within the Study Area is characterized by matured women who are still very active. This presents forestry practices as a possible livelihood option for households in the Study Area as women are known to be active home makers dedicated to the welfare of their members. This study confirmed the report of Adekunle, (2009) which stated that people in this age group (31-50 years) are agile and gainfully employed in farming, hence their involvement in agro-forestry practice.

The result in Figure 1 shows that 43 respondents were into forestry practices between 1-10years; 28 respondents were into the practices between 11-20years; 22 respondents were into forestry practices between 21-30years and 7 respondents were into forestry practices between 31-40years. The summary shows that the highly experienced (31 to 40years) in these forestry practices are very few, meaning that most women took the forestry professions for granted for a very long time before getting to know the gains involved.

The result in Table 2 shows that 46 respondents were into woodlots management; 9 respondents were into nursery development; 33 respondents were into home garden system of agroforestry; 10 respondents were into boundary trees practice; and 2 were into the practice of apiculture. The result in Figure 2 shows that more women were into woodlots management due to its quantifiable and unquantifiable benefits derived from the practices, followed by home gardens, boundary planting, nursery development, and Apiculture. The results showed that women generate more income from the sales of the woodlots products, followed by home garden which the women realizes food and income through poultry and livestock production; fresh vegetables and fruits; seeds for soup condiments; fuel wood and staking materials from the trees, and income from the sales of the products.

The results also showed that there were few women in nursery development because there is no immediate income and food for household, unlike woodlots management that money can be realize from the sales of fruits, fuel wood and soup condiments on daily basis. They will have to wait for the seedlings to be ready for sales and this could take months depending on the species of trees. There are fewer women in apiculture due to the

hazard nature of bees and lack of income to invest in hives and harvesting materials.

### **Woodlots Management**

It was learnt from this study that women generates more than 75% of their income from the gathering, processing and sales of indigenous tree products such as *Parkia biglobosa* seeds, *Mangifera indica* fruits, *Irvingia gabonensis* seeds, *Anacardium occidentale* fruits, *Prosopis gabonensis* seeds, *Vitellaria paradoxa* seeds, *Vitex doniana* fruits, *Adansonia digitata* leaves and fruits, etc. The income realized from the sales of the woodlots products helps the women to provide for household food and improve on their livelihood. Women are the key to the development of Africa's resources (Williams, 1992).

**Nursery Development:** The study showed that nine (9) respondents were into tree nursery development to produce seedlings primarily for market sale. Tree nurseries provide income generating opportunities for the respondents and enhance their livelihood and technical capacity. They generate income from the sales of the seedlings to individuals, community organizations, government agencies, non-government organizations, and corporate or private customers.

**Home garden:** Home garden are reservoirs of agro-biodiversity in rural communities worldwide and in many

cultures, they are maintained by women (LEISA, 2004). Home garden is a way of producing poultry and livestock; fresh vegetables and fruits; seeds for soup condiments; fuel wood and staking materials, and income from the sales of the products by the women and these products are harvested within the homesteads when required. This rich diversity is important not only for household food security and economic stability but also for the earth of the ecological system (Leakey, 1999). The practice of home garden by women in the Study Area shows that the women are empowered through the quantifiable and unquantifiable profits derived from the practices with very low input investment and surplus output. Udofia, (2007) stated from his findings that between N3,000 and N7,000 were generated as mean monthly income from home gardens across the three agro-ecological zones in Akwa-Ibom State. An attractive feature of home gardens is their resilience in nutrient advantage and environmental services, thereby creating a harmonious two-way link between providing more food and the presenting sustainable environmental conditions (Udofia, 2011).

**Boundary trees:** Dwivedi (1992) stated that bounding trees are strips of trees or other vegetation planted on the edges of fields while it could also be used as

intercropping of trees or other woody plantation within farm crops to provide demarcation, or boundaries the woody species apart from preventing boundary disputes. Women have good initiatives in mitigating conflicts, seeking viable solutions and negotiating consensus in communal forest management (Walsum, 2002). Harris, (1996) stated that women are very active in afforestation practices and therefore champion communal forest management and development (Anyakoha, 1999).

**Apiculture:** The practice and management of bees in hives place on or around trees and shrubs. The women in study area that practice apiculture generate a lot of income from the sales of honey to those in urban areas and some agents from pharmaceutical industries. The women realize N21,500 from the sales of 25litres of honey and can harvest more than 240 litres every three months.

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## CONCLUSION

The benefits derived from forestry practices by the women in the study area include income from the sales of products produced from the forestry practices carried out by women in the study area, direct food such as fruits, vegetables, poultry, livestock, and soup condiments; improvement of soil structure, nutrients, and microclimate; and improvement in rural living standard from sustained income that is generated from forest tree products such as fruits, vegetables, soup condiments and increased live-stocks. Also the diversity in agro-forestry practices provides insurance against drought, reduces soil erosion, increases the economic returns to land and labor, and enhances nutrient cycling which makes the system sustainable.

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