

Traditional Livelihood Practices among Indigenous Dagomba Women of Ghana: A Study of Women of Sagnarigu

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Abstract: - The study is about traditional livelihood practices among indigenous dagomba women with particular reference to women of Sagnarigu, a suburb of Tamale in the northern regional. Using a cross sectional approach, the study explores the various livelihood practices adopted by women of Sagnarigu to sustain the lives of their families. The study found among others that the production and sale of vegetables was one of the main livelihood strategies adopted by the women of Sagnarigu; but this was not enough to sustain the women and their families all year round. As a result, the women-farmers had to engage in other livelihood strategies to complement their farming activities. The study also found that 92% of the women did not have any formal education and this to a large extent, limited their access to higher paying off-farm opportunities. The study concludes that the female indigenous farmers of Sagnarigu, augment their returns from vegetable production with income from other economic activities.

Key Words: Livelihood, economic activities, indigenous, families, sustainability

I. INTRODUCTION AND BACKGROUND TO THE STUDY

According to Aduse-Poku et al. (2003), the concept of livelihood has remained a subject of utmost importance due to its inevitable role to human existence. A livelihood is much more than a job as it covers a whole range of things people do to make a living. Recent increases in population and in technology across the world have brought about more variations in livelihood activities among communities, thereby further puzzling the livelihood concept. Most people especially in the rural areas of the developing world, obtain their means of livelihood from their immediate environments. Carney (1999) also argues that, the livelihoods and quality of life of the rural dwellers in Sub-Saharan Africa is affected or even controlled by a multiplicity of factors or contexts that make life for them almost a struggle for survival. These factors border on economic policies, agro-climate, environment, socio-culture, demography, infrastructure, services, governance and so forth.

Indigenous people

The term “indigenous people” is in itself a contested category of people; so too is indigenous knowledge. The former refers to “culturally distinct ethnic groups with a different identity from the national society, draw existence

from local resources and are politically non-dominant” (Melchias, 2001:35). The World Bank (1991) adds a development perspective by stating that indigenous people are social groups with a social and cultural identity distinct from the dominant society that makes vulnerability to being disadvantaged by the development process. The UN has no universally accepted definition but thinks indigenous communities, peoples and nations are those which, with pre-invasion and pre-colonial societies that developed on their territories, consider themselves distinct from other sectors of the societies now prevailing in those territories, or part of them (Cobo, 1987). There are some common grounds from these definitions. Indigenous people are people living in an area within a nation-state, prior to the formation of nation-states, but identify with it; and have maintained a great part of their distinct linguistic, cultural, social and organisational characteristics. These differentiate them in some degree from the surrounding populations and dominant culture of the nation-state. It would make sense to note that, for this claim to be valid, others must see such groups as indigenous. Found mainly in areas where they have lived for thousands of years, indigenous people inhabit nearly a fifth of the planet. Contemporary discourse on who is an indigene has led to the talk of “autochthones” that are indigenous inhabitants and “non-indigenes”, or migrant settlers. The cloudy atmosphere surrounding the definition of indigenous people also explains the variance in estimates of their members. Estimates show that between 300 and 500 million indigenous people speak a vast majority of world languages and represent the majority of cultural diversity we must preserve for posterity (Melchias, 2001).

The International Labour Organisation (ILO) convention 169 concerning indigenous and tribal peoples in independent countries adopted in 1989 refer to:

- a) Tribal people in independent countries [as those] whose social, cultural and economic conditions distinguish them from other sections of the national community and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations; and
- b) People in independent countries who are regarded as indigenous on account of their descent from the

populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization or the establishment or present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions.

ILO Convention 169 makes it clear that self-identification as indigenous or tribal shall be regarded as a fundamental criterion for determining the groups to which the provisions of the Convention apply.

Statement of problem

This study seeks to establish the reasons for which indigenous livelihood practices of Dagomba women do not seem to be able to move them out from the claws of poverty and why this phenomenon still remains a mystery. There is the need for alternative strategies to be put in place to enhance the well-being of the indigenous woman. The growing consensus is that although traditional activities continue to play a central role in indigenous development, the promotion of complementary tools of traditional growth should be of paramount importance. It should also be noted that, sustainable indigenous development and poverty reduction requires that the incomes of poor indigenous women and the sources from which they derive their livelihoods be enhanced and therefore, pro-poor income growth needs to be encouraged.

Additionally, livelihood options for indigenous poor women will provide new coping strategies that will reduce the impacts of unforeseen contingencies on their means of survival.

Meaning of livelihood

The concept of livelihood is widely used in contemporary writings on poverty and rural development, but its meaning can often appear elusive either due to vagueness or to different definitions being encountered in different sources. By Oxford Dictionary definition, it is a “means of securing the necessities of life” which makes it more than merely synonymous with income because it directs attention to the way in which a living is obtained, not just the net results in terms of income received or consumption attained. The most generally quoted definition of livelihoods is that given by Carney (1999, p.5) based on the work of Robert Chambers and Gordon Conway (1992), which definition states that; a livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when one can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both presently and in the future, while not undermining the natural resource base. The above definition, with minor modifications, has been utilized by several researchers adopting the rural livelihood approach. It should be noted that, an important feature of this livelihood definition is to direct attention to the links between assets people possess in practice to pursue alternative activities that

can generate the income level needed for survival and this is exactly what this study seeks to uncover. Niehof et al. (2001) describe livelihood as a material means whereby one makes a living; and livelihood generation also refers to the bundle of activities that people undertake to provide for their basic needs. Again, according to the World Bank (1999), a livelihood (making a living) is largely about generating income. But this is really a means to an end, which also includes aspects of food security (the ability to feed oneself and one’s family), providing a home, health, security (reduced vulnerability to climatic, economic or political shocks, and so forth), sustainability (the ability to continue to make a satisfactory living), power (the ability to control one’s own destiny), and others.

From this definition, the World Bank again emphasize that it is important not to lose sight of long-term goals when analysing the issue of livelihood. In other words, improving rural livelihoods involves more than just maximising the production of crops or livestock. Although most agricultural research is about natural resources, plants and animals, agricultural researchers cannot ignore the fact that agriculture is a human activity. The farming systems that people develop depend on social, economic, cultural, psychological and policy factors, as well as on natural or biophysical factors.

Unituslabs (2012), a livelihood research organization, also defines livelihood as one’s “means of support or subsistence” or the activities that economically support a person and his/her family.

In the light of this study, the following definition is used in describing the meaning of the term livelihood; a livelihood can be seen as comprising the assets (natural, physical, human, financial and social capital), the activities and the access to these assets (mediated by institutions and social relations) that together determine the living gained by an individual or household or a community. This definition is generic as it includes all that generates income for individuals, families and communities at large and therefore suits the purpose of this study.

Indigenous knowledge

Indigenous knowledge on its part refers to what indigenous people know and do and what they have known and done for generations, practices that evolved through trial and error and proved flexible enough to cope with change (Melchias, 2001). This definition draws our attention to the colonial racist idea that indigenous knowledge is a monopoly of trial and error while western (modern) knowledge is science characterised by experimentation. Hence, while the former is presumed clogged, concrete, and inaccurate, the latter is painted as intangible, weighty, right, and imbued with universal reasoning. Indigenous knowledge systems were also developed by experimentations though these experiments were not documented and the knowledge systems were legitimized and fortified under suitable institutional frameworks, culture and practices. They have been passed on

to other generations (though discriminatory) and have enabled indigenous people to survive, manage their natural resources and the ecosystems surrounding them like animals, plants, rivers, seas, natural environment, economic, cultural and political organization. Knowledge of these elements form a set or interacting units known as indigenous coping systems.

For this study, indigenous knowledge system refers to the set of inter- actions between the economic, ecological, political, and social, environments within a group or groups with a strong identity, drawing existence from local resources through patterned behaviours that are transmitted from generation to generation to cope with change. These patterns are sustained by micro level institutional arrangements vested with differentiated responsibilities that ensure the group's continuous survival. Unfortunately, these systems are fast eroding due to colonialism, commercialization, globalization and modernization, lack of efficient codification, breakdown of the traditional family structure and function (the institution that helps in the socialization of tacit knowledge), developmentally induced human displacements, the decline in the practitioner base and many other reasons. It is largely inherent in the community, and it is not associated with any form of formal learning or training; rather, it is transmitted or taught through oral tradition and is deeply rooted in African culture (Ijaiya et al, 2009). Indigenous knowledge resides in the heads and on the lips of its custodians, passed through generations through oral tradition. Even in an increasingly digital age, oral tradition remains an important means of preserving and transmitting indigenous knowledge. Indigenous knowledge represents a possible alternative path for progress among the world's rural poor. As Escobar (1995, p.98) has stated, "the remaking of development must start by examining local constructions, to the extent that they are the life and history of the people, that is, the conditions for and of change". Such an approach to "remaking development" according to Escobar, (1995), can be supported by careful ethnographic work that seeks to tease out the complex interrelationships between communities and places. Importantly, this approach implies a change that comes from within communities themselves by demonstrating confidence in and deployments of indigenous knowledge, among other things, as factors that can bring about economic and social progress. In this regard, the rural poor would have a voice in discussions about progress that materially affect them, and outsiders would listen seriously to them, learn from them, and respect their realities and priorities.

Areas of application of indigenous knowledge in Dagbon

It is unfortunate that indigenous knowledge has largely been marginalized by developmental trends in many parts of dagbon including the Sagnarigu community. The use of indigenous knowledge for conservation tends to affect all aspects of the environment. For instance, in many communities in dagbon, certain forests and bushes are designated as shrines. These forests and bushes are in effect considered protected areas. These protected areas have

multiple functions because they also influence other elements or the environment such as biodiversity, forest conservation, land use and management. Therefore, they serve as important frontiers for regeneration of flora and reproduction of fauna. Conservation practices are very vital to indigenous communities as they ensure the sustainability of natural resources in order to guarantee their availability for generations to come. More so, maintaining the delicate balance present in the environment warrants that other practices that rely on the environment will continue to flourish, such as weather predictions and traditional medical practices (Lwoga & Ngulube, 2008). The usefulness of traditional agriculture among dagomba women includes but not limited to the following;

- ✓ Food preparation; about two generations back, life expectancy was far longer that what obtains today in most parts of Africa where people lived up to between 70 and 90 years before dying. Part of this can be explained by the food habits of the people. Mothers were not used to cooking without mixing vegetables, protein and other vital nutrients in soups capable of forming a balanced diet. They never went to school to study how to prepare a balanced diet. It was a habit for people to eat a fruit even after a meal and the fruit trees were at the immediate surroundings of the house. Today, even with improvements in healthcare, knowledge and purchasing power, people eat much unbalanced diets. Malnutrition is rampant, killing as much as, if not more than HIV/Aids is doing in the region.
- * Health care; The importance of traditional medicines for humans as well as animals in Africa both now and in the past is enormous. Traditional medicine takes on a diverse and complex definition and though it involves some aspects of mind-body interventions and use of animal-based products, it is largely plant-based. Vilakazi (2006) posited that more often, Western-trained African doctors are looking toward traditional medicines for cures. Medical practitioners have been working successfully throughout Africa with traditional medical practitioners (TMPs) regarding HIV/AIDS treatment thereby validating traditional medicines and practices. Vilakazi (2006) listed African doctors doing important traditional medical work that is proving to be successful in dealing with serious diseases, including HIV/AIDS. Arunachallam (2007) had also examined the activities of multinational pharmaceutical companies, which send out scouts to the Amazon and the jungles of Africa in search of plants that have been used in traditional pharmacopoeia and to learn about their use from Indigenous medical practitioners.
- ✓ Natural disaster management; a study carried out by Rautela (2005 p.233) on Indigenous technical knowledge inputs for effective disaster management in the fragile Himalayan ecosystem, disaster prevention and management, the study revealed the relevance of the various disaster management practices of the Himalayan region. During the course of their habitation in the

disaster-prone Himalayan terrain, the indigenous people through experience, experimentation and accumulated knowledge devised ways of reducing their vulnerability to natural hazards. Findings showed that their understanding was fairly evolved in the areas of earthquake, landslide and drought management and had devised efficient ways of mitigating the effects of these.

- ✓ However, it must be noted that the successful application of indigenous knowledge in natural disaster management is based on good prognosis, close observation and a thorough understanding of the local environment.
- ✓ Natural-resource management,
- ✓ Poverty alleviation and
- ✓ Transmission of culture

Women's contributions to indigenous knowledge

Indigenous women are not only excluded from public decision making, but they are often invisible as knowledge makers especially in mainstream science which has undervalued their knowledge. However, as producers, custodians, and consumers of traditional knowledge, women have been recognized in major International agreements e.g, the United Nations Declaration on the Rights of Indigenous People (UNDRIP, 2007). Their contributions have been noted as crucial to biodiversity management, the sustenance of family and community, and the development of new knowledge (FAO, 2005). Women produce 80% of the food in Africa, 60% of the food in Asia, and 40% of the food in Latin America (FAO, 2005). Due to their work of providing food, water, fuel, Medicines, fodder, and other necessities to their families, rural women have wide and diverse knowledge about the uses of local resources. However, the losses of biodiversity increase the women's burden as they perform their daily chores. For example, water scarcity and contamination and deforestation have made many women's water and fuel-gathering tasks more taxing and time consuming (Gibb, 2007). Rural women have a lot at stake ensuring the health of local ecosystems now and in the future and they play a key role in the preservation of biodiversity. The demand from global markets for cheaply produced agricultural products has intensified the expansion of commercial agriculture into rural areas in developing countries. This expansion has threatened the biodiversity of local ecosystems as cropping, the introduction of alien species, and the clearing of forests has intensified. It has also resulted in a division of labour in many communities: Men involved with raising commercial crops and women tend to be involved with raising crops for personal consumption. Because of this, women tend to have specialized knowledge of wild plants than men (Gibb, 2007). However, the increased centrality of money in these rural economies has further lowered women status- they do not earn cash like the men do. This further degrades women's economic contributions to local economies. This partly explains why many projects aimed at assisting farmers deal only with men- it is their commercial, moneymaking contributions that matter. This

approach not only excludes women from participating in the planning and decision-making stages of development projects, but also excludes them from reaping any resultant benefits. In this way, gender-blind development work can reinforce gendered inequality.

Sustainable livelihoods

The sustainable livelihoods idea was first introduced by the Brundtland Commission on Environment and Development as a way of linking socio-economic and ecological considerations in a cohesive, policy-relevant structure. The 1992 United Nations Conference on Environment and Development (UNCED) expanded the concept, especially in the context of Agenda 21, and advocated for the achievement of sustainable livelihoods as a broad goal for poverty eradication. It stated that sustainable livelihoods could serve as 'an integrating factor that allows policies address development, sustainable resource management, and poverty eradication simultaneously. Most of the discussion on sustainable livelihood so far has focused on rural areas and situations where people are farmers or make a living from some kind of primary self-managed production. In a classic 1992 paper, Sustainable Rural Livelihoods: Practical concepts for the 21st Century, Robert Chambers and Gordon Conway proposed the following composite definition of a sustainable rural livelihood. A livelihood comprises the capabilities, assets (stores, resources, claims and access), and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; which contributes net benefits to other livelihoods at the local and global levels and the short and long term. While the definition of a livelihood can be applied to different hierarchical levels, the authors stressed that it is used most commonly at the household level. Even then it is also important to recognize variations in well-being and access at an individual or Intra-household level, as well as at the broader levels of the extended family, the social group, and the community. Among the various components of a livelihood, the most complex is the portfolio of assets out of which people construct their living. This portfolio includes tangible assets such as stores (e.g., food stocks, stores or value such as gold, Jewellery, cash savings etc.), resources (e.g., land, water, trees, livestock, farm equipment), as well as intangible assets such as claims (i.e., demands and appeals which can be made for material moral or other practical support) and access, which is the opportunity in practice to use a resource, store or service or to obtain information, material, technology, employment, food or income. Stresses are defined as pressures which are typically continuous and cumulative and therefore to some extent predictable, such as seasonal shortages, rising populations or declining resources, while shocks are impacts which are typically sudden, unpredictable, and traumatic, such as fires, floods and epidemics. Any definition of livelihood sustainability, the authors argued, has to include the ability to avoid, or more so

usually to withstand and recover from, such stresses and shocks.

II. RESEARCH METHODS USED

This section includes the research design, the study population and area, sampling procedure, data collection tools and instruments, data sources, analytical procedure as well as ethical considerations employed for the study.

Study design

A cross sectional approach was adopted for this study. This design was chosen because it is relatively cheaper and straightforward to conduct. It is also useful for evaluating the relationship between exposure and outcome, this agrees with Gordis's (2009) assertion that, exposure and outcome are determined simultaneously for each subject as a snapshot of the population at a certain point in time. The ultimate argument here is that rural people have in-depth knowledge about their circumstances and livelihood systems and must therefore be assisted to articulate their feelings and problems and recommend solutions to enhance the relevance and applicability of the research findings (Cornwall and Jewkes, 1995; Bennett et al., 2004). Both primary and secondary sources were used but primary data was collected through interviews and observations.

Study area and population

The study was conducted in Sagnarigu, the district capital of the Sagnarigu municipal area of the Northern Region of Ghana. The study population consisted indigenous Dagomba women in the community.

Sampling procedure

The researchers used a non probability sampling technique for the study. This technique was adopted because the researchers chose respondents randomly in order to answer questions the researchers prepared. Respondents gave answers from their personal perspectives. The sampling consisted of 50 indigenous women from the Sagnarigu community.

Sources of data and research tools/instruments

The method adopted for this study involved data collection from both primary and secondary sources. The primary source was the direct data obtained from the field. The relevant tools used were interviews and observations. The secondary data was also collected from relevant documented sources. The respondents were interviewed on a face-to-face basis using an interview guide written in the English language. The questions were translated into the local language (Dagbani).

Data analysis

The data analysis was mainly descriptive based on qualitative research methods. The researchers collected data by talking to indigenous women in the community. Secondary data was mainly from books, the internet, journal articles and other documented sources.

Reliability and validity of the analytical procedure

The data was obtained directly from primary sources whenever at all times. The results were reviewed for consistency and compared with other submissions. There was a pre-test of 10 individuals before the actual interviews were conducted. The purpose was to ensure that anomalies were corrected so the items could measure exactly what they were intended to measure. Analysis was undertaken to generate a descriptive picture of the data gathered from the interviews.

Ethical consideration

Informed consent was sought before information was taken from all participants. Study participants were assured of confidentiality of information and that the study was not going to be physically invasive. Participants were also assured that data collected will be used for the purpose of the study and were assured of their rights to withdraw from participating in the study at any time they wished to do so.

III. FINDINGS AND DISCUSSIONS

Socio-economic characteristics of the female indigenous Vegetable Farmers in Sagnarigu

The findings here show the mean age of women (with their economic traditional livelihood practices being vegetable production). About 73% of the respondents were below 50 years of age implying that the sample was dominated by active farmers and economically productive farmers willing to explore new avenues for livelihood. 78% of the respondents were married. However, further examination revealed that only 24.6% were in monogamous marriages while as much as 54.2% were in polygynous marriages. This latter group reported that they work as part of the family labour on their husbands farms. The returns from their farms (which are usually indigenous pepper farms inter-cropped with other crops), are a form of compensation for the labour expended. This meagre income was the main source of livelihood for the women and their children. The study also revealed that about 92% of the respondents did not have any formal education. The lack of education may limit farmers' access to higher paying off-farm opportunities. Family size represents the human capital endowment of the farmers as it reflects potential labour supply. It further shows that the majority (64.6%) of the farmers had between 3 and 6 persons in their family. The family size of this magnitude may influence preference for farming activities given that family members and land are available for farming operations. Access to land is critical for agricultural production. The research shows that in the study area, farm size allocated to pepper and other food crops ranged from 0.75 to 1.50 and 0.61 to 1.30 hectares respectively. Majority of the farmers cultivated less than 1 hectare of vegetables (65%) and other food crops (87.5%) production. About 73% of the respondents rented the land on which they farm, while only 25.8% of the respondents inherited their farm lands. Hence, most of the farmers had temporary tenancy on their farm plots. This suggests a

constraint to access to land and small scale farming operations that may predispose farmers to augment income from farming activities with income from alternate sources in the study area.

Income profile of the respondents

When linked to farm and off-farm activities in the rural areas, diversification is often used in describing the expansion in the importance of non-crop or non-farm income (Ijaiya et al. 2009). Evidence from the findings suggests that agricultural activities (production of vegetables, food crops and livestock) make up more than 3 quarters of the total income from vegetable production contributing half of the total income. This implies that less than a quarter of income (21.89%) is generated from off-farm activities. According to Babatunde and Qaim (2009), this less significant contribution of off-farm activities to total income suggests that distress-push effects are more important in this particular cause.

Out of all the agricultural activities in the area, vegetable production contributed exactly half of the income of the respondents and it was the most important source of income followed by food crops such as maize (23%) which is produced by 57.9% of the respondents. Nearly three quarters of the women farmers (71.7%) participated in livestock rearing, albeit its contribution (5.54%) of total income is relatively small, less than half of the farmer’s derived income from local financial institutions (37.4%) and off-farm activities (42.9%), these sources only contributed 9.37% and 12.52% respectively to the total income. The classification of off-farm employment followed. Ngheim (2010) classified off-farm as self-employed activities other than those related to crops, livestock, and aquaculture production that takes place away from household-run farms. This classification also includes processing of any kind of goods for sale, whose input materials can be either home-produced agricultural commodities or bought from markets. The study also revealed that women farmers income generation activities included petty-trading (36.7%), sale of agricultural produce (28.2%), processing of agricultural crops (17.5%) and a few in artisanal occupation (13.5%) and hiring out of labour (3.9%) were skilled in tailoring and hairdressing and very few (3.9%) worked as cleaners and storekeepers in private establishments. According to Ijaiya (2009) and Adugna and Wagayehu (2008) diversification into non-farm activities such as off-farm wage labour, self-employment and transfer implies more diversity in income source.

Indigenous knowledge among rural women

Indigenous knowledge	Use
Family health	Fever- herbal leaves include Nim tree leaf, guava.
Food processing	Mortar and pestle-pounding of vegetables and tubers
Food preservation	‘kanwa’- prevent food from fermentation
Burial ceremonies	Slaughtering of goats as forms of sacrifice

The respondents mentioned in the above table that, indigenous knowledge is available and in use in so many facets of their daily lives. Through the use of taboo, telling of folk tales, methods of informal training and periodic celebration of traditional festivals, culture is transferred and preserved; daily money contribution (susu) helps to save and lend money; different herbs are collected from the bush, prepared and used to treat or prevent diseases of children and adults alike. Shifting cultivation is done to enhance renewal of land. Farm pets are controlled by the use of different methods; sun drying is used in preserving majority of family food as well as those for sale.

Impact of rural women's use of indigenous knowledge on the development of the community

The table below presents a frequency distribution of the impact of indigenous knowledge use on the development of the Sagnarigu community.

Impact	Frequency	Percentage
Availability of food	338	84.5
Cultural promotion	224	56
Provision of healthcare	191	47.75
Reduction of infant mortality	121	30.25
Social stability	152	38
Women empowerment	106	26.5
Economic growth	96	24
Poverty reduction	112	28
Political stability	82	20.5
Resources management	71	17.75

Source: field Survey, 2019

The respondents were asked to rank their choices (1 -10) indicating the most important livelihood indicator. Availability of food ranked first. Cultural promotion ranked second and provision of good health ranked third. It is believed that these results are strongly indicative of the development that is taking place in Sagnarigu and its immediate environs. The last four contributions; economic growth, poverty reduction, political stability and resource management ranked lowest, probably because majority of the respondents were not able to really measure the level of their contributions in these areas. Moreover, many of them believed that their savings or income was too small to have had a high significant impact on the household economy. There was also an indication that majority of the respondents were poor. It should be noted that lack of good water supply, good food, and inadequate healthcare, lack of education or employment and discrimination against women are some of the numerous factors that contribute to poverty in the area. For poverty reduction (ranked 8 out of 10), shows that majority of the respondents have not been able to combat all factors of

poverty except food supply. Furthermore, it can equally be suggested that the ninth rank of political stability (as a contribution), shows how indecisive majority of the respondents were; maybe because they have not experienced political crisis in their localities or were not interested in politics. Only a small proportion of those who were farmers indicated their contribution to resource management in the area of land use. To a very large extent, the women of Sagnarigu can be described as active participants in the daily livelihood struggles for their families as shown in this study. Their involvement in farming and other survival strategies in no small way help to ameliorate the difficulties that poverty exposes them to.

IV. CONCLUSION AND RECOMMENDATIONS

The study concludes that female indigenous farmers augment returns from vegetable production with income from other economic activities. These sources of income do not have the same potential contribution to livelihood patterns. The study brings to the fore the socio-economic characteristics of the female indigenous vegetable farmers in Sagnarigu, their income profile and the pattern of livelihood diversification strategies that exist among them. Information elicited from the respondents includes socio-economic characteristics of the farmers, their ages, marital status, components of farmers' incomes and total expenditure. The data collected was analysed with the aid of descriptive statistics and cluster analyses. The results show that the majority of the women were below 50 years of age, many of them were married and a few had a minimum of primary school education. A good number of them cultivated less than one hectare of land. The income profile of the women-farmers indicated that though, vegetable production ranked as the most important source of income as returns from it represented exactly half of the total income, it was not sufficient to sustain their livelihood throughout the year. This was the reason some of them engaged in other livelihood strategies in order to complement their farming activities. Patterns of livelihood diversification strategies identified by the cluster analysis include sole vegetable farming, arable crop farming, and part time mixed farming. A livelihood diversification strategy that combines multiple portfolios demonstrably yielded higher income for the women-farmers.

It is recommended that the women farmers should intensify livestock production in the livelihoods portfolio as a conscious business endeavour. The farmers should integrate on-farm with off-farm investments, especially those that have complementarities with farming activities such as milling and other food processing activities, to enable them increase income. The study also recommends that the women farmers of Sagnarigu should form farming groups so as to be able to

access loans to increase their farms and therefore maximise production and in the end improve on their living conditions.

REFERENCES

- [1]. Aduse-Poku, et al, (2003). *Improving Rural Livelihoods within the context of Sustainable Development. Case Study of Goaso District.* <http://www.Tropenbos.org>, Retrieved: October, 2012, pp 1-6
- [2]. Aluko Y.A. (2018). *Women's use of indigenous knowledge for environmental security and sustainability development in southern Nigeria.* The international indigenous policy Journal 9(3) Retrieved from; <https://ir.ib.uwo.ca/iipi/vol9/i553/2> DOL: 10-18584/iipg-2018- 9.3.2
- [3]. Babatunde R.O & Qaim M. (2010). *Impact of off-farm income on food security and nutrition in Nigeria.* Poster presented at the Joint 3rd African Association of Agricultural Economists (AAAE) conference, Cape Town, South Africa.
- [4]. Carney, D. (1999). *Approaches to Sustainable Livelihoods for the Rural Poor.* Overseas Development Institute, Poverty Briefing 2: January 1999, pp 37-63
- [5]. Carney, D. (1998). *Implementing the Sustainable Rural Livelihoods Approach' in D. Carney (ed) Sustainable Rural Livelihoods: What contributions can we make?'* DFID, London.
- [6]. Cobo, M. (1987). *Discrimination Against Indigenous Population Martinez cobo study.*
- [7]. Cornwall, A. ,Jewkes, R, (1995). *What is Participatory Research?Vol.41No.12* Pergamon, London.
- [8]. Escobar, A. (1995). *Encountering Development: The Making and Unmaking of the Third World.* Princeton University Press. Princeton, New Jersey.
- [9]. FAO, (2005). *Building on gender, agrobiodiversity and local knowledge.* Retrieved from <http://www.fao.org/docrep/005/AC546E/ac546e08.htm>
- [10]. ICRA, (2012). *International Centre for development 48 oriented Research in Agriculture.* <http://www.icra-edu.org/obictcs/anglolearn/ACFfTAGCm.pdf>.
- [11]. Ijaiya, M. , Ijaiya, G. , Bello, R. , M & Ajayi (2003). *Income Households and their Implications on Poverty and Resource use.* Zed Books St Martin's Press.
- [12]. IOL, (1989). *Convention concerning Indigenous and tribal people in independent countries, indigenous and tribal peoples convention, C167, conference session 76.* IOL, Geneva, Switzerland.
- [13]. Melchias, G. (2001). *Biodiversity and Conversation.* Enfield: Science Publishers, inc.
- [14]. Minot, N. ,Epprecht, M. , Anh, T. & Trung, L. (2006). *Income Diversification in the Northern Uplands of Vietna.,* Research Report No: 145 International Food Policy Research institute, Washington D.C.
- [15]. Ngheim L. T. (2010). *Activity and income Diversification: trends determinants and Effects on Poverty Reduction.* Quarter Journal of International Agriculture,
- [16]. Niehof et al (2001). *A conceptual framework. (UPWARD Work Paper Series: 5)_* ISBN 90-6754-643-7
- [17]. Robert, C., Gordon, C.. (1995). *Sustainable rural livelihoods.* Impanel college, London.
- [18]. Suchman, M.C. (1995). *Managing Legitimacy. Vol. 2.* Academy of management
- [19]. Unituslabs, (201 2). *Projects creating livelihood opportunities.* Retrieved form <http://unituslabs.org/projects/creating-livelihood-opportunities/>
- [20]. World Bank, (1991). *Indigenous people. The World Bank Operational Manual, Operational Directive, OD, 4.20.* Washington DC. World Bank.