



CAPITAL ASSETS AS BUILDING BLOCKS FOR LIVELIHOOD ACTIVITIES AND SUSTAINABILITY AMONG RURAL DWELLERS IN HADEJIA-NGURU WETLANDS, NIGERIA

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ABSTRACT

Farming remains the most important livelihood activity in many communities. However, it is increasingly becoming unable to provide sufficient means of survival for the rural populace on its own. To that effect, people over the years have diversified their livelihood portfolios into other non-farm activities in an attempt to build their resiliency. This paper examines capital assets' availability and productivity, and the resilience strategies adopted by rural dwellers in the Hadejia-Nguru-Gashua wetlands in mitigating their prevailing ecological, environmental and management challenges. Stratified random sampling technique was used to draw 172 respondents from 15 communities of the wetlands. The study assessed assets availability and utilisation, as well as the pattern of the resilience strategies adopted. Results revealed that the people have access to capital assets and have developed multiple livelihood portfolios. It is therefore, recommended that more awareness should be created to facilitate construction and expansion of these livelihood activities.

Keywords: Capital assets, resilience, livelihood activities, wetlands, rural community

INTRODUCTION

The Hadejia-Nguru-Gashua wetlands is endowed with vast land and other resources; forest, grazing areas, wildlife and water ranging from uplands to the low lands stretching down to the aquatic environment where fish and diverse aquatic organisms abound. The wetlands system support a significant number of the populace for livelihoods in terms of cultural, socioeconomic development, food security and community livelihoods (Tafida and Galtima, 2015). The wetlands directly support about 1.5 million farmers, herders and fishermen (Wikipedia, 2015). These once-very productive wetlands system have in the last two decades witnessed series of ecological problems. In addition, the current climatic changes and poor resource management in the area further accentuated the problems (Kaugama and Ahmed, 2014). The primary direct drivers of degradation and biodiversity loss in the wetland include changes in the environmental factors, infrastructure development, land use, water withdrawal, pollution, over-exploitation of resources, and the introduction of invasive aquatic species-*typha* grass (Ovie *et al.*, 2007).

In fact, studies have shown that wetlands are among the world's most stressed ecosystems (Mitsch and Gosselink, 2000; Smardon, 2009; Keddy, 2010). Exacerbating the situation is the recent recurring human security insurgence and other setbacks in the region, which greatly endanger and jeopardize the lives and livelihoods of the rural dwellers dependent on the wetland resources particularly in terms of food security. Earlier study by Chambers and Conway (1992) indicated that livelihood and survival of individuals, household groups and communities are vulnerable to stresses (e.g. declining yield on soils, which degrade through salination, acidity or

erosion, declining in common property resource, declining water tables and rainfall etc), and shocks (e.g. wars, persecution, civil violence, droughts, storms, floods, famine, epidemic of crop pests or of animal or human illness among others).

The wetland community livelihoods are affected by ecological, environmental management and other induced social challenges. The people have apparently developed some strategies against their plight; affecting the wetland and community livelihoods, though the rural dwellers often developed some resilience strategies against their plight. This is possible based on the premise that a rural household has access to certain amount of resources generally referred to as capitals assets, which can be utilised to fashion out a set of livelihood strategies (crop farming, livestock rearing, off farm employment, etc.) to improve its welfare (Chambers and Conway, 1992) However, these strategies performed by the wetland's people remain fragmented. Against this backdrop the study attempts to consolidate the strategies for sustainability of the natural resource base and for improvement in the livelihoods of the practitioners. As defined by Ellis (2000), a livelihood is made up of the abilities, assets (stores, resources, claims, and access) and activities necessary for a means of living. Assets are the basic material or social, tangible or intangible services, resources, skills or attributes. They are the physical, natural, social, financial, and human resources that people use for constructing their livelihoods. Assets can be understood as partly chosen by design to reduce vulnerability and to enable the household to survive stresses and shocks with minimum risk of threat to future livelihood (Cambers and Conway, 1992)

This paper advocates that consolidation and optimum use of capital assets in multiple livelihood portfolios would improve resilience and enhance



sustainability of the dwindling wetlands resource base. It is against this background, the paper intends to look at the capital assets accessibility and resilience strategies of the rural people in the wetlands.

METHODOLOGY

The Hadejia-Nguru wetlands are located between 12° 39'0"N and 10° 35'30"E, and receive the bulk of its water from Rivers Katagum, Jama'are, Kafin Hausa and Burum Gana. These Rivers, originating mainly from the neighbouring states of Kano, and Bauchi, flow westerly and eventually unite at Gashua to form the Komadugu Yobe River system that empties into the Lake Chad. The total land area is estimated to be about 84,000km² (DFID-JWL, unpublished) in Ovie *et al.*, 2006. The wetlands provides employment, income and food security to millions farmers who integrate farming with fishing and livestock herding - the dominant rural economic activities of the area. The nature of annual flooding in, the region has made the area to be fertile and productive. The area provides grazing to about 506,000 cattle, 437,000 sheep, and 529,000 goats (HNWCP, unpublished) in Ovie *et al.* (2006). The Bade people constitute the major ethnic group; although the Hausas, Fulanis, and Kanuris also form a sizeable population. are also important in the area. Primary data were mainly used for the study using household interview schedule and Focus Group Discussion (FGD). Two hundred and ten (210) questionnaires were administered in 15 communities of the wetlands, using stratification and simple random sampling technique out of which 172 were successfully retrieved and analyzed. The data were analyzed mainly using descriptive statistics. Capital assets were analyzed using scoring technique. For each asset, a scale of 1-5 with the later being the highest in terms of productivity were given for the respondents to score the present status of each asset compared

with its status 20 years or more. Finally the average score for each asset was presented as the current status of the assets.

CONCEPTUAL FRAMEWORK

Rural livelihood remains a complex phenomenon; natural vagaries, multidimensional poverty, and vulnerability affect their livelihoods negatively. However, no matter how poor, the locals often have assets on which they can draw to pursue a diversified livelihood strategies and outcomes in order to attain sustainability. Taking a lead from the concept of sustainable livelihood (Figure 1) developed by the UK Department for International Development (DFID, 1999). Deductions from studies in the wetlands have showed that the people are vulnerable to certain ecological, environmental, drought, flood, reduced water table and rainfall and insect infestation on crop and animal diseases, which affect their livelihoods negatively (Neiland, 2000; Tafida and Galtima, 2015). At the same time, the framework emphasizes that the poor people have assets and choices irrespective of their conditions, which the present paper intends to help in consolidating and broadening the choices of the people dependent on wetland resources. Empirical evidence from a variety of locations suggests that rural households do indeed engage in multiple activities and rely on diversified income portfolios. In sub-Saharan Africa, a range of 30–50 per cent reliance on non-farm income sources is common; but it may attain 80–90 per cent in southern Africa. Certain policy, institution and processes are instrumental through operational laws, policies, culture and established institutions often guide these engagements. To some extent, they approve good practices and checkmate the bad ones. Finally, the whole idea of the framework leads to livelihood outcome in terms of more income, increased well-being, reduced vulnerability, improved food security and sustainable natural resources.

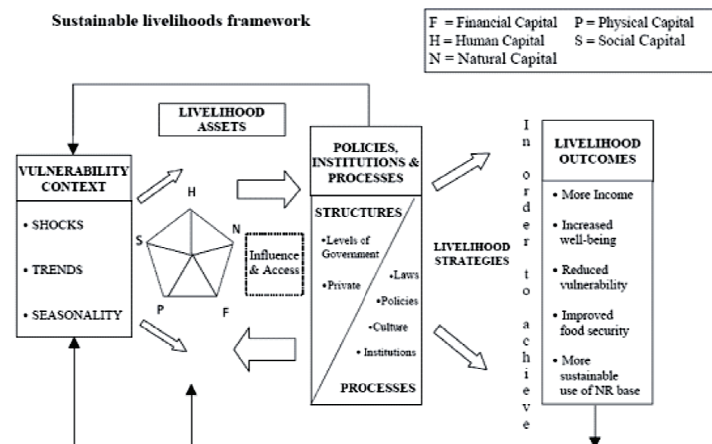


Figure 1: Sustainable Livelihood Framework (Adopted from DFID, 1999)

RESULTS AND DISCUSSION

Capital assets Accessibility

The livelihood approach considered a myriad range of livelihood assets irrespective of the community or situation of the people. These capital assets comprise of the Human, Natural, Physical, Financial and Social, which can be used to construct a livelihood strategy. The current study analyzed three components from each of the five capital assets that cut across the respondents, as presented in figure 2. On the natural asset, the result shows the accessibility and productivity of land to be 2.8 on the scale of 5 points being the highest. Forestry is rated 2.5 while fisheries is 1.8 on the scale of 5 scored by the respondents. This shows that the productivity of the major natural resource base in the area has reduced remarkably with fisheries as the worst hit. Physical infrastructure has equally dwindled with power (electricity) reduced to 0.6, road 2.5 and market

3.2, points. In terms of human capital, the people have vast experience with average years of experience in the primary occupation of 22.2 years, average number of skills was ranked 3 and average number of years spent in school was 4.1 years. Social asset was assessed in terms of cooperative membership, remittances and linkages as in figure 2. While the financial capital assessment centered on savings disposables items and livestock. Livelihood strategies and outcomes at the household level depend to a large degree on the amounts and qualities of these assets owned or controlled by the household. Land and water endowments can be viewed as elements of natural capital, while human capital includes the amount and quality of labour available. The optimal combination of investments in the five forms of capital might be viewed as a necessary condition for achieving sustainable rural development.

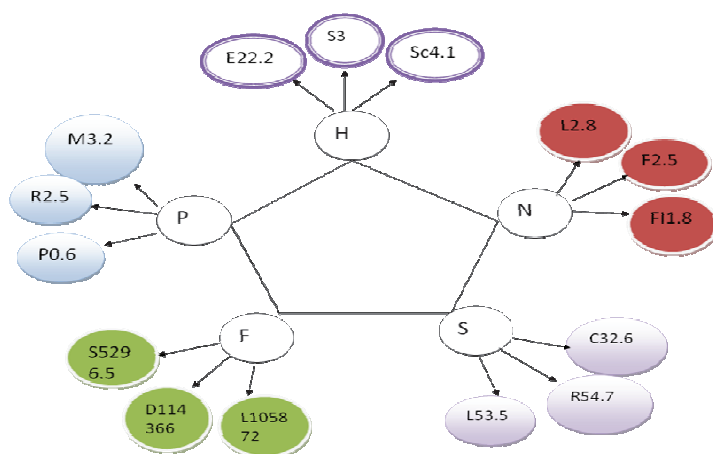


Figure 2: Capital assets accessibility and productivity in the wetlands

Key: P=Physical assets; M=market, R=Road, P=power

H=Human assets; E= years of experience, S=number of skills, Sc=Years of schooling,

N=Natural=Natural assets, L= Land, F=Forestry, F=Fisheries

S=Social assets; C=Cooperative membership, R=Remittances, L=Linkages

F=Financial assets; S=savings, D=Disposable items, L=Livestock

Resilience strategies

Although, majority of the people in Hadejia-Nguru-Gashua wetlands are farmers, it is evident from the study that they engaged in multiple livelihood activities as a resilience strategy against their environmental, ecological and other challenges. Figure, 3, shows that farming among the five categories of activity analyzed still remains the most important livelihood activity in the community contributing 48.5% to the overall income. This is followed by fishing with 19.8% and livestock with 14.4%, others comprise of trading (8.6%) and services (8.7%).The diversity of

livelihoods is an important feature of rural survival but often overlooked by the architects of policy. Diversity is closely allied to flexibility, resilience and stability. In this sense, diverse livelihood systems are less vulnerable than undiversified ones; they are also likely to prove more sustainable over time, precisely because they allow for positive adaptation to changing circumstances. In a broad sense, analysis of 'resilience' is about the potential capacity of systems to adapt to shocks, recognizing that disturbance and change are integral component of complex systems.

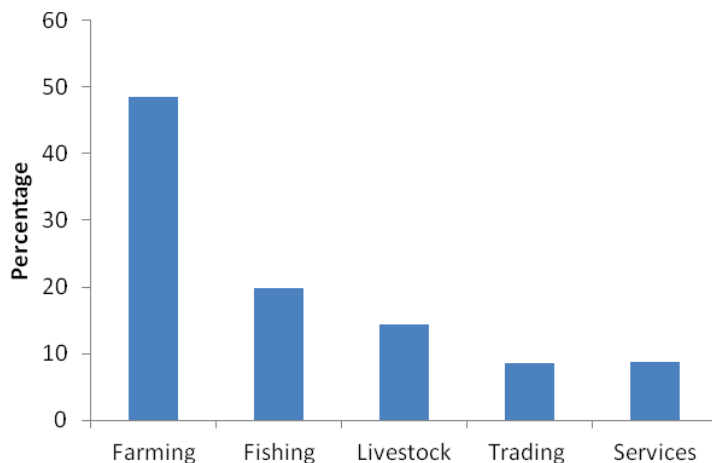


Figure 3: Resilience Strategies Adopted by the wetland'd people

CONCLUSION

Ecological, environmental, management and other human factors have grossly undermined the potentials of the hitherto rich Hadejia-Nguru-Gashua wetlands, thereby subjecting millions of people dependent on the natural resource base for their livelihood into poverty and poor socioeconomic well-being. In spite of their conditions, the people always draw their capital assets of Human, Physical, Natural, Human and Social to construct a multiple livelihood portfolio as resilience strategies to address their plight and to attain sustainability. Though an excellent and better approach, it has been consolidated and broadened to achieve meaningful outcomes. Therefore, this study have shown that assets accessibility and pattern of resilience strategies adopted have consolidated the people thoughts broaden the horizon of their opportunities in order to sustain the dwindling natural resource base, improve their well-being and to guide the policy. The challenge, therefore, lies in operationalizing the concept of resilience and making it practically and pragmatically meaningful when it comes to its implementation on the ground.

REFERENCES

- Carpenter, S. R., B. H. Walker, J. M. Anderies and N. Abel (2001). From metaphor to measurement: resilience of what to what? *Ecosystems* Vol. 4 pp 765-781
- Chambers, R, Conway G. 1992. Sustainable rural livelihoods Practical concepts for the 21st century. *Institute of Development Studies (IDS) Discussion Paper 296* in Brighton, Sussex
- DFID (1999) Sustainable livelihoods guidance sheets. department for international development (DFID), London, UK
- Ellis, F. (1999). Rural Livelihood diversity in developing countries: evidence and policy implications *Odi Natural Resources Perspective* no 40 April 1999 pp. 40.
- Ellis F. (2000). The determinants of rural livelihood diversification in developing countries. *Journal of Agricultural Economics*, 51(2): 289-302
- HNWCP (1997). Water management options for the Hadejia-Jamaare-Yobe River Basin. IUCN- The World Conservation Union
- Keddy, P.A. *Wetland Ecology Principles and Conservation*: Cambridge University Press: Cambridge, UK, 2010.
- Kaugama, H. H., & Ahmed, B. A. (2014). Prospect and Challenges of Farming along the Hadejia-Nguru wetlands in Jigawa State Nigeria. *International Journal of Academic Research and Management Science*, 3(6), 43-52.
- Mitsch, W.J. and Gosselink, J.G. (2000) *Wetlands*, 3rd ed.; John Wiley and sons: New York, NY, USA, 2000.
- Neiland, A. E. (1997). Traditional Management of Artisanal fisheries in North East Nigeria: Final Report, CEMSRE Report No 43, Portsmouth, UK. 400p
- Neiland, A. (2000). "Traditional management system and poverty alleviation in Nigeria". paper presented at the seminar on livelihoods and fisheries management in the sahelian region. CIFA/PD/FAO Ougadougou. Burkina Faso 3-5 Jul. 2000 Pp93-114
- Ovie, S.I., B.M.B. Ladu and A. A Tafida (2006). Food security and poverty alleviation through improved valuation and governance of River Fisheries in Africa. characterization of key fisheries stakeholders and the impact of fisheries on livelihoods in the Komadugu-



- Yobe Basin of Lake Chad, Nigeria. Project report No.1
- Ovie, S.I., Raji, A., Ladu, B. M.B. and Tafida A. A. (2007). Characterization of key stakeholders in the Kamadugu Yobe Basin of Lake Chad, *Nigerian Journal of Arid Zone Fisheries* 3(2):66-76
- Smardon, R.C. (2009). *Sustaining the Worlds wetlands; Setting Policies and Resolving Conflicts*; Springer Press: New York, NY, USA, 2009
- Tafida, A. A and Galtima, M. (2015). Environmentally induced alternative livelihood strategies among the artisanal fisher folk of Kainji Lake Basin, Nigeria. *International Journal of Environmental Science and Development Vol. 7 No.1*