

APPLICATION OF HOLISTIC APPROACH FOR SUSTAINABLE FISHERIES: A CASE STUDY OF KAINJI LAKE BASIN

A.A. TAFIDA*, A.A. ADEBAYO**, M. GALTIMA**, J.O. AYANDA* & J.R. MANI*

*National Institute for Fresh Water Fisheries Research, PMB 6006 New Bussa

**Federal University of Technology, PMB 2076, Yola

ABSTRACT ✓

The sustainability of the resources requires much more than paying attention to a single factor, rather looking at it in a holistic manner. Specifically, other economic infrastructure and resources that form the essential components of the fisheries system and fishers livelihood needs to be considered. This to a greater extent will permit choice and mobility of livelihood portfolios, hence reduction in fishing efforts and sustainability of the sector, which eventually translate into development of the sector. However, provision of these facilities are often capital intensive and often left for the government along to provide.

INTRODUCTION

World Bank poverty assessment in Nigeria revealed that sustained long-term growth depends critically upon increasing the access of poor people to quality social services and essential infrastructure in order to enable them to increase human capital and make full use of their assets. Key priorities are health, education, water supply and sanitation, rural roads, availability of capital and credit, adequate market structure etc. These catalogues of infrastructure and economic factors are necessary conditions for economic growth. Increase in per capita income must be accompanied by certain modifications in economic or administrative arrangement or input (Long, 1976). The Nigerian fisheries system has witnessed series of studies, investigations and interventions over the years. However, the sector has not witnessed any remarkable transformation, particularly the actors. Looking at the scenario in Nigerian fisheries, the assertions of the World Bank (1996) and Kurien (2006) whom reported that addressing the problems of fisheries sector requires a holistic approach as opposed to reductionist approach; need to be taken with all seriousness for optimum growth and development of the sector. Generally, the absence of vital infrastructures that would permit diversification of livelihood portfolios often leads to exploitation of fisheries resources which translate to it depletion, low net income and poor well-being.

MATERIALS AND METHODS

The survey was conducted in Jan-Feb. and Aug-Sep. 2008 in order to capture the two flooding regime on the lake (high flood and draw down) and the two seasons (Rainy and Dry). The study covered the eight sub-stratums of the lake where 30 villages (10%) were randomly selected using random number generator from 297 (total number of fishing villages on the Lake basin) (Abiodun and Niworu, 2004) and 259 respondents were drawn using stratification technique. Apart from household survey, in each of these villages focus group discussion was conducted among elders and informants, with an average number of 12 respondents per community. Some guided questions were used for unification of results and easy analysis. Simple descriptive statistics were used for the analysis.

RESULTS AND DISCUSSION

The findings revealed that basic infrastructure that would enhance productivity and well-being of the fishers are grossly inadequate in most of the fishing communities around Kainji lake basin. Majority of the communities are without tarred road, electricity and market (86.7%) and majority lack financial institution (96.7%). The findings equally shown that most of the fishing communities are without other basic necessities such as bore hole, pipe borne water, health care centre, and primary school among others, Fig. 1 shows 70% 90%, 70%, and 40% of the communities are without those infrastructural facilities respectively. However, this survey revealed appreciable existence of primary schools in the fishing communities, though higher schools are virtually not in existence, 96.7% and 80% of the communities are without tertiary and secondary schools respectively (Fig.1). The findings conforms with that of Pollnac (1985) where he revealed that small-scale fisheries are generally located in rural and coastal areas near estuaries, often isolated from most development programmes/projects and generally lack infrastructure, which is the engine block for development. Specifically, FAO (2006) indicated that fishing communities often suffer from educational disadvantages due to location and social marginalization. Roads for instance play a vital role in

collection and distribution of goods and services; it allows access to markets and health centre/hospital and permits easy delivery of fishing and farming inputs as well as local information delivery particularly for communities without mobile phones. Absence of market within the community may mean traveling long distance, which at times might be difficult and exorbitant for the fishers, especially during rainy season. Similarly, lack of electricity presents a great impediment to engagement into other important livelihood portfolios like services eg barbing, operation of cottage industry; grinding/processing. Access to credit facilities can play a significant role by serving as a buffer against uncertainty. Credit can as well be helpful in enhancing and expanding the fishers' entrepreneurship.

The importance of infrastructure as a catalyst of economic growth has been long acknowledged in the development literature. Infrastructure according to Lopez (2004) can directly enter the production function and improve total factor productivity hence well being. Therefore, provision of infrastructures such as roads, water supply, electricity, schools among others are essentially vital components that are needed to stimulate rural income by increasing peoples choice and mobility of livelihood portfolios, hence reduction in fishing efforts and subsequently its sustainability and development of the sector.

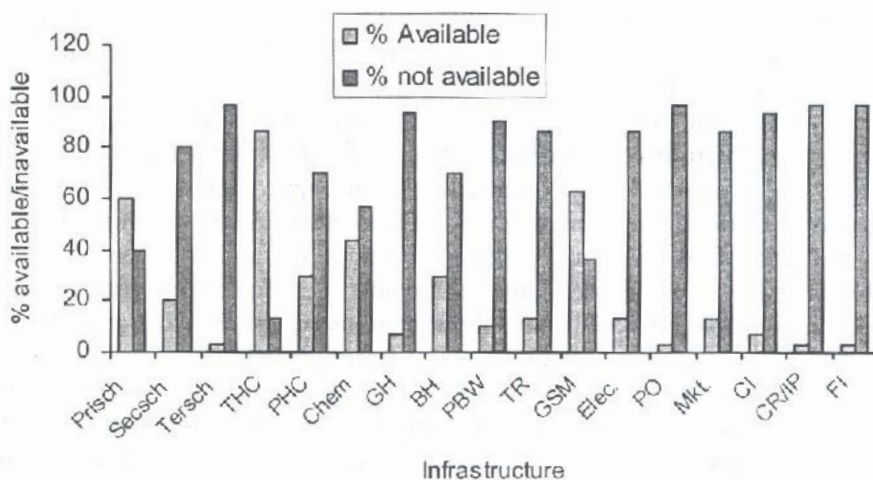


Fig. 1 Availability of infrastructure in KLB fishing communities

Keys: Prisch = primary school, Secsch = Secondary school, Tersch = Tertiary school, THC = Traditional Health Centre, PHC= Primary Health Centre, Chem.= Chemist, GH= General Hospital, BH = Bore Hole, PBW =Pipe Borne Water, TR = Tarred Road, GSM , Elec. = Electricity, PO= Post Office, Mkt. = Market, CI = Cottage Industry, CR/IP, Cold Room/Ice Plant, FI = Financial Institution, KLB = Kainji Lake Basin.

Providers of Infrastructure in KLB Fishing Communities

Government and private firms/individual are contributing immensely to the development of infrastructure in the fishing communities. Most of the infrastructures (100%) are provided by the government, and few such as chemist and GSM by private firms/individual Table 1. GSM for instance reduce transport cost, provide easy access to market information, increases capital and thereby improve fishers' income.

Need for Holistic Measures

The concepts of sustainable livelihood advocate for consideration of livelihood-related opportunities and constraints regardless of where they occur (Farrington et al., 1999). They narrated the following advantages of holistic approach to include the following

- It is a non-sectoral and applicable across social groups;
- It recognizes multiple influences on people, and seeks to understand the relationships between these influences;
- It recognizes multiple actors (from the private sector to national ministries, from community base organizations to newly emerging decentralized government bodies);
- It acknowledges the multiple livelihood strategies that people adopt to secure their livelihoods;

- It seeks to achieve multiple livelihood outcomes, to be determined and negotiated by people themselves.

Table 1: Infrastructure Provider in KLB fishing communities

Infrastructure	Government.	Community.	NGO	Private Firm/individual
Prisch	100	0	0	0
Secsch	100	0	0	0
Tersch	100	0	0	0
THC	0	0	0	100
PHC	100	0	0	0
Chem	0	0	0	100
GH	100	0	0	0
BH	100	0	0	0
PBW	100	0	0	0
TR	100	0	0	0
GSM	0	0	0	100
Elec.	100	0	0	0
PO	100	0	0	0
Mkt.	100	0	0	0
CI	0	0	0	100
CR/IP	100	0	0	0
FI	0	0	0	100

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Infrastructures (electricity, school, roads, markets health care facilities etc) are grossly inadequate in many of the communities, and where available are developed by government. This will increase their vulnerability and inhibit their capacity to diversify into other income portfolios.

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