ENHANCEMENT OF FISH PRODUCTION IN BORNO STATE WITH EXTENSION SERVICES

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ABSTRACT

Borno State possesses great potentials for Fish Production both from Inland fisheries and aquaculture. The socio-economic and environmental production factors are suitable for fish production. If the potential of the state is well harnessed, it would be playing significant roles in achieving self sufficiency in fish production in Nigeria. But the situation at the moment is that, its fisheries potentials are not being optimally utilized. While the inland waters of Lake Chad are currently being recklessly exploited, aquaculture development is given little or no attention. It is evident that there is a missing link between research results and the potential end users. Because information in fish production variables is a pre -requisite for fisheries development, the gap that exists between these two poles must be bridged, fisheries Extension provides this important link between research result and the end users of research findings. The paper examines the importance of extension services as the key to unlocking the fish production information that are usually consigned to the pages of academic journals and research publications.

INTRODUCTION

Borno State possesses great potentials for fish production both from Inland fisheries and aquaculture. The Inland fisheries of Lake Chad is reputed to be one of the most productive Lake system in Africa (Stauch 1977, Durand 1980, Raji 1992, Neiland and Ladu, 1997), and occupies a strategic position in inland fisheries in Nigeria supplying over 26% of the total fish produced from that sector (FDF, 1991).

Studies have equally revealed the aquaculture potentials of the state (Sule et al; 2001, Raji and Omoyeni 2001). This suggests that if these potentials are adequately harnessed, the state will be playing significant roles in bridging the gap between domestic fish production and demand in Nigeria.

Ironically, these fisheries potentials are not being optimally utilized. While the inland waters of lake Chad is currently being recklessly exploited, aquaculture development is given little or no attention, thus resulting in reduction in annual fish yield. What is evident is that there is a general lack of awareness on sustainable fisheries development. This lack of awareness is attributable to inadequate or lack of institutional support services such as extension services.

UNDP/FAO (1975) noted that the success of small or large-scale fish farming business depends on the provision of adequate supporting services such as extension, which is recognized as a potent and critical force in the development process.

Given that fisheries extension delivery system is operational in the state, its potentials for fish production will greatly be enhanced.

This study therefore attempts to examine the status of fisheries extension services in Borno State with a view to presenting the catalytic roles it can play in boosting fish production in the state.

STATUS OF FISHERIES EXTENSION IN BORNO STATE.

In Nigeria, various organizations are involved in fisheries extension delivery system, among these are research institutes with mandate for fisheries extension, e.g. the National Institute for Fresh water Fisheries Research (NIFFR), National Institute for Oceanography and Marine Research (NIOMR) others are the state ministries of Agriculture and Natural Resources, Agricultural Development Projects (ADPs).

FEDERAL DEPARTMENT OF FISHERIES (FDF) ETC.

These organizations provide specialist support services through training and workshops, publications, television and radio broadcasts etc.

Much as there exist different organization with mandate of extension services, the impact of extension delivery system has not been significantly felt. Ogbe and Odiba (1996) rated the extension services in the country as poor. Gaffar (1996) noted also that there is lack of demonstration models and other facilities for effective extension services, he identified only 13 model fish farms established by the Federal government at various locations in the country.

Going by what is on ground in Borno state, the performance of extension service delivery can be described as abyssymally poor. In the first place, the state lacks the institutional framework that supports fisheries extension services, for instance, it was not until 2002 that the state made a bold step to establish a department for fisheries in the ministry of Agriculture, though the state government is deriving enormous benefit from the inland fisheries, it had not given fisheries development the desired attention the Federal institutions in the state having the mandate of fisheries extension have not been able to deliver that mandate due variously to structural issue and funding problems.

Experience at the state has shown that extension services is grossly inadequate or even absent, Sule and Raji (2004) corroborated this in a study of the socio-economic survey of Lake Alau and noted also that there is absence of fisheries extension services in the state. Sule *et.al* (1996) observed also that there is lack of fisheries extension workers in the Arid zone.

There is no doubting the fact that there have been appreciable research endeavours on the Lake Chad fisheries and the fisheries of the Arid zone where in lies Borno State, what is evident is that, there has not been meaningful transfer of the knowledge of the research results to the end users. This smacks the fact that fisheries extension in the state demands urgent attention.

PROBLEMS OF EXTENSION SERVICES IN BORNO STATE.

Agricultural extension including fisheries is a voluntary out of school educational process of teaching rural families scientific agriculture with a view to improving their quality of life through efficient use of the resources at their disposal (Williams, 1981) fisheries extension will therefore get the requisite production information necessary for optimum fish production across to the rural families engaged or willing to engage in fisheries enterprises whether in the capture or culture fisheries.

Absence of this service mean that the vital production information will not get to those that it will benefit. The implication of this is negative for fish production.

In Borno State where this is the case at the moment, the problems associated with it are as follows:

1. **Dearth of trained fisheries extension manpower**: Fisheries science is technical and the technology transfer requires skill, expertise and experience on the part of the extension staff. Skilled manpower is grossly inadequate at the region, the state has not taken full advantage of the only Federal College of Fisheries with the mandate of training manpower for fisheries development, this is manifested in the short supply of

manpower to provide the required services, this is a reflection of the low interest shown by the state government to fisheries development. But for the efforts of fisheries research scientists in various capacities, most of the rural populace would not have been opportunity to hear about fisheries development.

2. **Lack of demonstration models and other facilities**. Demonstration is one of the most effective methods in extension communication. In Nigeria however, this method has not been adequately utilized (Ogbe and Odiba, 1996). Extension agents without demonstration model will no doubt be incapacitated. In Borno State a notable demonstration model hatchery in Monguno, has long been abandoned, the Marama fish dam had since been neglected and turned to wild fish seed collection center. The general situation is lack of demonstration models in the state.
3. **Inadequate funding**: This has adverse implication on extension services e.g. this affects the provision of essential equipment for extension personnel, it affects mobility, for instance it requires that there is good transport facilities e.g. 4 wheel drive to effectively cover most parts of the state.
4. **Communication gap:** Extension agents who do not understand the local language / dialect of the area will not be able to communicate with the local folks without an interpreter. Fish farmers may not have access to telecommunication services like radio and television through which some of the extension information are disseminated.
5. **Lack of awareness** Majority of rural dwellers are illiterates. This factor can impede the rate of adoption of new technologies and in harnessing the existing potentials for optimum fish production.

FISHERIES EXTENSION SERVICES AS THE KEY TO BOOST FISH PRODUCTION IN BORNO STATE.

Based on Williams (1981), Extension has three major roles to play in aquaculture development.

1. To get the fish farmers into a frame of mind and attitude conducive to acceptance of technology change. The potential fish farmer has to be made to understand that investment in fish farming is enterprises are very profitable. For instance a potential fish farmer will more likely develop interest in flow through / re-circulation system that has the potential of over 750% return on investment in 12 months, the extension agent will play significant roles in presenting the technicalities and the viability of the project. Through effective and dynamic extension education programme the interest of potential fish farmers can be generated.
2. Dissemination to the fish farmers the results of research and to carry the farmers' problems back to fisheries research organization. Effective line of communication must exist in order to perform this function properly.
3. To help fish farmers, gain managerial skill such as fish farm planning, design and construction, fish farm management, fish inputs procurement and possibly production, fish handling, marketing and distribution practices with the aim of reducing post – harvest losses.
4. Through the contacts of fisheries superintendents Fisheries assistants with the farmers and fisheries extension agent will be properly placed to be collecting the catch statistics on regular basis.

Considering all these functions, it is evident that the role of fisheries extension in fisheries development cannot be over-emphasised. For instance, by contacts with the fishers folks through workshop, training, seminar etc. the fishing communities would be sensitized on the need for responsible fisheries practices. Through demonstration model some of the fisher folks

would switch to fish farming given the percentage return on investment. In other parts of the state where they are reluctant to embrace aquaculture practices, their interest could be generated with effective extension services.

An understanding of the operational model of a typical extension services system is expected to give us clear insight into the functionalities of extension services. Thus the need for the foregoing illustration.

Most Agricultural Development Programmes (ADPs), practices the unified agricultural Extension system (UAES) whereby the training and visit (T&V) system of agricultural extension is mostly used in dissemination of research recommendations to farmers. Technical papers on specific aspects of aquaculture and fisheries production are discussed between the resource scientists and the subject matter specialists (SMS). The result of the discussion is passed to the block Extension supervisor (BES) and village Extension Agent (VEA) who will take it to the end user at scheduled regular visits. The village extension Agent (VEA) reports back to the Block Extension Supervisor (BES). This scheme is quite effective as the extension officers ensure that the day-to-day production problems of the fish farmers are appreciated by the researchers. This feed back mechanism has been acclaimed to facilitate the continuous re-orientation of research towards the priority needs of fish farmers (Ajana, 1991).

This operational model of the extension services has the capacity to mobilize the rural dwellers, which constitute the majority of the populace for mass adoption of proven technologies in fish production.

Given that there is effective take off of extension services in Borno State, the enormous potentials for fish production can be greatly enhanced to translate into abundant fish production, thereby increase contribution to economy of the state and the gross domestic product of Nigeria (GDP) while meeting the protein needs of the people.

RECOMMENDATIONS

The foregoing recommendations are considered necessary to witness the take off of effective fisheries extension services delivery system in Borno State.

1. Government should redirect its efforts to establishing a viable institutional framework that will guarantee the effectiveness of extension services in the state
2. Government should provide fisheries demonstration models in all the local government area of the state and equip them with the relevant training equipment and materials e.g. video and television set for showing documentaries on fisheries operations and management, etc.
3. Government should encourage the educational advancement of fisheries studies. This remain the only way to met the short fall in fisheries skilled manpower
4. The fisher folks and the fish farmers should be organized into cooperative societies to enhance technology transfer process as well as give them access to credit facilities and other production inputs
5. Government should adopt the methods of public enlightenment campaigns through television documentaries, use of postal etc, with the view to creating the awareness necessary for successful extension services delivery.
6. To enhance the delivery of extension messages, the extension agents should be motivated through enhanced remuneration, provision of welfare packages and provision sound transportation system.
7. It is necessary that government increase the funding of established institutions with the mandate of extension services delivery. This will ultimately boost their capacity for efficient performance.

CONCLUSION

Fish production from both the inland fisheries and aquaculture in Borno State can greatly be enhanced if extension services system is efficiently developed. It is not enough to be conducting scientific researches on Borno state fisheries; the research results must get to the ultimate end users.

Extension service has the capacity to bridge the existing gap between research results and the end users. It is evident that there is general lack of awareness in the state on how to harness and optimize the enormous fisheries potentials of the state.

Creating the awareness through efficient extension service systems remains the key to witnessing the optimization of the fisheries potentials of the state.

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