

Sustainable development in fisheries of Nigeria

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Abstract

Development of the fisheries sector in Nigeria has become of utmost importance, both to ensure adequate food at affordable prices and as the main source of economic and social progress for the rural poor. Sustainable fisheries development is defined by FAO as fisheries development that integrates bio-ecological, technological, economic and social dimensions to sustainably improve the well-being of all the people engaged directly or indirectly in the fisheries sector as well as the natural productive system. In other words, such development must integrate the triple bottom line framework captured in the Samuel Mann Venn diagram of sustainability. In Nigeria, there are fisheries laws and policies that brought about in the interim increased fish production. However, policy shifts and unsustainable implementation have led to decline of the fisheries sector over the years, leaving the target rural economies more vulnerable than ever. Sustainable fisheries development can only be achieved through regulated fishing, which considers fishery management objectives and proper enforcement of regulations.

1. Introduction

Nigeria is reasonably endowed with large rivers, small water bodies and some natural springs. It also has an extensive coastline of approximately 900km and an Exclusive Economic Zone (EEZ) of about 217,313 km² (Sea Around Us, 2007). Nigeria has a high demand for fish (1.5 Million Metric Tons (MT)) and a per capital consumption of 7.5-8.5kg annually (FDF, 2005). Current national production stands at 511,000 MT/annum, thus resulting in a demand-supply gap of about a Million MT. Nigeria currently imports 700,000 MT of fish annually at a cost of some US\$400 Million (Ovie and Raji 2006). The artisanal fishermen on the coastal waters supply about 260,000 MT, while those on inland waters contribute about 200,000 MT. The remainder of the 511,000 MT annual production comes from industrial fisheries. Thus, fisheries are crucial to the Nigerian economy, contributing 5.4% of the Gross Domestic Product (FDF, 2005). Although contribution of the fisheries sector is essential to agricultural development in Nigeria, both to ensure adequate food at affordable prices and as the main source of economic and social progress for the rural poor, more than half of policies and programmes in agriculture development focus on forest matters while less emphasis is placed on food and animal production.

2. History of fisheries development in Nigeria

The history of fisheries development in Nigeria is a comparatively recent one. Deliberate efforts at developing the country's fisheries can be said to have started in 1941. At that time no real national fisheries policy was in place, rather, programmes focused mainly on increased fish production through input supply at subsidized rates, technology transfer and revolving loan schemes for fishermen. However, commencing from 1971, in the form of interim measures pending the collection and collation of scientific information, the Nigerian Federal Government, with advice from the Federal Department of Fisheries, promulgated the Sea Fisheries Decrees of 1971, 1972 and 1992. The Sea Fisheries Decree (1971) was promulgated to control and regulate coastal fisheries, along with Sea Licensing Regulation (1971); the Sea Fisheries (Fishing) Regulations (1972); Exclusive Economic Zone Decree of 1978 and Inland Fisheries Decree (1992). These decrees were limited in scope and were directed at the following parameters:

- i) The 1971 decrees focused on registration and licensing of fishing trawlers operating in the coastal waters of Nigeria. The catch quota for each boat was not included in the decrees.
- ii) The 1972 decree placed restrictions on the cod-end of trawl nets used by industrial trawlers; however, details of the sizes of fish to be caught was lacking. It also restricted fishing trawlers from operating within the first two nautical miles of the continental shelf; this restriction was later extended to 5 nautical miles in 1992.
- iii) The 1992 decree stipulates the conditions for granting a fishing license for shrimping and fishing, which requires application for pre-purchase assurance and submission of feasibility studies.
- iv) Regulations for in-land water fisheries were left for the individual states to enact. Out of the 36 states, only 15 states have fisheries edicts, laws or regulations in place. There are no official guidelines or codes of conduct for aquaculture in Nigeria.

There were also a number of agricultural development interventions that affected fisheries, notably, the following: National Accelerated Food Production Programme (NAFPP) was an agricultural extension programme initiated in 1972; Agricultural Development Projects (ADP) in 1974; Operation Feed the Nation, launched in 1976; River Basin and Rural Development Authorities, established in 1976; Green Revolution Programme, inaugurated in 1980; The World Bank-funded Agricultural Development Projects; National Fadama Development Project (NFDP) (Iwuchukwu and Igbokwe 2012).

The first Comprehensive Agricultural Policy for Nigeria, with fisheries as a component, was developed in 1988(FMAWRRD, 1988). Seven policy objectives were identified for fisheries as follows:

- increasing domestic fish production;
- earning foreign exchange through the export of fish, especially shrimps;
- developing local fisheries-based industries;
- rational management and conservation of fisheries resources for optimum use;
- encouraging the manufacturing of fish products;
- providing employment to Nigerians by mechanizing the sector; and
- increasing per capital income of indigenous fishers.

A draft of a new National Fisheries Policy was presented for discussion at the National Fisheries Development Committee (NFDC) meeting. Since its presentation in 2000 no other action has been taken on the draft and in terms of goals and objectives, the draft does not differ significantly from the 1988 policy.

3. Problems associated with Agricultural policies and programmes

These agricultural policies and programmes have undergone changes that seem to reflect changes in government. These policies and programmes vary only in nomenclature and organizational network but tend to have the same objectives (food security and sufficiency). Despite all the policies and laudable programmes with challenging themes, Nigeria is yet to achieve food security. The policies were geared mainly towards increased development of the agricultural sector with emphasis on chemical inputs from fish feeds, fossil fuel inputs from mechanization, immediate economic gains in monetary returns and socioeconomic advantages of job creation; but left a gaping hole in terms of environmental impacts and sustainability. Although the policy and programmes brought about in the interim increased fish production, Nigeria Planet (2006) sadly noted that the unsustainable implementation has led to decline of the fisheries sector over the years, leaving the target rural economies more vulnerable than ever.

4. Fisheries Management systems in Nigeria

There are three Fisheries Management systems practiced in Nigeria which are:

- Type I. Traditional systems: These are classified as management systems operated by the administration of traditional authorities which enforce regulations to control fishing. Practices such as ban on fishing at certain time of the year or during fish breeding period
- Type II. Mixed systems: The mixed systems involve the participation of both the traditional and the modern government administrations.
- Type III. Modern systems: These include those operated by the administrations of the central government where fisheries regulations are enforced by officers of the fisheries departments.

Type II (mixed) is most common (56%), followed by the Type I (33%) and type III accounting for only 11%. However, the traditional management systems (Type I), is the most effective especially at the local community level. The village heads that have responsibilities for enforcing the Type I management Systems are well accepted and respected in their various domains. Although the Mixed System (Type II) is most prevalent, governments generally lack the logistic support (personnel, funds, field vehicles etc.) to enforce fisheries laws and regulations. In general, fisheries management systems in Nigeria can be described as variable and hindered by poor financial support for policy implementation.

Three key issues confronting the management of the fisheries are:

- Environmental Change – climatic patterns and man's activities
- Exogenous Factors – human population, poverty and food demand
- Weak policies and policy implementations

5. FAO sustainable fisheries development

Sustainable fisheries development is defined by FAO as fisheries development that integrates bio-ecological, technological, economic and social dimensions to sustainably improve the well-being of all the people engaged directly or indirectly in the fisheries sector as well as the natural productive system (Serge, 1998). In other words, such development must integrate (Environment, Social and Economic) the triple bottom line framework captured in the Samuel Mann Venn diagram of sustainability (Mann, 2011). The Code of Conduct for Responsible Fisheries (FAO, 1995) has developed the FAO definition of sustainable development into a much more detailed and specific set of General Principles (Article 6) and a large number of specific provisions aiming at facilitating the implementation of the FAO definition in the various facets of the fisheries-related activities: Fisheries Management (Article 7), Fishing Operations (Article 8), Aquaculture Development (Article 9), Integration of Fisheries into Coastal Areas Management (Article 10), Post Harvest Practices and Trade (Article 11) and Fisheries Research (Article 12).

The current policy thrust of the Federal Government is aimed at ensuring sustainable development of Nigerian fisheries for national food security, self-sufficiency in fish production, optimum resource utilization and conservation. The policy focuses on employment generation, wealth creation, poverty alleviation and reduction in rural-urban migration, among others. This in line with the National Economic and Empowerment Development Strategy (NEEDS) of the Federal Government and the New Partnership for Africa's Development (NEPAD) initiatives. Specific objectives which are expected to be

private-sector driven include the following: achievement of self-sufficiency in fish production; development and modernization of the means of production, processing, storage, marketing and resources conservation; ensuring total compliance with the FAO's Code of Conduct for Responsible Fisheries (CCRF), amongst others.

6. Constraints to sustainable fisheries development in Nigeria

In Nigeria, there are a number of constraints that pose significant challenges to the sustainable development of fisheries, including the following:

- **Inadequate knowledge of the resource and ecosystem:**

Insufficient and weak scientific data lead to incomplete information and knowledge, and policies based on such data will remain incomplete.

- **Non-interaction between the government and the various stakeholders:**

Another crucial gap in Nigeria's fisheries policy is the complete absence of stakeholders' input during the policy formulation process. Experience shows that top-bottom approach to fisheries management does not yield the best results.

- **Unavailability of financial resources to meet specific needs:**

Nigeria governments do not have an adequate appreciation of the social and economic potential of sustainable fisheries development, and hence still invest minimum resources in fisheries development and management activities. Budgetary allocations to Fishery Departments and Research Institutes are too meager to meet vital requirements such as research to update the laws with national fishery statistics and other relevant information; or vessels for policing the coastal zone to enforce existing laws.

- **Weak agricultural policy and implementation:**

Agricultural policies are not specific and most do not have strategy, targets, goals, or specific objectives and most importantly, do not include programmes or projects geared towards accomplishment of the goals. Policy implementation also requires enforcement by laws which indicates lack of strong political commitment on the part of government.

- **Inconsistency in policies and programmes:**

Agricultural programmes have undergone changes that tend to reflect changes in government or administration.

- **Inadequate technical advisory/extension services:**

Technical advisory or extension services which are intended to provide, teach and convince farmers to adopt and diffuse innovation are lacking. The participants/beneficiaries are not adequately educated on the goals of these programmes, which leads to their failure.

- **Lack of monitoring and evaluation of programme/project:**

The philosophy of monitoring and evaluation of projects in Nigeria is lacking.

7. Way forward

Sustainable fisheries development must strive to achieve a workable balance between defined objectives - those protecting the resource and its environment, and those seeking fair and equitable distribution of viable economic benefits (Singh-Renton, 2001). Nigerian governments need to appreciate the water bodies that abound in the country and should strive to optimize the social and economic potentials of sustainable fisheries development.

Fisheries administrations need to be given more financial resources, and properly staffed and equipped to address effectively all aspects of sustainable fisheries development and management. Policy/programme consistency should be adopted and their efficacy monitored and evaluated against specified goals. Government should provide an enabling environment for private sector involvement in agricultural development, especially in areas such as fish processing and preservation.

Environmental Impact Assessment(EIA) is an effective tool that will encourage development of sustainable fisheries. Introduction of environmental impact assessment as a requirement in the draft fisheries policies is necessary. Proper documentation of studies carried out for EIA in other sectors at the coastal region such as offshore oil and gas development could lead to collection of more complete scientific data and knowledge needed for more effective policies. It is important to recognize that EIA is not just intended to ensure approval from the government, but, more importantly, to ensure that projects are approved and implemented in alignment with sustainable development principles. Therefore, effective enforcement and monitoring of compliance to conditions and mitigation measures as stated in the EIA is essential.

Additionally, the government should recognize the benefit of, and work towards integration in fisheries management activities, including sharing of expertise and resources for education, research, technology, monitoring, control and surveillance activities, and development of the relevant legislative framework.

Economic gains in the fish supply chain could also be increased by taking steps to reduce post-harvest wastage, improved physical infrastructure, better extension and training services, more efficient marketing practices and the wider dissemination of fish processing and preservation technologies.

Finally, there should be better protection of the environment and control of waste disposal and pollution. Every effort should be made to prevent discarding of entangling material that could trap and kill fish or physically damage the environment.

8. Conclusions

Sustainable fisheries development can be achieved through regulated fishing, which considers fishery management objectives that address the status of the resource, the health of the environment, post-harvest technology and trade, as well as other economic concerns, social benefits, legal and administrative support.

References

- FAO (1995). The Code of Conduct for Responsible Fisheries. FAO: 41
- FDF (Federal Department of Fisheries) (2005). Report of Presidential Committee on Fisheries and Aquaculture Development: Consolidated Report., Vol. 1
- Federal Ministry of Agriculture Water Resource and Rural Development (FMAWRRD) (1988), Agriculture Policy for Nigeria. University of Ife press, Ile-Ife Nigeria.
- Inland Fisheries Decree (1992).
- Iwuchukwu, J .C. and Igbokwe, E.M. (2012). Lessons from Agricultural Policies and Programmes in Nigeria. Journal of Law, Policy and Globalization ISSN 2224-3240 (Paper) ISSN 2224-3259 (Online) Vol 5; 11-21 www.iiste.org

- Mann S. (2011) Sustainable Lens: A visual guide. New Splash Studio, Dunedin. 206. ISBN 13: 978-1468112771
- Nigeria Planet (2006). Towards Sustainable fisheries development in Nigeria. http://www.nigeria-planet.com/nig_towards_sustainable.html (Accessed 23 December 2012)
- Ovie, S. I. and Raji, A. (2006) Food security and poverty alleviation through improved valuation and governance of river fisheries in Africa. Fisheries co-management in Nigeria: an analysis of the underling policy process. 30
- Sea Around Us (2007). A global database on marine fisheries and ecosystems. www.seaaroundus.org.
- Sea Fisheries Decree of 1971. Federal Government Gazette Vol. 58 of 1971 Decree No. 30.
- Sea Fisheries Decree of 1972. Federal Government Gazette Vol. 59 of 1972 Decree No. 30.
- Sea Fisheries Decree of 1992. Federal Government Gazette Vol. 79 of 1992 Decree No. 108
- Serge, M. G. (1998) The FAO definition of sustainable development and the Code of Conduct for Responsible fisheries: an analysis of the related principles, criteria and indicators FI:EMF/98/Inf.6 <ftp://ftp.fao.org/Fi/DOCUMENT/eco-lab/1998/inf6-e.htm>
- Singh-Renton, S. (2001). Introduction to the Sustainable Development Concept in Fisheries. First meeting of the WECAFC ad hoc working group on the development of sustainable moored fish aggregating device fishing in the Lesser Antilles. FAO Fisheries Report No. 683, Supplement SLAC/R683 Suppl. 229-234. ISSN 0429-9337