



International Journal of Fisheries and Aquatic Studies

ISSN: 2347-5129

(ICV-Poland) Impact Value: 5.62

(GIF) Impact Factor: 0.352

IJFAS 2016; 4(3): 655-658

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www.fisheriesjournal.com

Received: 12-03-2016

Accepted: 13-04-2016

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Knowledge contestations, manifestations and implications for policy: A case of fisheries management in Uganda

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Abstract

Sustainable natural resources management including fisheries remains contentious owing to the multiple actors' divergent views. Centralized management has been resisted by resource end-users culminating into management failures as exhibited in fisheries over-exploitation. Co-management introduced in 2003 in Uganda as sustainable option to adaptively manage the fisheries. However, dwindling fish catches due to especially overcapacity on water bodies still persists. The current government-supported management option is 'privatisation' of user-rights of some lake portions to individual(s) for cage aquaculture to maximize revenue and fish supply. However, this has led to resistances from majority fishers dependent on the lakes for livelihoods. Policy formulation mainly by the state and its partners -the donors, excluding local fisheries, is the major reason for the impasse to sustainable management. It suggests inclusiveness participation of all stakeholders in all policy stages to create a good pack of reliable knowledge to attain sustainable fisheries management to ease the contestation.

Keywords: Fisheries management, knowledge contestation, fisheries policy

1. Introduction

Knowledge contestations are specific areas of knowledge where multiple competing truth claims vie for legitimacy ^[1-2]. There is a shift from a universal perception and understanding and later explanation to an issue, thus culminating always into a debate. When people are provided with subject –positions of discursive fields they tend to creatively twist ideas to and manufacture storylines to win their rival thinkers ^[3]. The competition for supremacy between the 'conventionalists'/state controllers and the 'traditionalists' (resource end-users) in sustainable resources management is a manifestation of knowledge contestation. The state always relies of professional experts to draw objectives, means of achieving them and the expected outcome. This is like a pack. It recruits its labor force from recognized training institutions and further orients them to what is expected of them at work. Thus they gain the charisma to achieve the best. On the other hand, the resource end-users, and sometimes the resource being their only source of livelihood, consider themselves better managers on the basis that they have lived with/on the resource, have seen it experiencing change and have developed adaptive strategies in times of shock, in addition to have by-laws protecting it. During the colonial times until 1962 and the post-independence era fisheries management was centralized with less participation of the fishers. It proved to be inefficient and ineffective in maintaining sustainable fisheries. There was rampant over-fishing. However, in 2003 to solve the problem of declining fisheries, co-management ^[4] was introduced as a more inclusive mode to manage the diverse, dynamic and complex fisheries sector. However, since Lakes are common pool resources, it is difficult to limit access to users ^[5-6]. Thus, there is growing interest in natural resources privatization to promote sustainability and conservation goals ^[7]. In the recent past, there has been encouragement by the government to privatise of the aquatic commons by the introduction of cage aquaculture in 2006 ^[8]. This growing new technology is implemented on natural water bodies in Uganda including Lake Victoria in order to tap them for commercial purposes, generate more revenue for the government and improve on the people's livelihoods ^[9]. However, cage aquaculture mainly by the few business class in hitherto fishing grounds formerly occupied by the majority capture fishers. The fishers are contesting the technology since is considered new and perceive their livelihoods threatened ^[8-10]. To conceptualize knowledge contestations, I will draw cases from the management of fisheries resources in Uganda in an attempt to account for the general ever-declining fish catches figure 1 as a management failure. Thus, there is a contestation between the fisheries scientists and local resources users on how best to sustainably manage fisheries resources in Uganda.

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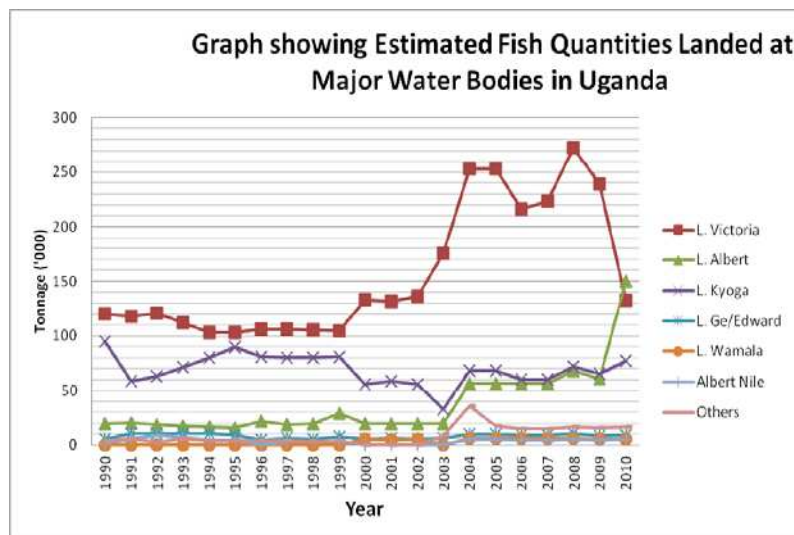


Fig 1: Estimated fish quantities landed at major water bodies in Uganda ^[11]

2. Fisheries resource base in Uganda

About 20% of Uganda's surface area is comprised of water ^[12], in addition, Uganda is the fifth largest fishing nation in Africa after Egypt, Morocco, Nigeria and South Africa Hempel ^[13]. 2010 The fisheries industry in Uganda is largely artisanal based on inland capture fisheries from lakes ^[14] Victoria, Kyoga, Albert, George and Edward Figure 2 There are about 49 known fish species in the country MWE ^[15], 2007 though the major commercial species are Nile perch *Lates niloticus*, Nile tilapia *Oreochromis niloticus*, Silver fish *Rastrineobola argentea*, African cat fish *Clarias gariepinus*, African lung fish *Protopterus aethiopicus*, moon fishes *Alestes baremose*, *Hydrocynus*, *Bagrus* ^[12]. In Uganda, the annual fish catch from Lake Victoria has declined from 238, 533 tonnes in 2005 to 183,824 metric tonnes in 2011 ^[16] yet fisheries resources contributes significant to the economic development of Uganda in terms of food, employment and income. Fish export earnings, mainly from Nile perch, have improved from US\$ 5.3 million in 1991 to US\$ 83.3 million in 2010; and about 1,000,000 -1,500,000 people are directly or indirectly involved in the fisheries activities ^[11].



Fig 2: Map showing the five major water bodies in Uganda ^[17]

3. Trend of Fisheries management in Uganda

Fisheries management in Uganda has seen transitional changes in the power and authority from state control with the help of the informal Landing Site Committees (LSCs)

managed by hereditary Gabungas (landing site leader), who helped government in collecting revenue, enforcing regulations and conflict regulation; to participatory management/ co-management ^[18, 19]. The Gabungas were usually powerful members in the society and even derived economic privileges from the fishery through their positions, their position was hereditary, and implemented government positions without input from the society continued to lead to conflicts, marginalisation and catches dwindled was an awakening call for a new line of action.

In response to the 1987 Brundtland Report for the World Commission on Environment and Development which argued that communities near the resources need to have greater access and control over decisions affecting their resource ^[20], the government of Uganda formed the Beach Management Units (BMUs) to implement co-management of fisheries resources supported by The 2003 Fish (Beach Management) Rules ^[21]. The BMUs was composed of 9-15 committee member with 30% boat owners, 30% non-boat owners, 30% other stakeholders (with exception of fish mongers), and fish mongers 10% ^[4]. The BMUs are tasked to collect data, regulating access, monitoring fishing activities in collaboration with the government.

4. Manifestations of knowledge contestation

The local resource users adopted the co-management model drafted by the government and donors. However, the resource users considered the architects of the fisheries management model as 'outsiders' who do not know the fisheries resources dynamic well. The users preferred their traditional management strategies basing on nature like seasonal changes and their embedded cultural repertoires and attached value like cultural symbols like taboos ^[22], with regard to fisheries management. This is one form of a knowledge contestation manifestation.

Furthermore, up to now there is recurrence of 'out-dated' or outlawed fishing practices. Whereas non-selective fishing gears like pots, hoes, seines, monofilament nets, spears, baskets and cat nets; and small fish sizes (minimum landing size for Nile perch and Nile tilapia is 18 and 11 inches respectively) are illegal according to the 1967 Fish and Crocodile Act ^[23], the use illegal fish gear and harvesting of young fish continues. This has been attributed to the long distance from the local governments ^[24].

In addition, there is a persistence conflict as clearly seen in the implementation of the fisheries laws. The resources users continued to defy laws from BMUs and government and this has resulted into the use of the army to fight illegal fishing practices. Conflict also has been noticed between the Local Governments District Fisheries Officers DFOs, BMUs committee members especially over taxes. They question why the local governments take all money from licenses. DFOs also perceive BMU committees as reducing their power.

Contestation has also emanated from the difference in the perceived use of the resources. Whereas the government of Uganda envisage an export target from fish, fish products and other aquatic products of US\$300 million by 2025 ^[12], a long term target, the fisher folks resource user consider immediate benefits like for food and some income.

The knowledge hiatus on explanation of some phenomena has exacerbated the tension. For example, the demarcation of Lake Sensitive Area LSAs in especially littoral areas with vegetation, on lakes like Kyoga to act as grounds for breeding and growth before recruitment to the pelagic waters has been contested on grounds that it is those areas where fish hides and nets should be cast nearby since hitherto, there has been fishing in these areas without hindrance ^[25]. Another unexplained phenomenon is on how fisher folks should respond to compensatory reduction in fish size due to environmental stress-induced evolution that leads to low spawner abundance ^[26]. In response to environmental stresses like increased fishing mortality; and climate change and variability, fish matures at a small size and reproduce fast instead of growing to bigger sizes recommended for harvest.

5. Meanings and significances of knowledge contestations for policy

First, it results into inclusiveness of the various actors in managing resources in policy formulation and implementation, this bring about a clear understanding and respect of the various sources of knowledge. Thus, policy implementation will likely meet minimal resistance. Fisheries co-management would not find resistance had it been formulated by 'outsiders' (government and donors) and implemented by both 'outsiders' and 'insiders' (fisher folks). Secondly, knowledge contestation results into a merger of knowledge for better management of aquatic resources. ^[27], points out that the growing need to integrate indigenous people's knowledge to ensure ecological and socio-economic sustainability of natural resources is inevitable. Fisher's knowledge needs to be tapped to supplement expert knowledge in policy formulation and implementation. Fisher folks are near and dependent on the fisheries and are capable of quickly noticing seasonal variations in relation to the catches, can even identify fish breeding grounds for protection. All this is done without much sophisticated tools.

6. Conclusion and way forward

The sustainable management of fisheries resource in Uganda has remained contentious due to the multiplicity of beneficiaries and actors each with a definite aim. Whereas co-management was intended to operationalise the decentralization policy under the 1997 Local Government Act ^[28], of delegating some power from the central government to the local governments and resource users, it remains a debatable model since it was drafted by the state without a clear understanding of the problems concerning fishers and why they choose particular practices in relation to exploitation

having co-existed with the fish resource for long. Frequent dialogues and consultations among actors in regard to good fisheries management practices are inevitable to ease the tension. In addition, all actors in fisheries resource management need to know that divergent knowledge domains will always exist and hence accommodation of either group should be unavoidable for coherence in resource use and management.

7. Acknowledgements

I would like to extend my gratitude to Busitema University Biology Projects 2016, Professors Hebinck P. Wangengen University, Onyango CA. Egerton University Mlozi-Malongo, RS. Sokoine University of Agriculture, Dr. Obaa BB Makerere University for the technical guidance and grounding me into the areas of agricultural rural development in Africa.

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