CHALLENGES FACED BY FISHERS AT IGBEDI CREEK, WILBERFORCE ISLAND, BAYELSA STATE, NIGERIA

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ABSTRACT
A study was carried out on the challenges of fishers of the Igbedi creek area of River Nun using questionnaire and informal interviews. A total of 120 questionnaires were administered; only 92 were successfully recovered. Igbedi Creek is a distributary of River Nun, a tributary of River Niger. Igbedi Creek fishery is characterised by artisanal or rather subsistence operations, low catches, high water turbidity with clay suspensions due to dredging and construction works. The fishery is traditionally managed with low participation of stakeholders. The challenges ranked on a score of 4 points were: lack of government intervention 4, inadequate fishing input 3.25, poor marketing structure 2, low income from fishing 1.95, poor catches 1.90, degradation of ecosystem 1.55, destruction of gear 1.40 and old age 1.25. Gears commonly used by fishers were nets, hooks and lines and traps of all sorts and shapes The prospects of Igbedi Creek fisheries can be enhanced by improved political will, participation of stakeholders in the management, putting in place structured research and adequate data collection programme. Establishing environmental protection programmes and organized marketing structure will also empower and improve the livelihoods of members' in communities along the creek.
Keywords: multispecies fishery, ecosystem modification, inland waters.

INTRODUCTION

Traditionally, the fish in rivers, swamps, creeks, wetlands and lakes were used for food and for local sales or trading by the populace around such water bodies. Food and Agriculture Organisation (FAO, 2003) described these water bodies as "inland waters", and stated that the nature of inland fisheries is changing. The waters are now often shared with many groups of people who are not involved in fishing. These groups are associated with large projects and industries such as dams, mining and agricultural irrigation schemes. These activities often bring in much more money than fishing activities. However, these projects can pollute and otherwise damage natural environments, including fish habitats, and bring significant change to the life of local residents. Some conservation groups are reacting to increasing environmental damage, and often ask for restrictions to be placed on some or all of the activities that affect these inland waters. These restrictions sometimes benefit fisheries, but may also limit fishing and, as a result, cause problems for fishing communities. Meanwhile, about 90 million people in the world depend on fish for their daily source of protein and as a source of income (FAO, 2005).

Fisheries vary enormously in scale from village managed ponds to large highly migratory fish stocks; the scale of a fishery determines the type of governance structures and institutional arrangements needed for its effective management.

Igbedi Creek is an open access water body with a multispecies fishery which is a last resort occupation for people in communities along the creek. The water is shared with many others who are not fishing. The continuous dredging activities have increased the extent of the banks with attended caving in of land mass. This has also created a murky appearance of the water in the creek, making fishing activities face a challenge of breaking down. It is the purpose of this study to find out the challenges faced by fishers operating in this water body.

STUDY AREA

Igbedi Creek is a distributary of the River Nun which is also a tributary of River Niger. Located between longitude 6° 03' E and 6° 15' E and latitude

4° 04' N and 5° 12' N. It is approximately 38 km in length from Agudama, Ekpetiama clan to Otuan. Other communities along the banks are Igbedi, Agorogbene, Ogobiri, Toru-Ebeni, Amassoma and Otuan (Fig. 1).

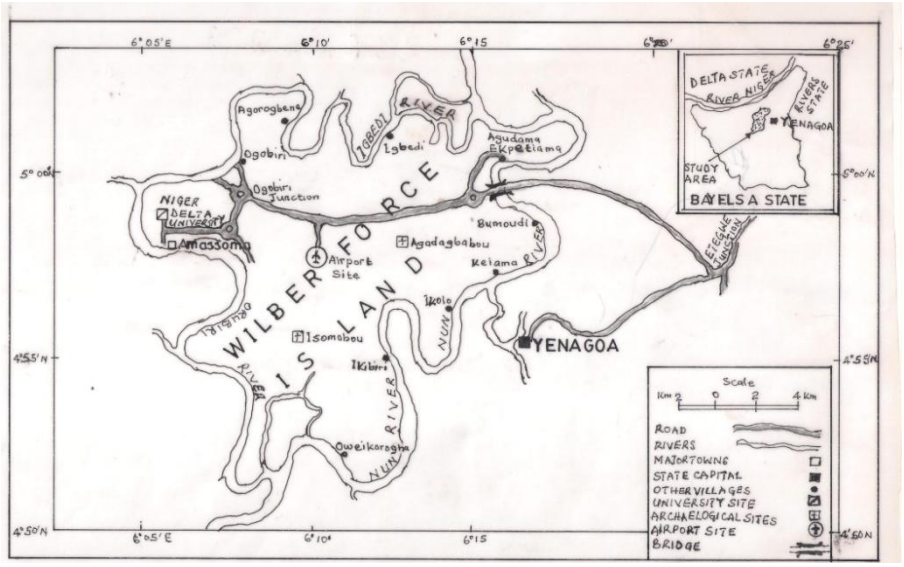

Fig. 1: Map showing the outline of Igbedi creek in Wilberforce Island, Bayelsa State, Nigeria (Source: Alagoa, 2007)

MATERIALS AND METHODS

Data Collection

A survey was embarked upon to determine the challenges facing the fisheries activities in Igbedi Creek, Wilberforce Island, Bayelsa State, Nigeria. A total of 120 questionnaires were given out to fishers only 92 were successfully administered and recovered. Three communities namely Agudama/Ekpetiama, Ogobiri and Amassoma were selected out of six communities along the bank of the creek. This was based on a non random selection method considering the accessibility and observed economic activities in the communities. Socio-economic information on the fishers was collected along with challenges faced on fishing activities.

Data Analysis

Data collected were analysed using statistical concept of means and percentages. The challenges were ranked on a scale of 4 points. Where nominal values of 1 – 4 were assigned to responses indicated as strongly agree, agree, disagree and strongly disagree. Cumulative was divided by number of responses.

RESULTS

Igbedi Fisheries is characterised by Artisanal or rather subsistence operations, low catches, high water turbidity with clay suspensions due to dredging and construction works. The socio-economic information on the respondents is shown in Table 1. The active age of respondents ranged between 31-50years old as reported in this study. The gender involvement was 46.74% for male and 53.26% for female giving a ratio of 1:1.14 male : female , this may be implied that gender participation is almost the same. The family size of 5 -10 recorded the highest frequency among the respondents. Many of the respondents were engaged in fishing as dual purpose with a 61.95% involved at both commercial/ subsistence level. Collaborated with individual interviews, many respondents only sell what remains after taking care of domestic supply. Gears commonly employed by fishers in Igbedi creek are nets comprising of cast nets and gillnets, hooks and lines recorded low usage which may be due to several other activities like water transportation and dredging going on in the area and traps of all sorts and shapes were employed, meanwhile 27.18 % of the respondents combined the use of all gear in their

operations. Majority of the respondents (83.70%) agreed that the venture is profitable.

The ranking of the challenges on a scale of 4 points is shown in Table 2. The challenges as ranked on a scale of 4 points were: Lack of Government intervention(4), Inadequate fishing Input (3.25) , Poor Marketing structure (2), other challenges were Low income from fishing(1.95), Poor catches (1.90), Degradation of ecosystem (1.55), Destruction of gear (1.40) and Old age (1.25). The Fisheries is traditionally managed with low participation of stakeholders as shown in the stakeholders' analysis (Table 3).

Table 1: Socio- Economic Information on Igbedi Fishers

Age		**Frequency**	**Percentage (%)**
	20 -30	15	16.30
	31 -40	30	32.61
	41 -50	25	27.18
	51 -60	9	9.78
	61 and above	13	14.13
	Total	92	100.00
Sex			
	Male	43	46.74
	Female	49	53.26
	Total		100.00
Family size			
	2 – 4	15	16.30
	5 – 10	62	67.40
	11 and above	15	16.30
	Total	92	100.00
Reason for fishing			
	Commercial	25	27.18
	Subsistence	10	10.87
	Commercial/subsistence	57	61.95
	Total	92	100.00
Gear employed			
	Nets	33	35.87
	Traps	25	27.18
	Hooks and lines	9	9.78
	All of the above	25	27.18
	Total	92	100.01
Years of experience			
	5-10	13	14.13
	11-15	30	32.61
	16-20	28	30.44
	21 and above	21	22.83
	Total	92	100.01
Mode of engagement			
	Part time	67	72.82
	Full time	25	27.18
	Total	92	100.00
Profitability			
	Yes	77	83.70
	Sometimes	6	6.52
	Do not know	9	9.78
	Total	92	100.00

Table 2: Ranking the challenges of fishing activities in Igbedi Creek on a scale of 4 points

S/N	Challenges	Rankings
1.	Lack of government involvement	4.00
2.	Inadequate fishing input	3.25
3.	Poor market facilities	2.00
4.	Poor catches	1.95
5.	Low relative income from fishing	1.90
6.	Pollution	1.55
7.	Destruction of ecosystem	1.55
8.	Invasion of aquatic weeds	1.55
9.	Destruction of gear by maritime vessels	1.40
10.	Old age	1.25
11.	Others	0.85

Table 3: Analysis of stakeholders

		Activities					
S/No	**Stakeholders**	**Fishing**	**Dredging**	**Transportation**	**Trading**	**Research**	**Management**
1.	Dredgers		√				
2.	Fishermen	√					
3.	Maritime workers			√			
4.	Traders				√		
5.	Researchers					√	
6.	Ministry of Agriculture and Natural Resources						√
7.	Ministry of Environment						√
8.	Community leaders						√
9.	Local government						√
	Total	**1**	**1**	**1**	**1**	**1**	**4**

DISCUSSION

Igbedi Creek fisheries is predominantly subsistence as observed in this study, a large percentage (72.82%) of the respondents operate on part time basis. Although 83.70% agreed that fishing is profitable in the creek, only 27.18% were operating at commercial level, it could be deduced that this same group are the ones that combine the use of all the gears. Though the fishing is profitable, ecosystem modification was a prominent issue in the Igbedi Creek fisheries which is left to be cared or uncared for by whosoever wishes since no concerted effort was put in place to protect the creek or sustain the fishery.

Overexploitation, ecosystem modification and international conflicts on management and fish trade are all key threats to the long-term sustainability of fisheries. According to FAO (2000) the role of management institutions are to : collect information , analyse information, ensure participation of stakeholders, provide training and capacity building, ensure coherence of local management plans with national policy objectives, monitor , control and put in place surveillance to encourage compliance with the regulations. The management institution in case of Igbedi creek fisheries is the government comprising of Ministry of Agriculture and Natural Resources, Ministry of Environment and the Local Government, which the respondents signified their lack of involvement the highest ranked among the challenges. World-wide experiences with fisheries and other free-range resources have shown that open access systems, where anyone who wishes to has a right to exploit the resource, can have severe consequences. In the absence of control, open access systems will invariably lead to over-exploited resources and declining returns for all participants. This has been found to occur in virtually all fisheries

under open access, from small-scale artisanal fisheries to large-scale industrial fisheries whether national or international, and has been dubbed the 'Tragedy of the Commons' (FAO, 1997). Scientists and management authorities will need to recognize the value of the knowledge of fishers, their representatives and communities (particularly regarding the ecosystem). This local management group should be involved in co-management because they understand the waters better due to their day to day experience of the seasonal fluctuations of water level and fish species availability. It thus becomes easier for them to abide with rules and regulations when they are co-managers. Apart from developing fisheries for food, many countries now use some of their inland waters for recreational purposes, this has not been a concerted activity in Igbedi area but many people do it unconsciously. While individuals may fish for food in a recreational area, the fish caught are reserved for personal use rather than commercial sale. Meanwhile, recreational fishing can provide significant economic and financial benefits to operators. Marshall and Maes (1994) stated that small-scale inland fishers are often not able to finance all the measures needed to establish and conduct sustainable recreational fisheries. Therefore, fisheries managers need to ensure that they are recognized as important stakeholders in the broader process of integrated management and one way to safeguard fishing interests is to develop plans that deal with the needs of everyone using inland resources. These interests in Igbedi area varied from fishing, sand mining, transportation, and trading to research and management. Organizations should be established as a means for individual fishers or other "stakeholders" (that is, people that have an interest in inland fisheries) to express their views and concerns regarding changes to their environment. The stakeholders should be encouraged to attend meetings when important issues are being discussed and they should be given access to studies and reports about activities affecting local fisheries. The analysis of stakeholders in this study has portrayed the significance of concerned individuals in management issues, four key important stakeholders were recognized as managers in this study, these are the arms of government represented by Ministry of Agriculture and Natural Resources, Ministry of Environment, the Local Government and the Community leaders. Fishers or their representatives should participate in decision making by agreeing to prioritized use of water by non-fishery projects. Likewise, fishery managers should share information about fishery plans with people involved in the other projects. Many of the problems facing fisheries management fall outside the direct control of fisheries managers. Examples of such problems include as related to inland waters: the degradation of water body as a result of agricultural or industrial runoff; destruction of fish habitats through infrastructural development, mining, oil and gas exploration and extraction and other human activities; the use of freshwater for power stations, irrigation and human settlements which changes river flow, and climate change remained factors affecting the distribution and productivity of fish stocks.

CONCLUSION

The important guiding principle for inland water development and management should be that of maximizing benefits from all activities for as many stakeholders as possible while maintaining a healthy environment. Effective management requires information about the biological, social and economic aspects of a fishery to ensure its sustainability and maintain its contribution to economic growth, food security and livelihoods. The expected support of the Government must be in the areas of research and improved data collection on the types of fisheries, stakeholders involved and capacity building for the fisheries institutions on emerging issues for appropriate management measures and resolutions. Governments should also work with development banks and other financial agencies to assist small-scale and subsistence fisheries. Since non-fishery users of inland waters have greater access to outside financing, governments might consider organizing finance for management programs as well as anti-pollution programmes from these sources. In this way a financial management plan can be secured for all the users of the aquatic area.

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