MARINE FISHING IN THE NIGER DELTA IN THE 21ST CENTURY: A STUDY OF ITS SOCIO-ECONOMIC DEVELOPMENT

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ABSTRACT

Marine fishing had been the mainstay of the Niger Delta's coastal economy since pre-colonial era, due to the littoral characteristics of the region. It had been serving the socio-economic needs of the people adequately. In the wake of oil exploration in Nigeria, from the 1970s, Marine fishing, a highly dependable economic Sector, had been neglected by the youths and governments despite its huge contributions to both regional and national developments. The thrust of this paper therefore, is unraveling the history of Marine fishing, the physical characteristics of the Niger Delta, its suitability for Marine fishing, as well as environmental and human inhibitions of marine fishing in the region. The study adopted historical narrative method of oral interview, and use of text books and journals. The study also made some recommendations for improvement and sustenance of Marine fishing in the face of peculiar environmental conditioning.

Key words: Fishing technology, local geography, marine fishing, Niger Delta

INTRODUCTION

A general survey of the Gulf of Guinea indicates that one of the predominant occupations common to all littoral peoples of the region since pre-colonial era had been fishing at both Marine and in-land areas (Ehinmore, 2002). Recent studies show that fish production in Nigeria and indeed in the Niger Delta region comes from three main sources; the artisanal (local fishing), commercial trawlers (industrial fishing in onshore and off-shore waters of the sea) and fish farming (culture of fish in enclosure-ponds, tanks, race way etc) (Ayo & Balogun, 1992). Of these three sources, artisanal fishing seems to be responsible for the highest amount of fish which are supplied locally in the Niger Delta region.

A brief description of the peculiar geographical nature of the region is necessary for vivid understanding of its suitability for maritime economic viability. This would also give impressive information on the magnitude of the siege emanating from both man and nature to the fishing folk of the region. The region comprises nine states which are; Abia, Akwa-Ibom, Bayelsa, Cross river, Delta, Edo, Imo,
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Ondo and Rivers. The Niger Delta is one of the largest wet lands in the world (Eyo & Oladipo, 2003). It covers an area of 70,000 square kilometers (Eyo & Oladipo, 2003). It is a low land rainforest. The region is traversed and criss-crossed by a large number of rivers, rivulets, streams, canals, creeks and estuaries, making land transportation in the region difficult. The coastal-line is buffeted throughout the year by the tides of the Atlantic Ocean while the mainland is subjected to periodic floods by the various rivers. The terrain covers dry-land, seasonally flooded land, galloping swamp, swamp, shallow water, offshore, deep and ultra-deep off-shore (Eyo & Oladipo, 2003).

Niger Delta has been described as the African largest Delta. The continental shelf is a belt of between 32.18 and 40.23 kilometres wide, lying behind the coast-line. Though Niger Delta coastal belts share similar geographical characteristics, the major study areas include Delta and Ondo State which form the western fringe of the region. The coastal belt (except the Western fringe, which is muddy) includes, a thin sandy beach ridge consisting of a number of small islands running along the coast and being flooded daily up to about 1.5 to 1.8 meters of water level at high tide (Alagoa, 1972). The red and white mangrove trees are so impressive and over grown in this region that it is rightly referred to as the mangrove forest belt, giving visitors the major physical characteristic image of the Delta region. (Alagoa, 1972) Literature on marine fishing is scanty despite its important and enormous contributions to national development. This important sector of Nigerian economy has also been facing myriad problems impeding its development over the years. This paper is therefore of the opinion that, with the vital socio-economic role of marine fishing in the development of the region, it deserves priority attention in scholarly studies.

FORMS AND NATURE OF MARINE FISHING IN THE REGION

A close observation of the marine fishing economy in the region shows that, the littoral environment of the area has set certain ecological peculiarities which have shaped the people’s socio-economic history. It was also noted that among other factors, illiteracy, adherence to rudimentary fishing technology and problem of storage hindered productivity.

Fishing in the area takes some levels which include; small, medium and large scale fishing activities carried out between the shore and the deep-sea area. It entails a high level of specialization on various traditional skills (Ehinmore, 2002). Marine fishing, especially at the deep sea level is highly capital and labour intensive. Eyitemi (2012) noted that, as a result of the swift ocean current and huge wave-breaking nature of the sea as well as high capacity of catch, large and heavy local tools, such as big boats, anchors, buoys, paddles and nets are used which make it different from in-land fishing.

Marine fishing generally involves good knowledge of local geography, such as, skills of wave maneuvering, knowledge of the wind direction, that of daily rising and falling of the tide, the ocean current, water colour, water nature, net mending and construction, aquatic culture (fish behaviour), weather, the seasons, swimming skills etc. (Omolere, 2012). All these conditions are a prerequisite for effective and professional marine fishing. Fishing in the sea in this
region and indeed in other littoral parts of Nigeria is carried out both day and night. In the 1950s and 1960s, mobility was restricted to the use of paddles and canoes, but lately, especially from the 1970s, it has mostly been by powered boats. However, there are still poor fishermen who cannot afford powered boats and therefore, use paddles, raffia poles with relatively small boats. This category of marine fishing is usually on a small scale near the shore (Atimitse, 2012).

Studies have shown that there are three major categories of marine fishing in the region. Therefore, fishing is near the shore. This is usually carried out either by trekking along the shore or by using boats in a few kilometers from the shore line. Some of the fishing tools used in this area include, cast nets (Obiriki) for catching fish and dragnets (asun and ekobi) for shrimps catching. Mejebi (2010) maintained that, in some communities, women are actively involved in these fishing devices of crayfish catching.

Another category of ocean fishing in the area is the intermediate off-shore fishing. Mejebi further confirmed that the area of operation in this form of fishing is relatively deep, up to about 3-10 meters. Fishing tools used include; sinking nets (apamu) floating or mobile nets, long line and anchored hooks.

The third category is the deep-sea fishing. This is the most labour and capital-intensive and the most commercially inclined form of fishing in the region. Area of operation is about 20-50 meters deep. Ehinmore (2002) noted that deep-sea fishing, known as Oko-Ota or ade ado by the Ilaje fishermen, had been practised in the area before 1900. Mobility was relatively made easy with the use of sails (Igbokun) among the Ilaje and ekere among the Itsekiri). Today, large powered boats, sophisticated nets of extra large meshes in some cases and other related tackle are employed. Though the region comprises more than two fishing peoples, the common marine fishes found in commercial quantity in the area are identified in English, Ilaje, Itsekiri language and in science.
Table 1:

### Major Marine Water Fishes Found in the Region

<table>
<thead>
<tr>
<th>S/N</th>
<th>English Name</th>
<th>Ilaje</th>
<th>Itsekiri</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Marine -cat-fish</td>
<td>Arighon</td>
<td>Okpagh oro</td>
<td>Arinus lastiscu tus</td>
</tr>
<tr>
<td>2.</td>
<td>Shiny-nose</td>
<td>Ofon</td>
<td>Ebe</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Croakers</td>
<td>Upokun</td>
<td>Ledi</td>
<td>Pseudotoithus elogatus</td>
</tr>
<tr>
<td>4.</td>
<td>Soles</td>
<td>Abolibo</td>
<td>Ebo</td>
<td>Synoglossus senegalensis</td>
</tr>
<tr>
<td>5.</td>
<td>Gravelle-jack</td>
<td>Agasa</td>
<td>Ebeminnghan</td>
<td>Caranx hippos</td>
</tr>
<tr>
<td>6.</td>
<td>Bongashad</td>
<td>Folol</td>
<td>Efolo</td>
<td>Ethmalosa fimbriata</td>
</tr>
<tr>
<td>7.</td>
<td>Shrimps</td>
<td>Ide-mefun</td>
<td>Ede-Mefun</td>
<td>Penaeus notialis</td>
</tr>
<tr>
<td>8.</td>
<td>Pampano</td>
<td>Owere</td>
<td>Owere</td>
<td>Trachinotus goreensis</td>
</tr>
<tr>
<td>9.</td>
<td>Shark</td>
<td>legure/yanyan</td>
<td>Olegure</td>
<td>Parageleus graveli</td>
</tr>
<tr>
<td>12.</td>
<td>Swordfish</td>
<td>Oyiluda</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Grunter</td>
<td>Keker/ Ighanker</td>
<td>Uken</td>
<td>Pomadasys jubelini</td>
</tr>
<tr>
<td>14.</td>
<td>Red Snappers</td>
<td>Obira</td>
<td>Obira</td>
<td>Pagrus spp/latesniloticus</td>
</tr>
<tr>
<td>15.</td>
<td>Sting ray</td>
<td>Opuepue/nate</td>
<td>Opuepue</td>
<td>Raja miraleus</td>
</tr>
<tr>
<td>16.</td>
<td>Mullets</td>
<td>Itoko</td>
<td>Toko</td>
<td>Mugil sp.</td>
</tr>
<tr>
<td>17.</td>
<td>Barracuda</td>
<td>Ijakere okun</td>
<td>Oduro</td>
<td>Sphyraena spp.</td>
</tr>
<tr>
<td>18.</td>
<td>Dolphin</td>
<td>Obeje</td>
<td>-</td>
<td>Corybaena eqniselis</td>
</tr>
<tr>
<td>19.</td>
<td>West African shade</td>
<td>Fanranfanran</td>
<td>Okungbo</td>
<td>Ilisha Africana</td>
</tr>
<tr>
<td>20.</td>
<td>Eel</td>
<td>Ejomalokun</td>
<td>Egwale-okun</td>
<td>Ophichthys ophis</td>
</tr>
<tr>
<td>21.</td>
<td>Broke marriage</td>
<td>Awo</td>
<td>Ewo</td>
<td>-</td>
</tr>
<tr>
<td>22.</td>
<td>Tarpon</td>
<td>Ede</td>
<td>Ede</td>
<td>Magalopsatlanticus</td>
</tr>
<tr>
<td>23.</td>
<td>Guitar ray/skate</td>
<td>Olupan</td>
<td>Ogumberiheri</td>
<td>Rhinobatos rhinobatos</td>
</tr>
<tr>
<td>24.</td>
<td>Silver cat-fish</td>
<td>Igangan</td>
<td>Enignun</td>
<td>Chrysichtlys nigrodigitatus</td>
</tr>
<tr>
<td>25.</td>
<td>Police cap/spade fish</td>
<td>Akaraba</td>
<td>Akaaba</td>
<td>Chaetodipterus gowensis</td>
</tr>
<tr>
<td>26.</td>
<td>Megalop</td>
<td>Agha</td>
<td>agha</td>
<td>Megalopsatlanticus</td>
</tr>
<tr>
<td>27.</td>
<td>Eagle ray</td>
<td>Majogho</td>
<td>Majogho</td>
<td>Pteromylacea bovina</td>
</tr>
<tr>
<td>28.</td>
<td>Silver fish</td>
<td>Doje</td>
<td>Doje</td>
<td>Trichируrus lepturus</td>
</tr>
<tr>
<td>29.</td>
<td>Jack fish</td>
<td>Ayo</td>
<td>Ayo</td>
<td>Selarcumerno Phthalmus</td>
</tr>
<tr>
<td>30.</td>
<td>Grouper</td>
<td>Lowutu/obiragbo</td>
<td>Obira-ugbo</td>
<td>Epinephelus aeneus</td>
</tr>
<tr>
<td>31.</td>
<td>Threadfin</td>
<td>Luroro</td>
<td>Oluroro</td>
<td>Brachydeuterus auritus</td>
</tr>
</tbody>
</table>

**Sources:**


ii. Oral Information from Local Fisher Men and Fish Traders.

### BANE OF MARINE FISHING IN THE AREA

Artisanal fishing in the Niger Delta marine water is faced with myriads of obstacles emanating from both man and nature. One of these problems is the menace of the commercial fishing trawlers. As from the 1970s, commercial fishing trawlers, both local and foreign started encroaching on the economic rights of the coastal fishermen in Nigeria by destroying their fishing nets. This is mainly as a result of non-conformity to the rules of keeping to a specified nautical level in the Nigerian marine waters by these commercial fishing vessels. There have been cases of these fishing trawlers destroying the fishing nets of the local fishermen and the victims could make little or no redress for the fact that, most of them are poor illiterates and therefore, find it difficult to seek redress constitutionally, (Ehinmore, 1998). Ehinmore further noted that the owners of the industrial trawlers are influential, and as such, most of them ignore the law and therefore intimidate and trample on the rights of the poor fishermen in this region.
Equally too, the industrial trawlers engage in indiscriminate sweeping of all categories of fish irrespective of age despite governments' warnings. This has drastically reduced the population of fish in the region as they are not allowed to mature and multiply accordingly. This dastardly act has led to scarcity of fish resulting to situation in which more fishermen are hunting for fewer populations of fish. From the 1970s to date, the situation has been degenerating (Tenabor, 2009). Added to this is proliferation of fishing vessels in this area by the industrialists which has made things worse for the artisans. For instance, from the 1980s, Nigeria had been noted for high degree of investment on fishing industry.

Some of these companies include:

a. Yinka Folawuyo fishing company (local)
b. Oceanic fishing company (Foreign)
c. Taraba fishing company (foreign)
d. Inter-continental fishing company (foreign)
e. Alison fishing company (foreign)
f. Sea-gold company (local)
g. Obelawo company (local)
h. Savannah company (foreign)
i. Ibru company (local)
j. Manucom company (local)
k. Karflex fisheries (local)
l. Honey well fisheries (Local), to mention but a few.

Closely related to the foregoing problem is the issue of oil exploration. As a result of the introduction of oil economy since the 1970s, the main traditional economy of the Niger Delta had been adversely affected (Meyor, 2004). Apart from the fact that fish have been very scarce as a result of the disturbing activities of the oil companies, such as making use of grenade for seismic work, resulting in low productivity of the fishermen, the fishes in the shore and creeks are already polluted and this has dangerous effects on the health of the people (Moro, 2008). Moro also noted that the water in the streams of the region has been inflicted with industrial chemicals from the oil companies thereby making the drinking and bathing water harmful to human health.

Another problem is attack of pirates. As a result of incessant engagement in wars over the years, the Niger Delta youths have strongly developed the culture of violence and insecurity, inform of arms trafficking, kidnapping, armed robbery etc. This violent act has in recent times been extended to robbing the artisanal fishermen, snatchcng of their engines as well as killing them when they resist just as they equally do to the industrial fishing trawlers. Commenting on the pathetic situation of the fishermen, Omamogho (2010) noted that "fishing in the sea is now a dangerous venture; it is like going to the war front". 
There are a lot of transportation problems which usually inhibit easy mobility in this part of Nigeria. First, the seasonal sedimentation in the sea-shore (especially in the western fringe of the Niger Delta region) usually poses transportation problems to the fishermen, (Omamogho, 2010). As a result of the seasonal deposition of black mud along the shore, fishermen find it difficult to cross to the sea. This situation is worsened by harmattan periods (from November to February). In most cases, fishermen would have to migrate in search of free and clear coast. In addition, those living on muddy coast which is marshy and slippery in the rainy season face the problem of transportation of fish from the shore and that of fuel and building wood from the forest (Omamogho, 2010). Worse still, many settlements are detached from the upland areas due to the criss-cross nature by rivers thereby cutting the fishermen off from social facilities, such as pipe burn water, electricity, motorable roads, modern education, modern health facilities, modern market etc.

Moreover, there are cases of boat mishaps as well as rowing due to high and swift sea current in the water ways. The months of May, June and July fall within the periods of dangers in which fishermen are reported drowned and their nets missing (Ehinmore, 1998). Though a good swimming skill might be an advantage, it is not an automatic qualification for safety in the sea, especially during turbulent wind with huge waves and fast flowing water current. The bulk of the hardship during this period is borne by those fishermen without powered boats.

Costs of fishing tools, such as out-board engines, boats, nets, string etc required to establish fishing business, both small, medium and large scale are very high. Many artisanal fishermen find it difficult and even impossible in most cases to set up fishing industries on their own due to high cost of fishing equipment. This has perhaps, in recent times induced high cost of sea fishes in the market places in the region and indeed in Nigeria in general. The most expensive of these factors of production seems to be outboard engine which is equally a vital factor. For instance, between 1972 and 1984, the price of 25 horse Power Yamaha engine ranged from about N600.00 (six hundred naira) to about N6, 000.00 (Six thousand naira) and between 1984 and 1994, it rose to about N40,000.00 (forty thousand naira) and between 1994 and 1999, it rose to about N200,000.00 (two hundred thousand naira). Till date, 25 power Yamaha costs about N600, 000.00 (six hundred thousand naira) while 40 horse power is about N1, 000, 000.00 (one million naira) (Egbayelo, 2012). This inflationary and prohibitive price of the fishing tackle has adversely affected effective fishing and transportation in the region.

Additional factors, such as low spirit of economic diversification, poor records of fisheries statistics, low spirit of investment among fishermen, illiteracy, marine erosion, storage problem, and government neglect have acted in concert to create problems for effective fishing among the artisanal fishing folk in the coastal Niger Delta region in recent times.

CONTRIBUTIONS OF MARINE FISHING TO THE SOCIO-ECONOMIC DEVELOPMENT OF THE REGION

The contributions of marine fishing in the socio-economic Development of
the Niger Delta region in the 21st century are tremendous. As a result of the littoral conditioning of the region which does not favour the practice of extensive crop farming, fishing becomes the most popular traditional economic activity. Marine fishing in particular has boosted the economic activities of the region in a number of ways.

The development and sustenance of trade and various market centres in the region and indeed in Nigeria owe much to local maritime fishing economy (Ehinmore, 2008). In addition to capacity building in water resources management for sustainable development, artisanal fishing has provided a major avenue for reducing unemployment problems in the Niger Delta and in Nigeria. It has equally promoted sustainable economic growth and development through the process of accelerated industrialization by encouraging the development of small and medium scale industries.

Tobor (1991) pointed out some important role of fishing in Nigerian economic development such as gainful employment, most especially to those in the coastal communities as well as promotion of the growth of ancillary industries. Fishing has induced the location of such industries that depend on locally sourced inputs such as agro-allied type, like fish processing, canning and packaging, fish therapy, crafts such as boat building, paddle carving, net construction and mending which have made adequate provision for biodiversity conservation in the region (Eyo & Oladipo, 2003).

Fakade (1992) emphasized the biological and economic value of fish to man. According to him, fish flesh is about the best source of animal protein and that it contains mineral salts and its oil is mainly polyunsaturated fatty acid and it has an anti-cholesterol factor. Fakade further maintained that, our deep sea fisheries can provide fish species suitable for producing local stock-fish, we can save a huge amount of money if we can consciously tap and process this resource (Fakade, 1992). Fish meal is said to be equally indispensable in the poultry industry while fish oil is very valuable to cosmetics and pharmaceutical industries.

Equally too, artisanal marine fishing has influenced the promotion of symbiotic relationship between the various economic activities of the industrial sector in the region. In this way, it has laid a solid foundation for livelihoods which have presented several options for both local fishing folk and the urban dwellers in the region. Marine fish supplied by the local fishermen help to organize inter-state trade among Nigerian fish traders, mostly women.

Moreover, through intra and inter-state trade and migration by the marine fishing folk, there is cultural diffusion resulting from inter-ethnic marriage and social interactions among the polyglot population of the industrial fishing settlements and market places (Faluyi 1998). Faluyi further noted that fishing and migration as agents of socio-economic dynamics in Nigerian coastal areas have been of great antiquity and importance.

Fishing activities in the coast has induced tremendous population drift to the area, resulting in the founding of towns and villages along the coastal line (Udo, 1978). The presence of these coastal settlements has, no doubt influenced development of water transportation routes between the rural and urban centres of the Niger Delta region. For instance, the Igbokoda- Ayetoro coastal water way in
Ondo state, Sapele - Ogheye water route in Delta state, Port-Harcourt - Angalabio coastal water route in Rivers State, Yenagoa - Brass coastal water route in Bayelsa State, Oron - Ibaka coastal water route in Akwa Ibom State, Calabar - Atabong coastal water route in Cross River State and so on. These rural-urban coastal water routes serve as the major means through which fish traders as well as passengers of rural and urban centres in this region are connected. The economic viability of the coast has influenced the development of market centres between the coast and the hinterland in the supply of fish and farm produce as well as other needed products from different specialized producers. With these areas of specialization in production, there developed an inter-dependent and inter-regional form of trade in the area.

In addition, fishermen usually form co-operative societies in the area which does not only make it easier for them to purchase fishing materials but also, enhances unity and social interactions as well as increase their economic status which enable them to patronize larger commodity markets and traders in the urban centres. In most cases, fishing co-operatives act as money lenders to other interested traders to embark on small scale businesses. In essence, the artisanal maritime fishing activities in the Niger Delta region have contributed immensely to both regional and national economy despite its myriad inhibitions.

**CONCLUSION**

The true history of artisanal marine fishing in the Niger Delta presents a paradox in terms of development in many ways. In spite of the huge contributions to both regional and national socio-economic developments, artisanal marine fishing industry is characterized by some problems which require urgent and priority attention. For an effective and result-oriented marine fishing among the artisans in the region, it is imperative that, the NDDC (Niger Delta Development Commission), oil companies, the Niger Delta governments as well as stakeholders, including the fishing folk should demonstrate a spirit of shared vision, commitment and transparency in finding solutions to the alarming rate of maritime problems and insecurity to life in the region.

The menace of piracy should be tackled with urgency through effective marine policing and the use of harsh punitive measures on culprits (if possible, capital punishment). Vast socio-economic and natural difficulties should be alleviated by putting in place a large-scale, multi-type and safe sea-in-land way transportation system which would criss-cross the entire region. This would enhance the growth of coastal - hinterland mobility, effective fishing and commercial activities in the region.

Also, industrial fishing trawlers should be prohibited from operating within certain limits of the shore as a way of avoiding conflicts between them and the artisanal marine fishermen. In Nigeria, for instance, industrial trawlers should not be allowed, through strict legislation, to operate below 5 nautical miles to the shoreline. This is to create enough fishing space between them and the local fishermen.
Government should intervene by making loans available with subsidies for small and medium scale industries. This would go a long way to enable local marine fishermen embark on modern fishing technology and as such expand the scope of their fishing techniques and industry. This would also stimulate people's interest in fishing occupation in the region.

Local fishermen should be involved in seminars and workshops through ministry of Agriculture and maritime academy as ways of infusing in them the knowledge of modern fishing techniques as well as updating their fishing dexterity. If these suggestions are considered, it is hoped that there would be tremendous progress in maritime fishing economy in the region and as such, more contributions of fishing would be made to the growth and development of the Niger Delta region as well as national economy. Finally, improvement in fishing industry would create room for economic diversification and also alleviate the problem of over dependence on oil economy in the region.

REFERENCES


