THE STORY OF FISHING IN NIGERIA

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The presence of numerous water bodies, some of which are prominent rivers cutting across vast areas of land emptying into the sea, avails Nigeria the opportunity of owning significant fisheries. The history of fishing in Nigeria may be as old as mankind, wherever people live near streams, rivers, lagoons and other bodies of water, but the history of fisheries development in Nigeria is a comparatively recent one. The bulk of domestic fish production in Nigeria presently comes from the capture fisheries dominated by the artisanal fishery sub-sector which produces over 80% of the annual total. Domestic fish production (0.55 million mt) falls short of the demand (1.5million mt). Due to the threatened depletion of the natural water resources, Nigerian fishery development is gradually tending towards culture fisheries, which is centered on Clariid catfishes (Plate 2) and the Tilapias (Plate 2). Many businesses are being built round it, and Nigeria is currently the largest producer of catfish in Africa (http://www.fao.org/DOCREP/003/W7499E/ w7499ea6.htm). However, the fish supply from aquaculture is currently under-exploited.

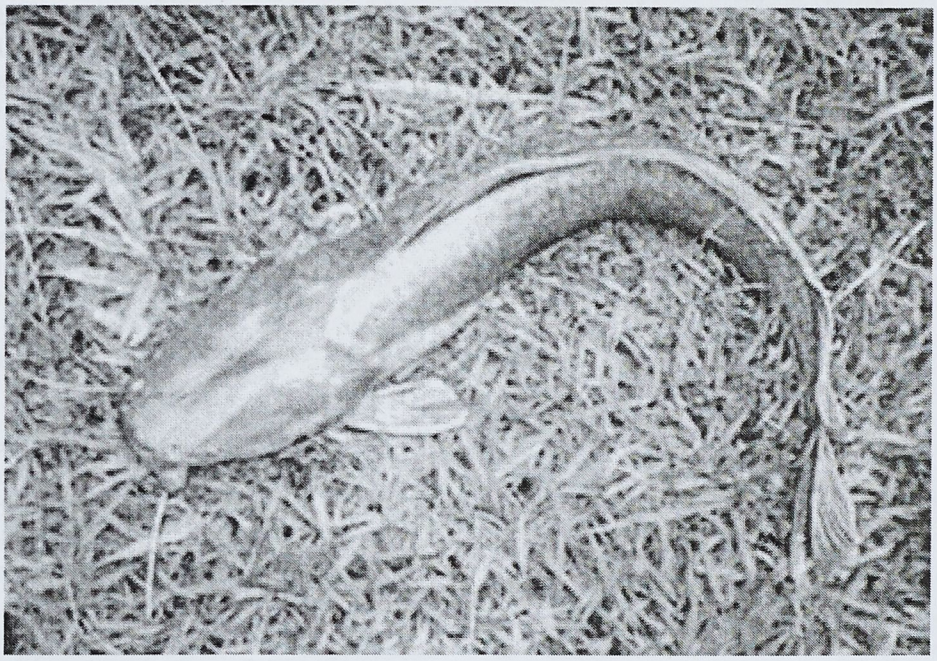

Plate 1: The African catfish, *C. gariepinus* (Adewumi, 2005)

Nigeria is a vast country of about 160 million people (2010 estimates — http//siteresources.worldbank.org//DATA), covering about 923,768 sq. km of landmass, endowed with a coastline of 853km and over 14 million hectares inland waters. The coastline stretches from the Western border with Republic of Benin to the Eastern border with Cameroon Republic.

In 1978, Nigeria established an Exclusive Economic Zone (EEZ) which is an area beyond and adjacent to the territorial sea extending 200 nautical miles from the baseline.

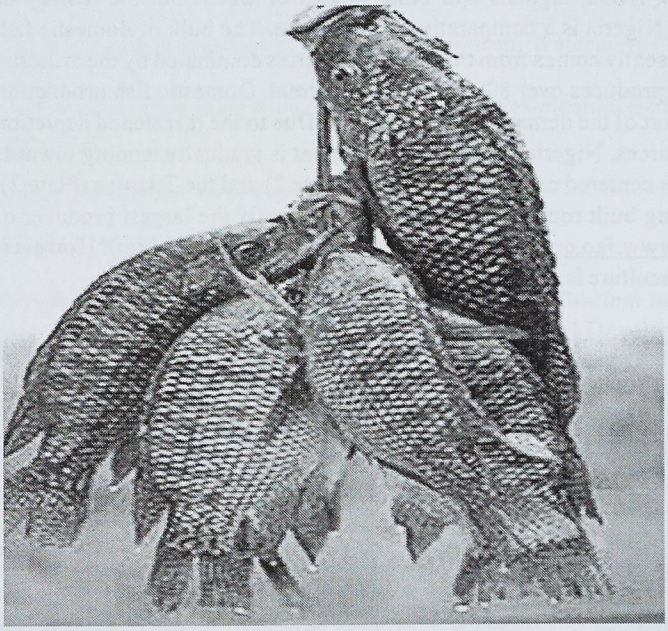

Plate 2: Tilapia sp

The surface area of the continental shelf is 46,300km^2 while the EEZ covers an area of 210,900km^2 (World Resources, 1990, cited in Ezenwa, 1994), within which Nigeria exercises sovereign rights for the purpose of exploring, exploiting, conserving, and managing the natural resources. Nigeria is therefore blessed with an abundance of marine, brackish and inland water resources. The presence of numerous water bodies, some of which are prominent rivers cutting across vast areas of land emptying into the sea avails Nigeria the opportunity of owning significant fisheries.

The Nigerian fishing industry is practiced in two environments: capture and culture fisheries. Capture fisheries involves hunting for fish from the natural water bodies such as rivers, lakes, lagoons, estuaries, creeks, seas and oceans. Culture fishery is the art of fish husbandry whereby fish are kept and fed in confinement and managed to achieve quick growth and accelerated production. While the artisanal (small scale) fishing had been in existence, the history of industrial fishing in Nigeria is a comparatively recent one.

History of Fishing in Nigeria

Though reports have it that a fishing company operated from the coastal waters of Lagos long before 1915, deliberate efforts at developing the country's resources can be said to date back to the Second World War when, because of the naval blockage of the high seas, the colonial administration decided to develop the country's local resources, including fisheries. A fisheries establishment was inaugurated in 1941 as a Fisheries Development Branch of the Department of Agriculture in the Colonial Office with headquarters at Apese village in Onikan, Lagos State. A senior Agricultural officer was appointed to conduct a survey of the industry.

Plate 3: Fisher folks sorting out fish caught from a stream and a pond (FAO, 1994)

A preliminary survey was conducted of the canoe fisheries of Apese village and Kuramo waters around Victoria Island, Lagos, and a small fisheries school was established at Onikan. Small motor fishing crafts were acquired for exploratory fishing in the estuaries, lagoons and creeks. Between 1948 and 1956, major efforts were made at extending the artisanal fisheries programme to the coastal areas of Nigeria. Trawling surveys were undertaken in the vicinity of Lagos and Cameroon. An active extension service was established to demonstrate the benefits of improved fishing techniques and gear to the coastal canoe fishermen.

The period between 1952 and 1957 witnessed a considerable boom in artisanal fisheries. This has been attributed to the concentration of fishing activities on the rich virgin grounds leading to high returns for efforts, general improvements in processing, storage and distribution methods, improvements in the type of fishing crafts used, and especially the complete change over to synthetic fibre (Plate 3). The overall result was that the contribution of fisheries to the national GDP quadrupled between 1960 and 1970.

The bulk of domestic fish production in Nigeria presently comes from capture fisheries dominated by the artisanal fishery sub-sector which produces over 80% of the total (Table 1). Over-fishing and threatened depletion of the natural resources however, has made production through capture or artisanal/industrial fisheries unpredictable. The current overall estimate of fish production from all sources (2007 estimate) was 0.62 million MT, out of which aquaculture produces some 85,087 MT (Table 1). This level of production is far short of the demand (2.66 million MT). To meet this demand, all stakeholders have realized that aquaculture development and better management of the capture fisheries are the best viable option. There has been a gradual improvement of the contribution of cultured products to the overall production, from 5% to 13.8% (Fig. 1). Musa, *et al.* (2005) reported that the sub-sector contribution of aquaculture to the domestic production is an average of 6%, whereas the annual yield potential is put at 2.5 million MT. It is therefore imperative to step up fish production through aquaculture in order to achieve fish self-sufficiency for the country. Onuoha and Deekae (2006) see aquaculture principally as a way of supplementing unpredictable production through capture or commercial fisheries. Various freshwater and brackish water fish species are being cultured.

The first attempt at fish farming was in 1951 at a small experimental station in Onikan, Lagos, where different Tilapia species were cultured, though the result was not impressive. Modern pond culture started with a pilot fish farm (20ha) in Panyam, Plateau State for rearing the common mirror Carp, *Cyprinus carpio* following the disappointing results with Tilapia culture. Ever since, sufficient interest has been generated that made regional governments establish fish farms, such as Buguma in Rivers state, Abagana in Anambra state, Agodi Garden in Ibadan, Isinla in Ado Ekiti etc. Although the major species cultured include fin-fish (tilapias, catfish, and carp), catfishes of the family Clariidae are the mostly farmed fish.

Table 1: Fish production in the Nigerian water from 1985-2007
Source: FDF, 1985, 2008

YEAR	Coastal and Brackish Water	Inland Rivers & lakes	Aquaculture (Fish Farm)	Industrial Commercial
1985	140873	60510	15000	26142
1986	160169	106967	14881	25042
1987	145755	103232	15221	24900
1988	185181	112443	15764	36549
1989	171332	132168	25607	33645
1990	170459	113075	7297	25329
1991	168211	123075	15840	36226
1992	184407	99536	19770	39365
1993	106276	94900	18703	35644
1994	124117	110484	18104	30488
1995	159,201	161,754	16,619	33,479
1996	138,274	170,926	19,490	27,244
1997	175,126	185,094	25,265	27,703
1998	219,073	213,996	20,458	29,954.60
1999	239,228	187,558	21,738	31,139.40
2000	236,801	181,268	25,720	23,308.30
2001	239,311	194,226	24,398	28,378
2002	253,063	197,902	30,644	30,091
2003	241,823	204,380	30,677	33,882
2004	227,523	207,307	43,950	30,421
2005	259,831	230,763	56,355	32,595

2006	269,878	248,659	84,533	33,778
2007	260,099	244,128	85,087	26,193

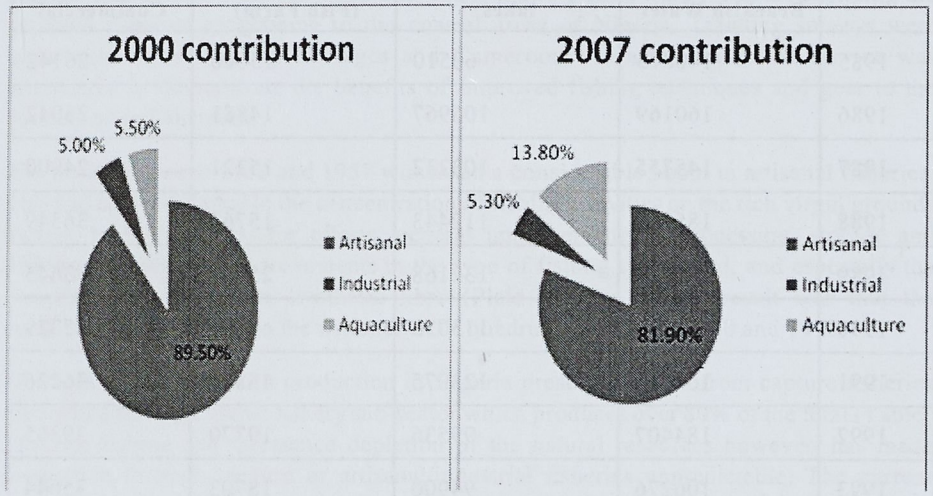

Fig. 2: Percentage contribution of various sources of fishing to the overall fish production in year 2000 and 2007

Since the propagation of *Clarias gariepinus* through hypophysation was initiated in Western Nigeria in 1973 (Elliot 1975), the procedure has been widely practiced throughout Nigeria thus leading to an increase of farm-raised catfishes from the 80's to date. The favoured catfish species include: *Clarias gariepinus*, *Heterobranchus bidorsalis*, *Clarias X Heterobranchus* (hybrid *Heteroclarias*) and *Clarias nigrodigitatus*. The Clariid fishes are highly favoured in aquaculture because of its hardiness, ability to accept a wide variety of natural food organisms and cheap supplementary feed (FAO, 2000). It is very well appreciated in Nigeria (where it is often referred to as lung fish). It was observed that of the over 30,000MT of various freshwater and brackish water fish species raised in the year 2000, catfishes were more abundant next to tilapias (Fagbenro et al, 2003).

A poly-culture of *C. gariepinus* and tilapia species (e.g *Oreochromis niloticus*) is also practiced. Recently, the introduction and adoption of the intensive water recirculatory system (WRS) for fish culture had made a significant contribution to the total amount of aquaculture production in Nigeria.

As artisanal industrial fishing is going on, many entrepreneurs are also going into fish farming with the result that we now have 'live' fish pools in markets all over many Nigerian metropolitan cities and towns today. Nigeria is currently the largest producer of catfish in

Africa, and the local parlance, fish pepper-soup, is readily available in many restaurants and hotels. The Federal Department of Fisheries (FDF) in 2007, estimates the total available land for aquaculture development as 1.7 million hectares, of which only 60,000 hectares are utilized. Also of the estimated aquaculture production potential of 2.5 million tons, only 85,087 tons are produced per hectare. Consequently, it is glaring that fish supply from aquaculture/industry potential is currently under exploited.

Conclusion

Fishing and the fisheries of Nigeria have grown over the years, threatening a depletion of natural water resources. The need to meet the domestic and export fish requirement of the nation has become the drive for the Nigerian fisheries development, which is gradually tending towards culture fisheries centered on Clariid catfishes. Many businesses are being built round it and Nigeria is currently the largest producer of catfish in Africa. However, the fish supply from aquaculture/industry potential is currently under exploited.

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