

The decline of a regional fishing nation: The case of Ghana and West Africa

John Atta-Mills, Jackie Alder and Ussif Rashid Sumaila

Abstract

Inadequate trade policies, globalization of the fishing industry, dominance of Europe's distant water fleets, declarations of exclusive economic zones (EEZs) by neighbouring West African nations, overfishing and a lack of good governance contributed to the decline of Ghana as a regional fishing nation, a position it had held since the 18th century. The prohibitive cost of access arrangements limited Ghana's access to distant waters. The country's marine environments have been impacted by overexploitation of stocks and the use of destructive methods. Subsistence fishing has become the sole means of survival for many fishers. The decline of the fishing sector has limited the country's ability to meet domestic demand and threatened the economic and food security of many Ghanaians.

The article traces the early history of Ghana's fisheries, their gradual decline during the last four decades, and outlines recommendations for policy changes to address the situation and steer the nation on a course towards sustainable fisheries.

Keywords: Ghana; Fisheries; Artisanal fisheries; Trade; International fishing agreements.

1. Introduction

The importance of fisheries for subsistence and economic development varies throughout West Africa. In Ghana, marine resources are an important source of food and economic activity, and until recently Ghana was considered a major fishing nation in the region. Nationally, the per capita consumption of fish is approximately 22 kg/year with 15% of protein derived from fish (WRI, 2001). Ghana is an importer of fish since the annual demand, 600,000 tonnes (Kwame Koranteng, pers. comm.) is higher than total annual marine and fresh water landings, 357,600 tonnes (WRI, 2001). Fishing contributed US\$ 380 million to the national economy and US\$ 56 million worth of exports in 1996 (FAO, 1998). In 1996, the fishing sector supported up to 1.5 million people, of which approximately 27% were directly employed in the sector (FAO, 1998). In the 1950s and 1960s, Ghana stood out as a fishing country of regional importance in West Africa (Adjetey, 1973). However, recent developments in the region have affected Ghana's status as a distant water fishing country (Acquay, 1992).

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The recent events and circumstances that have intervened to alter Ghana's position include: regional political developments (Overå, 2002), globalization, the expansion of foreign fishing fleets — especially Western European, Russian and Chinese — along with drastic economic changes (Acquay, 1992). These factors have impacted on the viability of some of Ghana's fishing operations in foreign locations, which in turn affected the country's domestic fisheries economy. This article examines how the development of the marine fishing sector since the 18th century has contributed to its current environmental, economic and social state, and makes recommendations for policy changes to provide for a sustainable national fisheries sector.

2. History

Ghana has a long history as an artisanal fishing country. The seeds for this had been sown in the 1700s and 1800s when Fante fishers from Ghana introduced ocean fishing to communities along the coast of the country (Lawson and Kwei, 1974; Jorian, 1988). The Fantes are reported to have been fishing in the current Benin Republic as early as the 1800s (Overå, 2001), while fishing by Ghanaians in the coastal waters of Côte d'Ivoire started in 1906 (Delauney, 2001). The first Ghanaian fishers arrived in Nigeria in 1916 (Overå, 2001) and in Liberia in the 1920s

(Haakonsen, 2001). By the early 20th century, Ghanaian fishing companies were well established between Senegal and Nigeria (Agbodeka, 1992). It was not until the 1940s that they extended their activities to the Republic of Congo (Overå, 2001).

Ghana's commercial fishing sector did not emerge until the 19th century when river boats were modified to handle the surf and rough seas along the West African coast (Agbodeka, 1992). These boats provided easy access to coastal resources throughout Ghana, resulting in well established inshore artisanal and commercial fishing (semi-industrial) sectors by the early 20th century. During this time, inland and coastal populations also developed a taste for marine fish as a source of protein, and soon demand exceeded the domestic supply and accessible fishing grounds became fully exploited. The demand for the fish in the late 19th and early 20th centuries, and associated trade and investment opportunities, encouraged the formation of fishing companies, with foreign offices directing semi-industrial fishing operations in distant waters. Ghanaian companies recruited crews from domestic fishing communities to man their sea-faring vessels. By the middle of the 20th century, the development of a semi-industrial fishing presence in foreign waters had established Ghana as a fishing power throughout West Africa (Agbodeka, 1992).

The Ghanaian fishing companies operating in foreign waters flourished from the 19th century to the early 1960s when many West African countries obtained their political independence. The new governments and their administrations perceived these Ghanaian companies and their fishers as security risks and many were expelled (Agbodeka, 1992). This action in effect marked the beginning of the decline of Ghana as a regional fishing power. In the early 1960s, the Ghanaian semi-industrial fleet was not equipped to fish in offshore waters and there were no new inshore fishing areas to develop. Accessible fishing grounds within Ghana were already heavily exploited by the artisanal and semi-industrial fleets. The Government of the newly independent Ghana recognized the importance of fishing and included the fishing sector in its development plans. Consequently, the new Government and private industry invested heavily in the fishing sector in the 1960s and 1970s and vessels for offshore industrial scale fishing were upgraded and equipped (Adjetej, 1973). In 1961, Ghana set up the State Fishing Corporation as a catalyst to attract national entrepreneurs through the provision of loans. At least four companies were started in the early 1960s. These investments were not well managed, however, large sums of money (C65 million or US\$ 44 million in the 1960s)¹ were lost (Agbodeka, 1992). The Government's attempt at a rapid transition from artisanal to industrial scale fishing, lack of finance and operating capital, lack of national human resources and a lack of supporting infrastructure also contributed to the poor

economic performance of this sector (Adjetej, 1973). The fishing sector continued to experience financial difficulties through the 1970s and 1980s. The loss of access to distant fishing grounds resulted in the lack of funds to replace gear and equipment. Political instability also prevented the sector from recovering (Agbodeka, 1992). The opportunities to invest in the offshore tuna sector were not realized until the 1970s and 1980s and then only as joint ventures with foreign investors (Overå, 2002).

Although Ghana achieved some measure of political stability in the 1990s, the poor economic conditions at that time and the prohibitive cost of accessing distant fishing grounds continued to plague the sector. By the 1990s, inshore marine resources had been overexploited which had also contributed to stagnation of the semi-industrial fleet. In both the semi-industrial and industrial fleets there has been an overall trend of declining catch per unit effort from 1980 to 2001. The growth of the offshore tuna sector maintained the catches in the industrial sector in the early 1990s (Figure 1), however recent landings have declined. The development of Ghanaian companies trading in marine products, however, grew to meet the local demand for fish and the Government's desire to earn foreign exchange. While Ghana no longer has fishing vessels in foreign waters, Ghanaian fishers can be found throughout West Africa as crew and officers on vessels of other nations.

The artisanal fishing sector proved to be much more viable than the semi-industrial sector. The landings by the artisanal sector increased continuously from the 1960s, while the semi-industrial sector peaked in the 1970s and has not recovered since (Figure 1). Much of the increase in artisanal

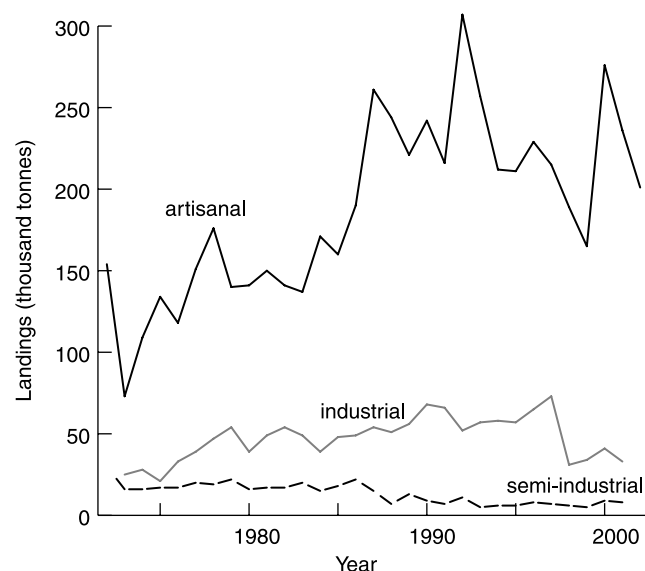


Figure 1. Ghanaian marine fisheries landings in Ghanaian waters 1972–2001.

Sources: Koranteng (1998), Fisheries Commission (1998), K. Koranteng pers. comm. (2003).

¹ Cedi1=US\$ 0.67 in the 1960s (pers. comm., Mahamudu Bawumia, Bank of Ghana).

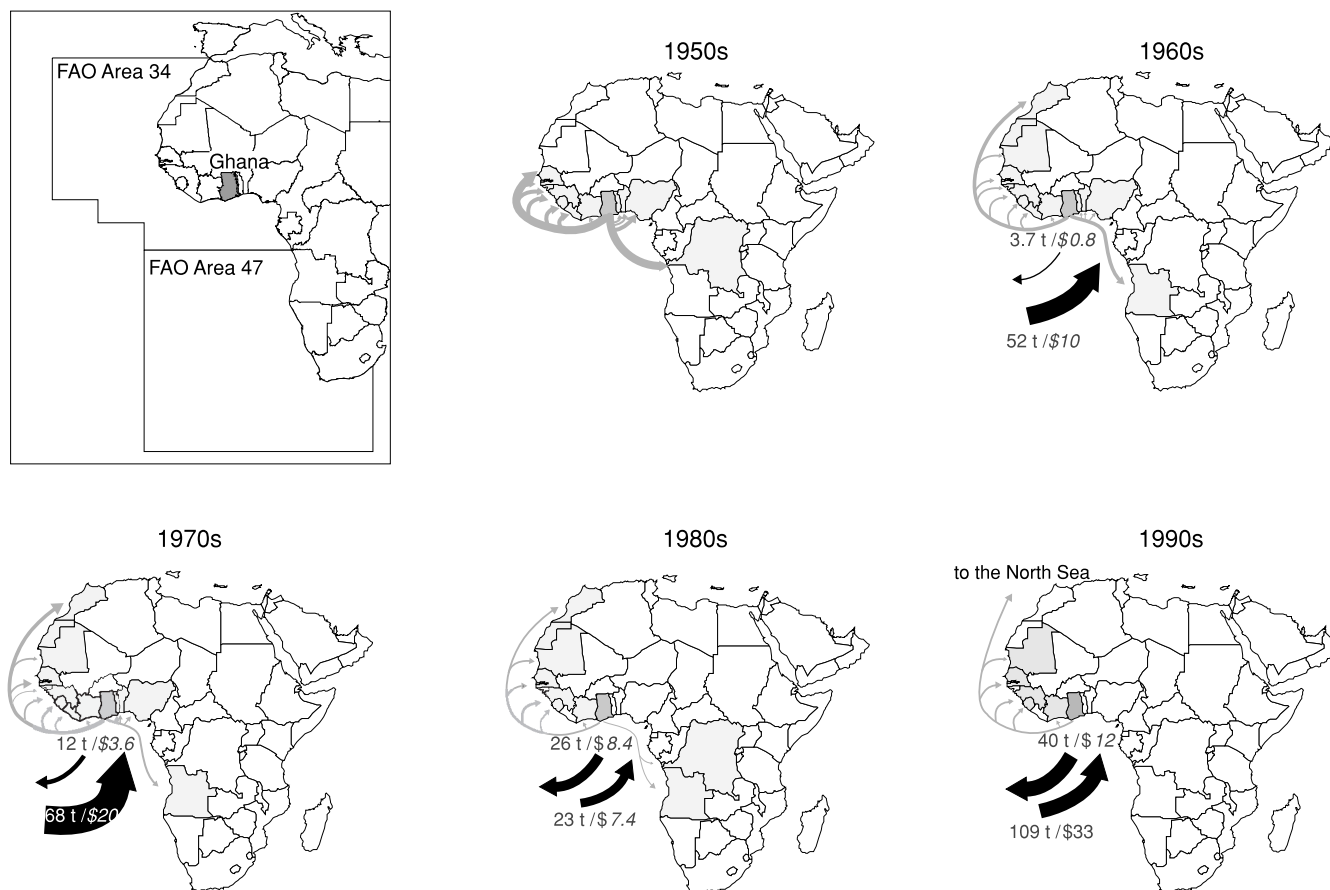


Figure 2. Study area, levels of Ghanaian access to foreign waters (grey arrows) and import and export flows ($t \times 1000$ and 1950 million US\$, black arrows).

landings can be attributed to improved technology available to fishers as well as exceptionally high landings of sardinellas (*Sardinella aurita*) and an increasing demand for fish within the country (Overå, 2002). However, recent landing statistics for the artisanal fleet indicate that landings peaked in 1992, and then declined, due possibly to the fluctuating nature of sardinella stocks or to overexploitation (FAO, 1998; Koranteng, 1998). Today, most of the artisanal landings are consumed within Ghana, but they do not completely meet the needs of the country.

3. Trends

Many of the trends discussed below are based on landing reports and artisanal (canoe) surveys. Landing statistics and results of artisanal surveys can be unreliable since they usually do not include illegal, unregulated and unreported landings and are therefore often underestimated. In this study, the FAO landings appear to be consistent and the canoe surveys reasonably reliable since a consistent survey methodology has been used and many of the same fisheries officers have been involved in the surveys for a number of years.

3.1. Landings and stocks

FAO (2002) fisheries statistics indicate that the Ghanaian fleet fished in FAO's Statistical Area 34 exclusively until 1971 when Ghana commenced reporting landings from Area 47 (Figure 2). Landings were low in this area and after ten years it was no longer fished (Figure 3). This time period coincides with newly independent West African countries exercising their EEZs and fishing rights, and the ineffective management of the economic and structural development of the fleet (Agbodeka, 1992). The increasing proportion of inshore landings in the total Ghanaian fish landings also indicates the weakening position of Ghana as a foreign fishing nation. The declines in the proportion of inshore landings in the late 1990s may be due to declining landings, as a consequence of overfishing.

As early as 1973, researchers noted that inshore demersal stocks, pink shrimp (*Penaeus duorarum*) and flat (*Sardinella maderensis*) and round sardinella (*Sardinella aurita*) were heavily exploited and in urgent need of management in the Gulf of Guinea (Gulland et al., 1973). While the only Ghanaian fisheries that were quantitatively assessed in the study were the flat and round sardinella, Gulland et al. (1973) concluded that assessments of demersal and pink

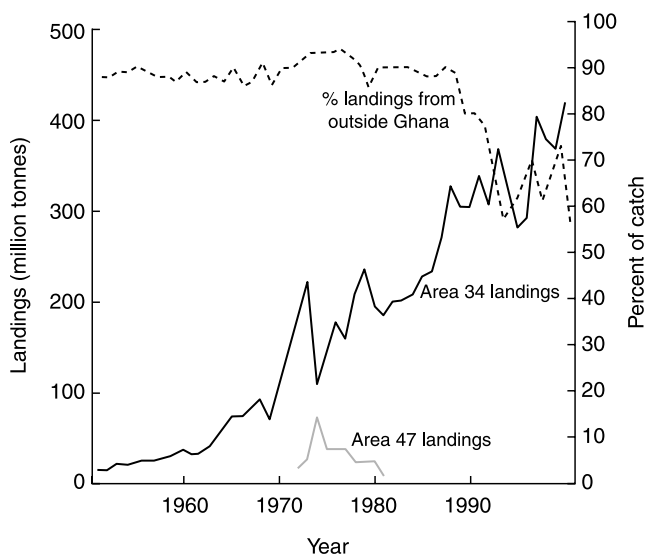


Figure 3. Total Ghanaian landings (t × 1000) in FAO Statistical Areas 34 and 47, and percentage of landing outside of Ghanaian waters.

shrimp stocks from Côte d'Ivoire, Senegal, Congo and Nigeria could be extrapolated to other stocks in the Gulf of Guinea. A report (IOC, 1997) stated that trigger fish (*Balistes capriscus*) had almost disappeared after a peak of abundance from the late 1970s to the late 1980s, and that small pelagic species, such as sardinellas and chub mackerel (*Scomber japonicus*), had high levels of exploitation and were also showing signs of depletion. By the 1990s, the overexploitation levels of the above fish stocks had not abated.

The enforcement of Ghana's EEZ and its associated fisheries laws is weak, making it difficult to assess the level of illegal fishing and therefore the catch by foreign vessels. Although the level of unlicensed intruders is unknown, it is considered to be high (Koranteng, 1998). Also, local fisheries officials do not enforce laws regarding illegal gear, such as small mesh monofilament nets used by local fishers.

3.2. Access

Figures 1 and 2 summarize landings and landing trends of Ghanaian fishers from 1972 to 2001. As shown in Figure 2, Ghanaian fishers had access to the coastal waters of West African countries from the 1950s to the mid-1970s. However, in conjunction with the negotiations for the United Nations Convention on the Law of the Sea (UNCLOS), and its final adoption in 1982, most of the other West African countries declared their EEZs. Thus between 1976 and 1988, Ghanaian vessels were gradually shut out from fishing grounds they had enjoyed until then. From a peak in 1976 of 108 access years to the coastal waters of 13 West African countries, Ghana's access steadily declined over the years, and is today limited to six countries and 27

access years.² At the same time, Ghana has been unable to compete against the subsidized European fleets for access to West African EEZs, in view of the prohibitive costs of such agreements, far beyond the country's ability to pay (Kaczynski and Fluharty, 2002). Neither has Ghana as yet entered into any access agreements allowing European vessels to exploit resources within its EEZ, unlike many other countries in West Africa, such as Guinea, Guinea Bissau and Senegal. Among the neighbouring West African countries,³ few access Ghanaian waters due to the current pressure on Ghana's fisheries exerted by domestic artisanal and semi-industrial fleets, and the relative lack of fish resources compared to coastal waters of other West African countries.

3.3. Domestic supply

Ghana's human population increased steadily from 1960; the current birthrate is 2.4% (Akoto, 2002). This growing population has consumed any increase in fish landings, although per capita consumption remained relatively stable between the 1970s and 1990s (Table 2). While domestic demand for fish has increased over time, landings from Ghana's waters increased substantially from the 1960s to the 1990s and currently are greater than the landings from outside Ghana (Figure 3). The ratio of fish imports to fish exports as well as the ratio of imported fish to total landings declined from the 1970s to the 1980s, but during the 1990s, it has increased dramatically (Table 2). Domestic supply still falls far short of meeting total domestic demand.

3.4. Imports and exports

Average annual imports decreased from 52,000 tonnes in the 1960s to 34,000 tonnes in the 1980s, but increased dramatically to over 108,000 tonnes in the 1990s (Table 1). Much of the fish that is currently imported is frozen (more than 100,000 tonnes annually) and not of high value (approximately US\$ 19.4 million or US\$ 1,330 per tonne) (FAO, 1998). Average annual exports have increased by more than 500% since the 1960s. Higher valued marine animals such as shrimp, canned tuna, shark fin, grunts (*Haemulidae*), sea breams (*Sparidae*), cuttlefish (*Sepiidae*), grouper (*Serranidae*) and croakers (*Sciaenidae*) are generally exported. In 1996, exports were 32,200 tonnes valued at US\$ 56 million⁴ (FAO, 1998). As a percentage of total landings, exports have grown from 6.3% in 1960 to 13% in the 1990s (Table 2). The ratio of imports to exports also declined from 1960s to the 1980s, but increased in the 1990s, so that Ghana continues to be a net importer of fish products.

² Access years are based on fishing agreements and are calculated by summing, for all countries accessed, the years Ghana had access to a country during that decade.

³ E.g. Côte d'Ivoire in 1988 to 1990.

⁴ US\$ 1,739 per tonne.

Table 1. Ghanaian marine fisheries imports and exports 1976 to 2001

Year	Imports	Exports
	(thousand tonnes)	
1976	103	3
1977	62	7
1978	53	38
1979	33	39
1980	29	29
1981	30	34
1982	20	32
1983	23	29
1984	15	26
1985	26	27
1986	35	33
1987	22	21
1988	14	26
1989	23	14
1990	23	2
1991	27	31
1992	41	24
1993	41	25
1994	40	33
1995	59	30
1996	103	39
1997	220	51
1998	187	54
1999	198	69
2000	171	54
2001	176	30

Source: FAO (2003).

Table 2. Average annual landings, exports, imports and per capita protein contribution for Ghanaian fisheries

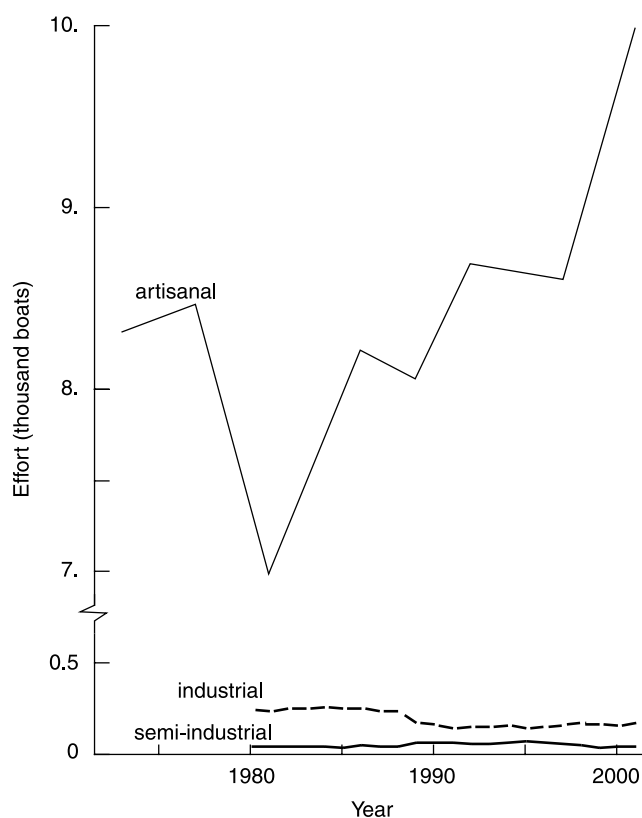
	1960s	1970s	1980s	1990s
Landings (t × 1000)	59	188	234	287
Import (t × 1000)	52	68	24	109
Export (t × 1000)	3.7	12	26	40
Exports (% of landings)	6.3	6.3	11.3	12.7
Imports (% of landings)	88	36.1	9.9	26
Ratio imports/exports	14	5.7	0.9	2.4
Per capita (kg/person) ^a	16.9	27.6	23	22
% total animal protein from fish products	na	65.9	50	63.2
% total protein from all sources ²	na	20.2	na	14.9

Source: Based on FAO (2003).

Note: 1960s value based on 1961 data (Laureti, 1999); 1970s values based on 1976 data (Josupeit, 1981); 1980s values based on 1986 data (Bonzon and Horemans, 1986); and 1990s values based on 1997 data (WRI, 2001).

3.5. Economic trends

When Ghana maintained a regional fishing fleet in the 1960s, several national companies were established and contributed to the national economy through investment, taxes

**Figure 4.** Ghanaian fishing effort 1973–2001.

Sources: Koranteng (1998), Fisheries Commission (1998), K. Koranteng pers. comm. (2003).

and employment (Adjetei, 1973). The contribution of the fishing sector to the Ghanaian economy has declined somewhat over the last 30 years. In 1975, fishing accounted for more than 4% of the agricultural Gross Domestic Product (GDP); by 1985 it had increased to 7%, but by 1997 it had fallen back to 5% (Josupeit, 1981; Bonzon and Horemans, 1988; FAO, 1998). The decline in the semi-industrial sector has severely impacted the economy through decreased investment in fishing, contributions to the GDP and employment. The size of the semi-industrial fleet size declined from 248 vessels in 1980 to 165 in 1996 (Koranteng, 1998) (Figure 4). Many local fishing companies, such as Mankoadze Fishing, Ocean Fisheries, Commodore, Obuorwe and Obedru, which prospered throughout West Africa in the 1960s and 1970s, have either ceased operations or now focus on fish importation and retailing. The only fishing businesses that are profitable under current economic conditions are those (established and new) that import fish from Europe and from other West African countries into Ghana for domestic consumption.

In the industrial sector, the situation is different, especially for tuna companies, which are controlled by foreign investors and function with some degree of economic stability. In 1970, there were 30 long-range vessels based in Ghana (Overå, 2002; Anon., 1976), fishing in foreign waters and the high seas. In 1998, this number had grown to 95

long-range vessels (62 trawlers and 33 tuna boats), many of them fishing in the high seas and in Ghana's offshore areas. Although the number of boats in the industrial sector increased, their catches only made up a small proportion of the fish landed in Ghana (Figures 1 and 4). For example, in 1998 it was only 20–30% of annual marine landings (FAO, 1998). This may be an underestimate since the level of fish trans-shipped at sea and catches landed in other countries is unknown. Most boats are operated under joint venture arrangements with foreign companies, often from the Republic of Korea (Overå, 2002), with landings destined for export to generate foreign exchange. These joint ventures also pay a higher license fee than Ghanaian vessels.

3.6. *Employment*

The fishing sector, especially the artisanal and semi-industrial fisheries, was a prime source of employment, primarily for unskilled young men (Pauly, 1976). In 1992 the fishing sector in Ghana employed about 500,000 fishers, processors, traders, boat builders and maintenance personnel (IOC, 1997) while by 1996 this figure had declined to 400,000 (FAO, 1998). The loss of up to 100,000 jobs in four years represents a sizeable change in the labour force, and it is most serious in Ghana where the fishing sector employs not only 2.5% of the total population, but also about 20% of the total labour force.

The enormity of the problem of declining gainful employment in the fishing sector can best be appreciated if we compare the canoe fleet in 1959, 1980s and 1990s (Figure 4). In 1959, 65,328 fishers were employed directly in the canoe sector. This represented 2% of the Ghanaian workforce, making fishing a significant source of local employment (Ghana Ministry of Finance, 1960). Added to this is the number of Ghanaians that were employed by the industrial sector to work on local boats as well as those boats fishing in distant waters. In the 1980s, an average of 97,500 canoe fishers or 1.6% of the workforce were employed in this sector and there was an average of 8,700 canoes. In 1992, the number of fishers declined to 96,400, which then constituted a mere 1% of the workforce, and the number of canoes had decreased to 8,688 (Koranteng, 1998). The 1995 canoe frame surveys found a further decline in canoes to 8,641, but the number of fishers had increased to 101,700. This trend continued to 1997 with 8,610 canoes and 103,340 fishers (Bannerman et al., 2001). The most recent survey has seen an increase in canoes (9,981) and a significant increase in fishers (123,156) (Bannerman et al., 2001).

The increase in fishers and canoes appears to imply that the artisanal fishing sector is a growing source of employment (Figure 4). However, the combination of an increased number of fishers per boat (from 11.1 to 12.4 between 1992 and 2001) and overall reduced catches/boat (from 35 tonnes in 1992 to 23 tonnes in 2001) further highlights the decline of this sector as a source of gainful employment. Earnings for each fisher are based on a given proportion of

the value of the catch. As the number of fishers per boat increases, the earnings per fisher decrease; and when catches per boat also decrease, earnings per fisher are further eroded. This is particularly so for unskilled crew who share the catch among a number of colleagues while the captain or owner takes a significant proportion of the catch initially. Some of the fishers who lost their jobs in the semi-industrial sector have been absorbed in the artisanal fleet where they fish for subsistence and some extra cash. However, the resource itself is also overfished and cannot absorb any increase in effort.

Unemployment for fishers has significant social and economic impacts since Ghanaian fishers are generally poorly educated and landless with few other options for income generation. Many unemployed fishers have migrated to the cities looking for work that is simply unavailable and have been unable to improve their economic conditions. Often the unemployed are pushed to the coast to fish so they can at least subsist, a dynamics Pauly (1997) calls 'Malthusian overfishing,' which is driven by the opportunity cost of labour tending toward zero. This increases the pressure on coastal resources including inshore fisheries, which are often already overexploited (Koranteng, 1998). Currently 42% of the population lives within 100 km of the coast with 191 fishing villages and 308 landing beaches along Ghana's short coastline.

The effect of unemployment of Ghana's artisanal fishers also impacts their dependants. Such impacts include a freeze on development in fishing villages, and in some cases the gradual deterioration of existing facilities and traditional social support systems for the aged, as many young men leave their villages. In the absence of gainful employment, many turn to crime and social unrest to express their frustration and loss of hope in the future. Exporting excess labour to other countries is not an option since the decline in coastal fisheries has also affected other West African countries.

4. **West Africa: Trends and regional perspectives on fisheries trends**

4.1. *Fisheries and environment*

The Ghana situation is a contrast to many other West African countries that did not develop their industrial fleets until well after the declaration of their EEZs, and have a history of allowing foreign fleets to access their fishing grounds (Iheduru, 1995). Countries such as Senegal and Mauritania have a long history of European fleets accessing their waters (Iheduru, 1995).

Ghana, however, is not unlike most West African countries facing declining catches. Overfishing, overcapacity, habitat degradation and inequitable access agreements have contributed to the decline in catches throughout West Africa. Kaczynski and Fluharty (2002) highlighted the decline in

catches of demersal species and cephalopods in Guinea Bissau.

Numerous press reports also highlight declining catches in Mauritania and Senegal, due mainly to intensive harvesting by the large and extensive European Union Fleet (Kenety, 2001). Concern has also been raised over artisanal fishers in Ghana using small mesh sizes, and trawlers operating close inshore, destroying coastal habitats as well as the gear of artisanal fishers (Koranteng, 1998; Overå, 2002).

Clearly there are too many fishers for Ghana's coastal resources, and alternative employment opportunities need to be developed. Aquaculture may provide opportunities for some displaced fishers as well as help to fill the gap between demand and supply. Small-scale aquaculture in freshwater lakes and brackish lagoons has been practiced for decades, but it is not widespread and production is low: 511 tonnes in 2000. There is considerable potential to develop aquaculture as a small scale industry so that it becomes an alternative source of employment for fishers and a source of fish for the domestic market. However, development of this industry, even as a low-technology industry, requires significant investment in infrastructure and capacity building within the artisanal fishing community. This will require the Ghanaian Government to alter its funding priorities under the current economic conditions.

Ineffective monitoring, control and surveillance (MCS) have also been cited as major factors in the current depressed state of many fisheries in the region. Foreign vessels intrude into Ghana's EEZ and some foreign fishing companies are fronted by Ghanaian nationals in trawling operations in the already overfished demersal sector. The fisheries are stressed further by the use of banned destructive gear. Enforcement measures to address these issues have been weak and the Government's recent proposal to license these vessels and charge them a fee (FIS, 2002) only exacerbates the over-fishing problem in the inshore fisheries. The only short-term benefit may be the foreign exchange the licenses will generate.

Few countries have the financial and technical resources to establish and operate an MCS programme for the foreign fleet or their own domestic fleets. In some cases, the foreign country accessing the national resources contributes to undertaking MCS. However, this is not common and generally the funds are not sufficient to undertake any significant programmes (Kaczynski and Fluharty, 2002). The cost to establish a MCS programme for Senegal in the late 1980s was estimated to be 2 billion FCFA, which at current exchange rates is equivalent to about \$US 3 million (Kebe, 1997).

There is merit in the idea of neighbouring countries pooling their resources to develop a regional MCS initiative to deal with foreign fleets illegally accessing EEZs and operating outside of agreement provisions. While this may be more economical for the countries involved, it does not address the issue of corrupt officials, who chose to ignore — or benefit from — the illegal activities of both foreign

and domestic vessels. Establishing an effective MCS will require a significant change in political and social attitudes, and improvement in the judicial system with respect to detecting and punishing corrupt behaviour. In Ghana, the new fisheries law sets the framework for sustainable fisheries, and the rules under which foreign companies should operate already exist. Again, implementation of the new law and the rules for foreign fishing vessels will require a reduction in fishing effort, something that is not politically attractive, and therefore difficult to enforce, with Ghana's current capacity.

4.2. *Social and economic considerations*

Kaczynski and Fluharty (2002) argue that European Union access agreements do not benefit West Africans, either economically or socially. In Guinea Bissau, such agreements have been detrimental to the development of the country's fishing sector. Socially, the problem of unemployment in the fishing sector is region-wide. In some cases, the reaction of some of the Governments in the subregion to increasing unemployment among fisher folk was to blame and expel immigrant fishers. The eruption of violence between the indigenous population and immigrant fishing communities in recent years in some West African countries can be traced to the general overall decline in fisheries resources (Overå, 2001). In December 1998, Ghanaian fishers were driven out of parts of southwest Cote d'Ivoire when local inhabitants burned their settlements (US Department of State, 2000). Such actions unfortunately only heighten tension in the subregion.

4.3. *Political aspects*

There appears to be a lack of political will to address the issues of sustainable fisheries in the region. In the New Partnership for Africa's Development (NEPAD), which sets out Africa's priority initiatives and details plans for their realization, no mention was made of the fisheries sector. African leaders appear to disregard overfishing as a priority issue that needs to be addressed 'to eradicate poverty and to place their countries, both individually and collectively, on a path of sustainable growth and development' (NEPAD, 2001). The detailed action plans for achieving food security in African countries, through improvement in agricultural performance, should also include measures to manage marine resources, as these are important contributors. Alternatively, the fisheries sector could have been dealt with under the NEPAD Environmental Initiative, which targets eight subthemes for priority intervention.

Despite the shortcomings of NEPAD, Ghana and its neighbouring countries need to explore economic opportunities and partnerships in the fisheries sector, especially in light of the strong demand for fish in Ghana. Unfortunately, Ghana's poor economy and minor marine resources relative to those of many of its neighbours, place it in a weak

position in terms of mutual economic gain. The fact remains, that for many West African countries, selling access rights and fish landings to the highest bidder makes economic sense, especially in light of the need to generate foreign exchange to service and reduce national debts. Similarly, Ghanaian fish trading companies sell to the highest bidder to maximize profits. Ghana law requires foreign companies operating in national waters to sell their catch in Ghana. However, enforcement of this rule is weak, as discussed above.

A long-term strategy of improved enforcement and the replacement of foreign companies with Ghanaian companies through leasing arrangements and buyouts are needed. This will help to ensure that the benefits from exploiting marine resources stay within Ghana and reduce the country's reliance on cheap imported fish. However, unless politicians and policy analysts take into account the outcomes of past initiatives, the country risks making the mistakes of the 1960s and 1970s in the transition.

5. Conclusions and recommendations

The decline of Ghana as a regional fishing country, and the attendant ecological, economic and social impacts have raised awareness in the country of the need to adopt remedial measures to deal with the future of fishing. The reality is that Ghana cannot depend on fishing in the waters of other West African countries as it used to.

However, there seem to be two main approaches towards the solution of the problem. The first is for Ghana, by working with other West African countries to seriously consider the well thought-out recommendations made by Kaczynski and Fluharty (2002) that suggest that:

- States should improve their investment climate, so that it is attractive for foreign fleet operators to integrate their offshore activity with the coastal States' economies; and
- Ghana, along with its neighbours, should lobby the European Union for policy reforms to minimize the impacts of European fishing fleets on West African marine resources; such a policy change would complement the European Union's recent change in attitude towards increased responsibility in ensuring the sustainability of the marine living resources it exploits.

These investment and policy reforms could also assist in the development of a stronger inland aquaculture industry in Ghana, which can contribute to meeting domestic demand for fish and to providing employment opportunities for coastal communities. There is also considerable scope for West African countries to improve intra-regional trade in marine products. Ghana could play a major role in developing these.

A second important step for Ghana is to implement its new fisheries law. The major focus of the recently passed

law is the formulation of sound fisheries policies and management plans, and their implementation through effective monitoring, control, surveillance and enforcement. However, such plans have yet to be published by the Minister. Effective monitoring also includes improving the reliability of the landings and canoe surveys through statistically based surveys and censuses.

The law has the potential to address the issues of over-exploitation of fishery resources, the non-enforcement of related laws, long-term sustainable exploitation of fisheries resources and the need for a strategy to provide alternative employment opportunities and resources to alleviate the social consequences of the decline of the sector. The new fisheries law provides Ghana with the framework to develop its valuable tuna resources as well as a Ghanaian fishing fleet, while at the same time ensuring the long-term sustainability of the fishery. A long-term strategy is needed for implementing the new law, developing management plans and integrating the industrial sector into the national economy.

It is hoped that policy-makers in Ghana will recognize that, given the current state of the country's fishery resources, the only way to provide a bright future for the country's fishing sector is to make a great effort to restore the marine ecosystem of Ghana to its potential productive capacity, and to this end strengthen the enforcement capability for local and foreign fleets. In the long-term, sustenance of fish resources and the communities they support will not be assured until alternative income sources for Ghana's fishers are made available, and the current economic conditions improve.

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