

Analytical Appendix 2
**The Challenges of managing small
scale fisheries in West Africa**

E Bennett

THE CHALLENGES OF MANAGING SMALL SCALE FISHERIES IN WEST AFRICA

Abstract

Ghana is often hailed as the miracle of West African development, yet this title obscures the wide disparities of wealth and development among its population. As the largest economic sector, agriculture has often been a target of development initiatives in the country, yet fisheries, now the country's largest non-traditional export earner have been side-lined. Although recent studies show that overall, poverty in coastal areas is decreasing, considerable challenges still face government and communities alike in their bid to improve living conditions in fishing communities. In order to achieve the goal of sustainable livelihoods in small-scale fisheries in Ghana a number of issues need to be addressed. Firstly the current mismatch between the traditional management system operating in the myriad villages along the coast and the modern management system that influences national policy relating to fisheries. Secondly, the economic and political conditions that have resulted in the reduced capacity for enforcement between the multiple users of the narrow continental shelf. Finally, the contradiction between current neo-liberal policy which aims to increase fisheries production (for export) and the small-scale fisheries sector which is struggling to provide sufficient supply for domestic consumption. The Community Based Fisheries Management programme is one example of how the Government of Ghana is attempting to bring the traditional and the modern together in order to address at least some of the above issues.

POVERTY AND POVERTY ALLEVIATION AS A NATIONAL ISSUE

When Ghana gained its independence in 1957 it was one of the most developed of the West African states and had a reputation as a country that could offer a comparatively high standard of living for the region, with a world-renowned University sector and stable government. Despite acute economic problems that surfaced in the 1970s, Ghana is still ranked higher in terms of overall development than most other countries on the West African coastline¹, although how it achieves this position has become increasingly controversial since the country embarked upon the neo-liberal Economic Recovery Plan in 1984. For, whilst overall economic indicators are healthy and Ghana has become, once again, the 'show case' of West African development (Porter and Young, 1998:516), there is serious concern as to the short to medium term impact of such drastic economic measures on the general populace.

According to the Interim Poverty Reduction Strategy Paper (2000-2002) issued by the Ghanaian Ministry of Finance, the Government of Ghana's overall strategy (fostered and encouraged by both the World Bank and the IMF) is to produce a middle-income country through a liberal market economy by the year 2020. One of the ways it aims to achieve this goal is through the modernisation and accelerated growth of the agricultural sector which includes crops, livestock, fisheries, forestry and cocoa, (GoG, 2000:1).

¹ According to the UNDP 1999 Human Development Index, Ghana is ranked at 119 – Togo sits at 128, Nigeria at 136, Cote D'Ivoire at 144, Senegal at 145, Benin at 147 and Sierra Leone at 162. The only two countries in the region ranked higher than Ghana are Gabon at 109 and Equatorial Guinea at 110.

Although the Poverty Reduction Strategy Paper makes passing reference to the improvement in the sustainability of fishing and the improvement in enforcement, there is no mention of the role of the fisheries sector in the reduction of poverty, or indeed, how such measures are likely to impact upon the fishing sector. This omission is, however, not surprising. Despite the wide variety of studies conducted into poverty and poverty alleviation programmes in Ghana, none desegregate data beyond the wider (agricultural) sectoral level. Any assumptions about the fisheries sector have to be made by way of extrapolation.

Poverty in a fisheries context

The Government of Ghana defines poverty as those living on less than 900,000 cedis (about £85/month at 2001 exchange rates). For the entire population of Ghana poverty fell, between 1990-2000, from 51% to 43%, although the trend has not been equal throughout the country. The greatest falls were recorded in Accra and rural forest areas (in the far west) whilst urban Savannah areas (such as Kumasi) experienced a rise.

During the same period (1990-2000) poverty in urban coastal areas fell by 2%. This would include large and medium sized fishing locations such as Tema, Accra, Teshie and Nungua in Great Accra region (where total poverty fell by 72%). Rural coastal poverty fell by 3.4% over the same period, this would include large areas of Western Region (which registered a 55% drop in poverty overall) and includes such fishing locations as Upper and Lower Dixcove and Axim and Volta region (which registered a 32% drop overall) and includes fishing locations such as Aflao and Tegbi. Central Region, home to the major fishing locations of Cape Coast, Elmina and Winneba is the only coastal region to have registered an increase in poverty, rising by 14% (GoG, 2000:3). Extreme poverty (that is those with an income under 700,000 cedi or £65/month) rose in urban coastal areas by 2.2% but fell marginally in rural coastal areas. The changes in both poverty and extreme poverty in fishing villages is partially borne out by recent research (Bennett et al, 2001) where a rise in petty crime in urban coastal communities has been reported, although rural communities reported that crime had not increased noticeably.

Urban coastal fishing villages are inevitably affected by the proximity of basic services, markets and alternative employment opportunities, but also suffer from high prices and the pressures from the tourist industry that is increasing land prices along the coast. Rural coastal fishing villages have benefited from the extensive road-building programme that has resulted in a newly surfaced and speed controlled road running almost the entire length of the coast – making access to services and markets a little easier. Their comparative isolation, however, has also impacted upon development opportunities, as will become clear in forthcoming sections.

The role of fishing in national development, both from a poverty alleviation point of view and from a national economic perspective, poses some interesting issues. Firstly, FAO data shows that the calorific contribution of fish in the Ghanaian diet has declined by just under 50% since 1970 and the supply of fish per head of the population has also dropped by about 3kg over the same time span. These figures thus indicate that current catch rates are not able to keep pace with population growth, which raises questions about the nutritional well-being of the population as a whole,

and the coastal fishing population in particular. Secondly, according to the World Bank the potential for substantial tax revenues from fishing activities has not yet been fully exploited. However, many would argue that these two problems are in fact at odds with each other: boosting fishing activity and export revenue will do little to improve the supply of fish to the domestic population.

Some causes and impacts of poverty in marine fisheries

There is little to distinguish the nature of poverty in inland fisheries from that which occurs on the coast. Small-scale fishers are generally faced with the same constraints and difficulties irrespective of the water body they fish in. There are, however, a number of specific issues pertinent to marine fisheries that help explain the existence and perpetuation of poverty on the coast.

Firstly the distribution of wealth in the community. Fishing communities are not homogenous, egalitarian units, but a heterogeneous group of villagers bound together under the leadership of a common chief where power alliances and political struggles are a daily phenomenon. Wealth in a fishing community is represented by access to the means of production, thus ownership of nets, canoes or smokers raises some fishers and fish mummies into a category far above others that have to sell their labour. While in many villages wealth is held by the family unit, fishing crews are based on matrilineal lines and the overall objective of the family unit is 'human' rather than 'capital' reproduction (Ninsin, 1991: 102) this has changed in many villages. The introduction of new fishing gears – particularly where traditional dug-out canoes have been replaced by inshore (semi-industrial) vessels – has dramatically changed the ethos of the traditional fishing unit with the pursuit of capital, the repayment of substantial loans and the introduction of quasi-wage labour becoming more prevalent. Although it is not possible at this stage to state how this shift in means of production from the 'artisanal' to the 'capitalist' has affected poverty and its alleviation in Ghanaian fishing villages, there is little doubt that the traditional community safety nets are under considerable pressure as the focus of the communities economic activities is 'modernised' beyond the ability of the community institutions to adapt to rapid change.

The distribution of wealth is also a function of the access to wealth-enabling resources. Access to credit is a particular issue in Ghana. A recent survey (Bennett et al, 2001) indicates that most villages have to rely upon internal, community based credit arrangements. Although a number of small-scale banking ventures have been attempted over the years, constraints in the wider economy coupled with local resistance to paying back loans has rendered most of these inoperative. The Fish Mummies now provide most credit in communities. Indeed the credit system devised by the women has proved to be far more robust than that offered by the government or banks in credit schemes over the last 20 years. The study by Bennett et al found that fishermen consider government loans to be public money and will think nothing of defaulting on the payments, and may even move away from their villages to avoid the payments. This rarely happens when they obtain credit from the women, since the women will find them and discredit them or at worse place a curse on them. Unlike the women, who regularly borrow money from the bank, fishermen find it much harder to get bank credit largely due to their poor track record of repaying loans.

Secondly, the nature of the pelagic stocks targeted by marine fishers leaves them vulnerable to seasonal and long-term fluctuations. Pelagic stocks are subject to year-on-year fluctuations which impacts upon the community's income levels. For example, the combined sardine catch of the Ghanaian canoe fleet in 1997 was 30,000 metric tonnes less than the previous year and the combined mackerel catch for 1992 was 50% the previous year's catch². Dependence upon fishing opportunities also changes through the year with most fishing communities passing through seasons of extreme hardship followed by (potentially) bountiful periods. The peak fishing season runs from August to October, minor fishing is conducted through November and December, there is then a lean period until April when some fishing recommences until the peak season begins once again in August. What is more, these fluctuations are also exacerbated by the fact that overall catch rates for pelagics by the small-scale fleet have declined from a peak of nearly 300,000 metric tonnes in 1993 to a low of circa 150,000 metric tonnes in 1999. The total canoe catch for 1999 was only marginally higher than the total catch in 1974. While this makes little difference in terms of CPUE (there are approximately 400 more canoes in the fleet now compared to 1974), there are an estimated 20,000 more fishermen in the sector compared to 1974. Proceeds from the catch are shared amongst the crew, so declining levels of catch and rising levels of fishermen inevitably mean that some sections of the community are receiving progressively less benefit from the fishery. There is no available data to indicate whether the current decline in catches is due to a natural decline in stock or over-fishing, but in a recent study (Bennett et al, 2001) fishers perception was that the coastal shelf was over-fished. Whilst this cycle of feast and famine has been in evidence for generations, the coping strategies for dealing with lean periods have not always managed to keep pace with change. In terms of sustainable livelihoods, then, the ability to weather shocks has reduced and vulnerability to poverty is more of an issue than it once was.

Although the distribution of wealth through the community will temper vulnerability in some quarters, Mensah-Abrampa (1998:152) notes that in a study of Ghanaian fishing communities, villagers felt that although most of them suffered hardship, even the more wealthy members of the community were subject to high vulnerability and extreme dependence upon unpredictable natural resources. So, although wealth may cushion some of the potential shocks, the nature of fishing means that ultimately, a bad season or prolonged period of rough weather impacts on all levels of society to some degree.

A number of coping strategies have emerged over the years to deal with vulnerability and lack of livelihood security. One particular strategy common to many of the fishing villages along the coast is the use of salt and brackish water lagoons for fishing during the lean period. Use of the lagoons is governed by a strict set of taboos that in many cases are more stringent than those that existed for marine fishing. The use of lagoons as a safety net in times of need has, however, diminished almost to the point of non-existence in some areas. The rapid 'christianisation' of the coastal villages has rendered many of the taboos non-functional as people reject the 'old' beliefs. Many of the lagoons are polluted (often as a consequence of the rejection of the use taboos), coastal erosion has destroyed others and over-fishing has left many

² Data courtesy of MFRD catch data, unpublished.

others lifeless (Ntiamo-Baidu, 1991) although Mensah-Abrampa (1998:148) reports the continued use of lagoons as a safety-net in a number of fishing villages.

Migration is also an option for coping with poverty, if not a means of poverty alleviation in West African marine fishing villages. Although the degree and nature of migration varies considerably across the region, clear patterns can be found. In the case of Ghana, internal migration is a long-standing tradition in many communities and forms an essential part of the fishing cycle (Bortei-Doku, 1991:180). Although Haakonsen reports (1991:1) that migrant communities can pose complex problems in fisheries development initiatives, recent research in Ghana (Bennett et al 2001) found little evidence of any internal conflict between migrant and native community members. Some migrant communities have been established for so long in other communities that they are now a permanent feature, although they retain their cultural and linguistic ties with their original home communities. Although conducted on a much smaller scale, international migration by Ghanaian fishers also occurs. Much of this involves groups from Volta Region in the East and Western Region in the West migrating to neighbouring fishing states of Cote d'Ivoire, Gabon, Benin and Togo (Bortei-Doku, 1991:185). Whilst some of these fishers migrate with their canoes, crew and attendant fish mammals to fish in foreign waters, others migrate in search of better opportunities where fishing regulations are less policed than Ghana. The opportunities to sell labour are also high incentives to migrate, some leave to seek employment on foreign tuna vessels or processing factories (Mensah-Abrampa, 1998:151), or in some cases, Ghanaian fishers are in high demand as skilled net handlers by Gabonese canoe owners (Bortei-Doku, 1991:185)

OVERVIEW OF THE GHANAIAN (SMALL SCALE) MARINE FISHERIES SECTOR

Marine fishing enterprises in Ghana range from the very small scale one-man canoes through to the industrial vessels operating off shore in international waters. Fishing makes up about 5% of Ghana's agricultural GDP. 85% of national catch comes from the sea while inland waters account for the other 15%. About 75% of total national production is consumed domestically and a further 35,000 tonnes is imported to meet this demand. Fish is the country's largest non-traditional export earner accounting for earnings of about US\$17 million in 1995 (World Bank, 1995:4). There are estimated to be some 400,000 fishers, fish processors, traders and associated trades making up about 10% of the total population.

The Ghanaian coastal fishing fleet can be divided into four sectors: by far the largest is the small-scale fleet of artisanal³ canoes totalling some 8641 vessels and employing an estimated 101,000 fishers as crew. An estimated 58.7% of the canoe fleet has outboard motors (GoG, 1995). The second largest fleet are the modern 'inshore' vessels (also sometimes referred to as 'semi-industrial' vessels (measuring up to 70' long). These number about 300 and use mainly bottom trawls and purse seines. The two smallest fleets comprise the 40 or so distant water vessels (referred to as industrial vessels) that have been forced onto the Ghanaian continental shelf since the

³ The term artisanal is used in Ghana to denote very small canoes with no engines, and all vessels with outboard engines.

introduction of EEZ in other parts of Africa and the Tuna fleet which fishes exclusively for export on international waters.

TRADITIONAL MANAGEMENT AND AUTHORITY IN A GHANAIAN MARINE FISHING VILLAGE

Marine artisanal fishing in Ghana operates out of fishing villages along the coast. Villages are organised along traditional lines: there is a chief of the village – who may or may not live there; the Chief Fisherman and his council of elders and the Konkohene or Chief Fish Mammy and her council of elders. In conjunction with his council of elders (usually made up of canoe owners) the Chief Fisherman presides over the working of fishing in the village: he settles disputes, issues penalties, deals with actions required when there is an accident at sea and supervises the distribution of any communal inputs. The Chief Fish Mammy carries out a similar set of roles with the fish processors and traders (almost exclusively women). She settles disputes between traders, processors and the fishers and helps set fish prices. The post of Chief Fisherman is hereditary and carries with it a considerable amount of power and prestige. The community as a whole is responsible for the day-to-day running of fishing activities in agreement and collaboration with the Chief Fisherman. The State, by comparison has little effective impact upon what happens in the community on a daily basis.

Whilst Ghanaian coastal waters are legally open-access, beaches are a ‘common property’ resource in so far as the community, via the Chief Fisherman, has a right of exclusion. In a recent study of fishing villages on the Ghanaian coast (Bennett et al, 2001), 91.7% of villages confirmed that, whilst anyone may fish from the beach, they must first seek permission from the Chief Fisherman, although no village reported that anyone had ever been refused permission. Once granted permission the fisher and his crew become the ‘responsibility’ of the Chief Fisherman who will take care of him and his kin should he suffer an accident at sea or require the intervention of the Chief Fisherman in a fishing dispute.

Fishing activity at sea is guided by two sets of regulations: that dictated by the state through de jure Open Access and that set by the village through a system of traditional use rights and common property resources.

Each fishing village has its own particular set of norms that govern behaviour at sea and on the beach. It is common to find that fishing is prohibited on Tuesdays, the Chief Fisherman will determine the maximum number of nets that may be set in any one day, or, indeed the maximum number that may operate within the village. In some more populated villages a complex rota system for the setting and retrieval of nets operates to ensure that each owner has equal access to the resource. Complex norms to determine which canoe first sighted a shoal and thus who may encircle those fish exist, as do norms concerning the use of witch-craft against fellow fishers. The Chief Fisherman, in conjunction with the Chief Fish Mammy also set regulations regarding the landing and sale of catch in order to prevent accidents on landing the canoes (most of which are driven hard up the beaches on the back of the surf) and the distribution of the catch. None of the regulations laid down by the Chief Fisherman are specifically aimed at protecting the stock, rather they aim to ensure equitable

access to resources with the view to maintaining the livelihood of the community as a whole.

Alongside these norms, are those laid down by the state. State regulations concern individual behaviour and fishing practice, no quotas are in operation at the moment although they are a possibility in the future⁴. Thus, vessels using different gear types are segregated (no trawling gears in waters less than 30m deep for example), there are strict laws regarding the identification of conflicting net types (drifting and static gears) and the identification of vessels are night. The state sets out and administers the licensing laws (which include all Ghanaian vessels) and has the power to introduce closed seasons and alter fishing zones as it sees fit.

CHALLENGES FOR SMALL-SCALE FISHERIES MANAGEMENT

Challenges for managing natural resources differ depending on the perspective taken. As part of the process of receiving IMF funding, countries have to outline development frameworks for relevant sectors. Ghana underwent this process for the Agriculture sector (which includes fisheries) in November 1999. Although the document's attention to fisheries is reduced to one paragraph, the national government-level perspective on the problems and challenges agriculture serve to throw some light on how the government perceives challenges in the natural resources sector. The problems and challenges outlined in the document are very much seen from the neo-liberal viewpoint: problems include non-integration of agriculture in industry, limited access to regional and international markets and inadequate financial services. Challenges include increasing non-traditional exports, attracting private investment into the sector and reducing poverty in the sector (GoG, 1999:7). These problems and challenges, broadly speaking, also apply to the fisheries sector, which is perceived to be in need of modernisation and integration into wider markets. The challenges as perceived by the community, however, are often quite different. The principle challenge facing small scale fishing communities is maintaining a sustainable livelihood in the face of increasing resource pressures and encroaching 'modernisation' which is threatening traditional management structures.

Challenges for small scale fisheries management influenced by international factors

Although Ghana's small-scale fishing sector is not connected to international markets (unlike other countries in the region where the artisanal sector feeds directly in to the fish export trade), events in the international arena have an impact nonetheless upon the sector. By far the most important issue is 'Structural Adjustment'. This is a blanket term that describes a process of neo-liberal economic reforms to bring a country's economy back from collapse. Structural Adjustment programmes often have two parts: stabilisation funding from the IMF to correct immediate balance of payment difficulties and longer-term adjustment loans from the World Bank to assist in a process of restructuring and realigning the economy onto a more efficient footing. The two parts are inter-connected insofar as World Bank project loans are needed to support the deeper structural adjustments needed once the IMF funding has corrected

⁴ Department of Fisheries, pers.comm, August 1999.

the balance of payments problem. A fundamental tenet of neo-liberal economic reforms is the reinsertion of the market in the functioning of the economy and the opening up of the economy. This generally requires the privatisation of state companies and interests, the abolition of import and export controls, the deregulation of the foreign currency market and the boosting of exports to kick-start the economy and keep the current account positive. However, the objective of boosting exports is often at odds with objectives of supporting sustainable livelihoods in the natural resources sector simply because the means of achieving the two aims are often incompatible.

This is the current situation in Ghana where economic reforms have left the domestic sector chronically under-funded. What is more, the emphasis on the 'market' as the important central focus of economic life has also meant a shift away from the Ghanaian fishing communities' traditional building blocks of the community and the family. It is the influence of international donors and policy advisers that has perhaps had the greatest impact on how small scale fisheries are perceived and managed within the country. As will become apparent below, the impact of international policy can have profound effects at all levels and, in order to understand the challenges faced at the community level, the wider institutional picture has to be understood.

National level issues influencing challenges to small scale fisheries management

The state of the national economy is now guided by the international issues mentioned above. As a result fisheries management issues are influenced as much by Ghana's commitment to the structural adjustment process as by national needs. One of the greatest challenges to national level management is finding the middle ground between external pressures for modernisation and local and cultural pressures to preserve the traditional.

Expansion of rival fleets: While neo-liberal economic reforms and dealing with debt are the current issues that affect the management of small-scale fisheries, national level issues were presenting the small-scale fleet with challenges long before the 1980s.

Political strategies of economic development and nation-state building at the time of independence saw the rapid expansion of various sectors of the fishing fleet – a fact that is causing increasing problems now, some 50 years on. The introduction of outboard engines to the canoes started in the 1950s, four years (1946) after the Fisheries Department had imported two 30-footer motorized fishing boats from the United Kingdom into the country for experimental fishing (MFRD, pers. comm 2001). The outboard motors enabled the canoes to move farther out to sea from the coast and to make bigger catches quickly in fewer hours or days than before. A direct consequence of the 'modernisation' of the canoe fleet is, of course, that they found themselves coming into closer contact with other sections of the fleet, which were themselves expanding at the same time.

In 1952, the Government of Ghana set up a Boatyard Corporation which started building in-shore vessels at Sekondi Boatyard. A similar venture began at the Tema Boatyard in 1962 where a large fleet of wooden fishing vessels with lengths up to 70-feet were built for the industry. Most of the vessels engaged in dual-purpose fishery,

that is, bottom trawling and purse seining. Later, individual entrepreneurs imported steel boats with sizes ranging from 30'-120' into the country to carry out fishing in both trawling and purse seining for fin-fishes and shellfishes. The introduction of inshore vessels was also aided by the Convention People's Party government that set up the 'charter-party scheme' whereby fishermen were able to purchase inshore vessels under very favourable hire-purchase terms (Ninsin, 1991:102). The size of the in-shore fleet was further enhanced in the mid-1970s when bumper trigger fish harvests encouraged record numbers of vessels into the fishery. Amid growing food supply problems the government ran a number of public campaigns to encourage the use of trigger fish in cooking (it had previously been regarded as trash fish). The massive increase in effort, however, resulted in stocks being fished out within 5 years. Only about half of the vessels that entered the fishery on the back of the trigger fish boom in the 1970s are still fishing, in highly constrained economic circumstances which further exacerbates competition problems in the coastal area (Afful and Kebe, 1996:10). There is little doubt that state subsidisation of the fishing fleet in the early years of independence has contributed to the parlous state of the industry now. Worthy goals of increasing catches to feed the nation were not backed up by adequate management measures to ensure that a) harvesting of stocks was carried out in a sustainable manner or b) that the traditional sector which forms the backbone of the industry was adequately protected from such rapid modernisation.

Economic collapse: Following on from the strong State presence in the industry has come the neo-liberal economic reforms that began under the Economic Recovery Plan in 1984. Briefly, the effects of these reforms are that the national currency has been rapidly devaluing which, whilst making Ghanaian exports much cheaper (and therefore more desirable) is making the importation of other goods (such as outboard motors and nets) more expensive. Ghana has no oil reserves and so importing fuel represents a considerable cost to the government and the population. The reforms have also seen government departments slimmed down across the board and the privatisation of many state utilities as the 'free market' becomes the leading economic rational. Afful and Kebe (1996:13) note, for example, that the sheer size of the Fisheries Department budget assigned to salaries (some 76.9% in 1992) had an impact on the ability of the Department to fulfil its other functions, as did the failure to recruit sufficient qualified staff (in the mid 1990, the Department had only 1/3 of the staff it estimated it needed to be able to develop and manage the sector). So, the Fisheries Department which was somewhat ineffective and under-staffed before the economic reform measures kicked in, become even more debilitated afterwards.

In the context of fisheries, the prevailing economic conditions are having a number of effects. Firstly the day to day costs of fishing are rising as fuel prices and input prices rise. As the cost of fishing rises, so the price received for the catch has to rise to compensate⁵. The women who buy the catch, are, however, also experiencing rising costs and are therefore trying to beat down the cost of a day's catch to compensate. The knock-on effects are widespread. Education and health at the local level both suffer as more and more family income is diverted away from these perceived add-on luxuries into the basic needs for survival. The removal of subsidies on fuel has also

⁵ For example, between 1985 and 1994, the price of a canoe rose by 1,775%, an Perkins outboard motor by 115% and the price of a kilo of fresh fish rose by 3,467% (Afful and Kebe, 1996:11). While this is not to suggest that suggest large price increases are still occurring, many fishers and Fish Mammies are still struggling with debt incurred during the period of rapid inflation.

affected the profitability of the fishing sector, with estimated return on investment currently standing at around -4.5% compared with the 17.4% with subsidies (Afful and Kebe, 1996:15)⁶

Decentralisation: Decentralisation, both as an economic and political tool, is the most significant issue arising out of the economic reforms to affect policy and management of small-scale fisheries. Following the coup of 1981, the government drew up a number of measures to devolve administration (though not necessarily politics) away from the centre and return it to the people. This initiative, which met with a modicum of success (see Mohan, 1996) was further developed with the on-set of the Economic Recovery Programme which began in 1984. This saw decentralisation of administration increase and District Assemblies were established in 1988. The central concept of the District Assemblies was to bring together the political and administrative elements of government at a more local level thus improving the input and impact of the local voice on higher echelons of government.

The aim of such decentralisation was that government should be brought nearer the people and that District Assembly members would be more accountable for their actions – because they were more closely linked to their communities. In order to promote this objective further, a sub-district layer of political administration was added made up of the Unit Committees. This was an attempt to incorporate the traditional Chief structure into the new administrative paradigm. Decentralisation as a tool for increased participation at the local level has met many problems. Firstly, there was little real involvement or participation of local communities in initiatives. (Porter and Young, 1998). Secondly the work of the District Assemblies was constrained by lack of financial backing, co-ordination problems and lack of relevance to the grassroots needs (Mensah-Abrampa, 1998:140; Mohan, 1996). Sharp cuts in central government budgets have further weakened ministerial representations at the district level as staff number and expertise has declined. The obvious consequence of this is that district level support for fisheries has been in decline as fisheries staff no longer exist in many districts (they are represented by Agriculture staff), thus further weakening the links between the needs and wants of the grassroots fishing communities and the decision making process of government.

Interviews with Fisheries Officers at various ports along the coast of Ghana (Bennett et al, 2000) revealed disenchantment with the process of decentralisation within the fisheries department. This process seems to have spread the limited resources in the fisheries department even more thinly making them almost ineffective at a local level. In many instances the management of fisheries has been placed in control of officers trained only in agriculture. Fisheries Officers note that agriculture trained officers do not understand the complexities of small-scale fisheries management. One consequence of this is that the successful resolution of a conflict between two fishing villages in different districts is heavily reliant on two District Fisheries Officers being fisheries orientated, rather than trained in agriculture; this is increasingly unlikely.

⁶ It should be noted that the Government's argument for withdrawing the subsidy was that it was being abused (sold on to non-fishery users at considerable profit) and that it had unduly increased fishing effort in the coastal zone which is considered to be over-exploited.

The challenges of managing small-scale fisheries at the local level

Not surprisingly, many of the challenges of managing small-scale fisheries at the local level are a direct consequence of issues beyond local level control.

Access: Access issues are common to many small-scale fisheries, and Ghanaian marine fisheries are no exception. Access to landing beaches is not a problem (Bennett et al, 2001). As outlined above, beaches are governed by de facto common property regimes, no-one may land at the beach or fish from the beach with the permission of the Chief Fisherman. Access to open water (and therefore to resources), however, is a major problem facing small-scale fisheries. This problem has arisen as a direct consequence of economic factors. Although the overall number of vessels (canoes, in-shore and semi-industrial) operating on the continental shelf has not increased over the past 20 years, the profitability of these vessels has decreased as a result of the declining economic situation and reduced catch rates. Competition for increasingly scarce resource by a fleet experiencing declining profitability is thus on the increase.

Enforcement and conflicts: The increase in competition has also been exacerbated by the marked decline in the enforcement of state rules that are designed to keep the competing fleets apart. The level of enforcement has been greatly affected by declining government budgets that have failed to recruit sufficient personnel, or provide those remaining with the means of patrolling the coast. The failure by state agencies to adequately enforce legislation is bringing the canoe fleet (restricted to 0-30m depth) into increasing contact with the inshore and industrial fleet (restricted to 30+m) as the latter frequently ventures into the zone effectively reserved for the canoe fleet. One of the consequences of increased competition and reduced enforcement is an increase in conflicts between vessels (Bennett et al, 2001). Under normal conditions, the respective Chief Fishermen settle conflicts between canoes. However, with an increase in the number of interactions between canoes and other vessels, resolving these conflicts is imposing increasing pressures on communities. Because the in-shore and semi-industrial vessels that come into contact with the canoe fleet are often based a considerable distance from the place of conflict, time and travel costs complicate matters. What is more, the inshore vessels and the industrial vessels are often owned by those operating outside the traditional community structure, which makes negotiated settlement harder as the two sides are operating under a different set of 'norms'.

Environmental issues: One issue peculiar to Ghana that is not connected to the problems in the wider economy is that of erosion. This is a particular problem along the Gulf of Guinea. Although erosion in the Gulf is a natural phenomenon, it has been exacerbated in the past 30 years or so by large scale infrastructure projects: notably Tema harbour which has altered long shore drift to the east and the Volta River Dam which has dramatically altered the hydrology of the river delta: silting up has occurred which in turn has affected long-shore drift and fish habitats. The consequence of this is that traditional landing beaches are being lost and entire villages have had to move several times as the shore-line creeps inland. Policies and efforts at the local level to guard environmental resources, part of the safety-net of rural communities, remain largely as initiatives in regulation only, there being little attempt, or indeed capacity to implement such initiatives. Mensah-Abrampa

(1998:140). Those initiatives that have been introduced have been set up that have little basis in the community but are handed down in a bid to achieve political targets. The result is disillusionment in local communities about government initiatives and the eventual collapse of the initiative in question Porter and Young (1998:520).

In summary then, the challenges of managing small-scale fisheries in Ghana are largely linked to, or shaped by, the wider economic and political environment. The conditions and requirements placed on the Ghanaian government by international financial agencies influence to a great extent how national government formulates policy regarding the production of food and the promotion of an export environment. These policies, in turn, have to deal with two parallel systems: the traditional system operating out of fishing villages which supply the bulk of the domestic fish supply and the modern system which governs the fleets that supply the export market, but also a small fraction of the domestic market. Formulating policy that meets the needs of both systems is constrained by reduced budgets and decentralised political administrative systems. At the local level, the traditional management of small-scale fisheries is hampered by increasing pressures in the coastal zone and the continued failure of the government to recognise and support such systems.

In short, the greatest challenge facing the management of small-scale fisheries – from both a government and community perspective is the mis-match between the traditional and the modern management systems.

The mis-match of TMS and MMS

The view of central government, as laid out in the Draft Fisheries Management and Development Law (2001:1) is that “because fisheries are important to the national interest they require management and development measures for effective conservation and optimum utilisation”. True though this statement may be, it fails to acknowledge, even in passing, that small-scale fisheries have been managed – with considerable success for many generations. The tone of the document is that for Ghanaian fisheries to move forward, management is needed, irrespective of the systems that are extant and already aiming at ‘effective conservation and optimum utilisation’ of the resource. This emphasis on the need to ‘manage’ and ‘deal’ with fisheries as a national issue is nothing new. The state spent considerable money building-up the inshore and industrial fleet on the back of state shipyard development in the 1960s and 1970s. Little attention was paid, during this process, to the impact this would have on the traditional sector, in fact the inclusion of the traditional sector into this plan was confined to providing it with subsidised loans for engines and fuel. State emphasis on the modern sector whilst effectively ignoring the ‘traditional’ sector has continued ever since.

The state’s attitude to the small-scale sector can be explained by the perception that traditional management systems need to be modernised in order for a country to move forward in terms of development – the same ethos influenced many aspects of development planning in the 1950s when ‘modern’ and ‘European’ were considered more effective and more appropriate to development than anything ‘African’ or ‘traditional’. The legacy of such perceptions is that fisheries management in Ghana is now grappling with the need to develop the fishing sector as a whole whilst recognising the contribution that the traditional sector can have.

Ghanaian society as a whole is governed by two sets of authority: the traditional and the modern (Ray, 1996). In a fisheries context, one of the consequences of the two systems of authority operating in parallel (and often at odds with each other) is that the notion of community is caught between the two. The traditional management system is based in the community and, whilst the elite can and do appropriate resource rent, the bigger picture is that of the welfare of the community as a whole. Re-distributive effects are mediated through complex systems of alliances, tributes and reciprocity. On the other hand the modern system is capitalist in nature and sees the individual as the sole beneficiary of the resource – the more efficient the fisher, the more they succeed. The inefficient fishers must, according to neo-classical fisheries economics arguments, be pushed out of the system. The wider welfare implications of allocation of resources and benefits are rarely addressed by the modern system.

So what does the mis-match between the two systems mean for poverty alleviation in the Ghanaian small-scale marine sector? Firstly, because domestically-consumed fish (which accounts for 60% of the animal protein consumed by the average Ghanaian), comes from the small-scale sector, any erosion of its ability to supply the domestic market has severe implications for wider nutritional well-being on the coast and further inland also. Secondly, there is evidence in many quarters that community based management of resources is more effective in producing sustainable outcomes in the long term than modern management systems where the emphasis is on open access and consequent tragedy of the commons are noted by Hardin (1968). Thus, a failure to adequately support and recognise the traditional management systems operating along the coast could have negative implications for the health of aquatic resources, and the long-term future of the Ghanaian fishing sector as a whole. Indeed, there is already evidence that the stocks targeted by the small-scale sector are over-exploited. Thirdly, the Ghanaian small-scale sector is highly vulnerable to external shocks (both economic and natural) and thus needs protection. Whether that protection should be passive, through legislation that adequately regulates the behaviour of other parts of the coastal fleet, or active, through initiatives such as the Community Based Fisheries Management Programme is still open to debate.

Where the traditional and the modern meet up

Although traditional and modern management objectives for small scale fisheries have failed to meet satisfactorily, recent developments in Ghana appear to making positive moves to improve the communication between the two.

The Community Based Fisheries Management Programme (CBFMP) is part of the Fisheries Sub-sector Capacity Building (FSCBP) programme which started in October 1995 with a loan from the World Bank. The programme forms part of the wider 'structural adjustment' lending to Ghana. The FSCBP is part of a wider Medium-Term Agricultural Development Strategy (MTADS) formulated by the Government of Ghana and the IDA in 1990. The underlying themes of the MTADS were the potential for, and the need to accelerate agricultural (including fisheries) growth (World Bank, 1995: 10).

The key objective of the FSCBP was to improve the long-term sustainability of

Ghanaian fisheries through structural changes in management at Ministerial, Directorate and the local level (World Bank, 1995). Also somewhat paradoxically its aim was to create a platform that would make Ghanaian fish production more competitive on the global market thus boosting export earnings from the sector⁷.

More specifically, the FSCBP aimed to: improve the capacity of the Department of Fisheries, address the issue of lack of an active management regime, weak institutional and legal frameworks for fisheries and a growing financial and resource crisis in the industry. Many of these objectives have been tackled to varying degrees of success.

Fundamental to the successful outcome of a large part of the FSCBP was the inclusion and participation of the largest group of fishers in Ghana – the artisanal fleet. The issue of capacity building at both a local and national level was central to the programme and had in fact been a basic tenet of the Country Assistance Strategy (the document upon which all World Bank lending is now based) formulated in 1990 (World Bank, 1995:12). The document establishing the FSCBP recognised that:

“Classical marine fisheries management tools [...] can only be applied with limits in Ghana in a fishery dominated by a large number of artisanal fishers holding traditional beliefs and in the presence of some fishing stocks of which the biomass is largely unaffected by human effort” (World Bank, 1995:14)

and that in order for management at the artisanal level to be implemented at all, it would, for the time being have to be restricted to improving the information on effort and participation in the fishery whilst:

“establishing trust and co-operation with the traditional authorities to promote community-based rational management” (World Bank, 1995:14)

A number of observations can be made about these statements. That the World Bank recognises that a) marrying traditional and modern management tools was going to be problematic; that b) co-opting the local artisanal communities was the only way to achieve any degree of success in the programme but c) doubt is cast upon the community based management already in existence. Echoing the modernists arguments of the 1950s the argument suggests that with increased pressure on stocks, management needed to be rooted in something beyond traditional superstitions or taboos. The only logical way down the road to greater sustainability of Ghanaian fisheries and improved economic conditions was therefore to educate fishers, get local communities on the side of government bodies and ultimately to modernise the traditional system with the active co-operation of the fishing communities.

In order to address the objective of fostering trust, cooperation, education and improved management at the community level, the Community-Based Fisheries

⁷ The World Bank report on this project (1995:10) makes these two objectives inter-dependent, although sceptics might argue that without substantial support and infrastructure (which appears to be partially missing in Ghana) it is not possible to pursue increased exploitation and exports together with greater resource sustainability.

Management Project was established. Although community-based management in its truest form already existed in Ghanaian artisanal fishing villages, in order for this system to feed into a wider government initiative, networks had to be created. To this end 'Community Based Fisheries Management Committees' (CBFMCs) were established as the linking mechanism between the traditional and the modern system. These committees were

“formed in a fishing community based on existing traditional leadership authority and local government structures, legally empowered by common law, and comprising all stakeholders, to oversee the management and development of the fishing industry. It is to ensure the active participation of the local people in decision making and implementation.”

Because the committee would act as a link (or go-between) between the two systems mentioned above, it was also recognised that the Committees would face additional pressures because they would have to a) harmonise relationships between individual community members and b) act on behalf of the government and the community in terms of by-law enforcement (Family Haven/Graceland Consult Ltd, 1998:23).

The setting up and functioning of the committees has been somewhat patchy. To date, 47 committees have been set up, the majority of these in Central Region (which has a strong commitment to the project). The region with the least number of committees was Western Region; the reason for this appears to be the isolated nature of many of the villages which, coupled with the lack of transport (a direct consequence of economic problems) has made contacting these villages much more problematic. The region with the least enthusiastic response to the programme was Greater Accra Region where many communities are reported to be sceptical about government initiatives.

The Committees have a constitution which states that they will a) ensure that laws and rules are abided by; b) educate fishers on the need for the laws and train them on fisheries matters; c) ensure sanitary conditions on the beach; d) use their financial resources to support development programmes in the communities and e) develop a management plan for sustainable exploitation of fisheries resources.

The first task of the committees was to draw up a list of by-laws governing fishing activity on their beaches and landing sites. By drawing up their own by-laws and submitting them to the relevant Assembly for ratification, local norms would be lent weight and legitimacy. This has a two-way function. Firstly the community feels that its laws are valued because they are recognised by a higher authority and secondly, it engenders a sense of trust and liaison between the communities and the higher levels of government authority. The by-laws usually contain sections on conservation of the fish stock, sanitation, restriction of children, conduct at the beach, conflicts and their resolution and safety at sea. While many of these by-laws are simply legalised local lore, many of the elements go one step further in attempting to manipulate and improve local community life.

Funding for the CBFMP is due to end in 2001, what will happen to the initiatives beyond this date is not known. Although the project has had considerable success in a

number of areas of small scale fisheries management, it has also met with many constraints and resistance. Creating a successful and operative link between traditional and modern management systems is a long-term project that, in ideal circumstances, requires far more input than the Ghanaian economy is able to provide. The initiative, is, however, a step in the right direction.

CONCLUSIONS

Ghana's small-scale marine fisheries face considerably less problems and challenges than its neighbours. There is no foreign industrial fleet competing with canoes for resources and the economy, although weakened, is comparatively stronger than other West African fishing nations. However, like many other coastal fishing nations, Ghana is still trying to find a successful means of marrying two different systems. The traditional management system, which, for generations has sustained small-scale fishing communities along the coast, is under threat from the modern management system that sees fish as a commodity for trading by entrepreneurs, rather than the basis for an entire way of life.

Economic difficulties that stem from Ghana's commitment to neo-liberal economic reforms have further complicated the situation. State priorities and policies with regard to poverty alleviation in coastal communities are dictated largely by outside interests rather than internal needs. As the economy and economic policy has focused on the individual and the market, so the role of community, and indeed traditional systems has come under threat. This battle between the two systems is being played out in the arena of small-scale fisheries management. Increased competition, decreased enforcement and a failure to support traditional systems is putting increasing pressure of small-scale fishing communities. Although recent initiatives by the World Bank to reverse this trend are having some impact, the future for traditional fisheries management of small-scale fisheries in Ghana looks bleak.

Afful, K. N and Kebe, M. 1996. *Fiscal Policy and the Artisanal Fisheries Sector in Ghana and Senegal*. IDAF Technical Report No. 90. FAO: Benin.

Bennett, E. Neiland, A., Anang, E., Bannerman, p., Rahman, A.A., Huq, S., Bhuiya, S., Day, M., Fulford-Gardiner, M. and Clerveaux, W. 2001 (forthcoming) 'Towards a better understanding of conflict management in tropical fisheries: evidence from Ghana, Bangladesh and the Caribbean' *Marine Policy*

Bortei-Doku, E. 1991 'Migrations in artisanal marine fisheries among Ga-Adangbe fishermen and women in Ghana' in Haakonsen, J.M and Diaw, C editors *Fishermen's migrations in West Africa*, IDAF/WP/36, published by FAO/DANIDA/NORWAY. pp180-207

Family Haven/Graceland Consult Ltd. 1998. *Manual on social mobilization towards community-based fisheries resource management*. (Ghana, unpublished manuscript) Government of Ghana (Marine Fisheries Research Division) *Canoe Frame Survey*, Tema, 1995

Government of Ghana (Ministry of Food and Agriculture) *Comprehensive Development Framework: Agriculture*, Accra, November 1999

Government of Ghana (Ministry of Finance), *Interim Poverty Reduction Strategy Paper 2000-2002*, Accra, June 2000

Haakonsen, J. M. 1991. 'Towards a better understandin gof fishermen's migrations in West Africa' in Haakonsen, J.M and Diaw, C editors *Fishermen's migrations in West Africa*, IDAF/WP/36, published by FAO/DANIDA/NORWAY. pp 1-11

Hardin, G. 1968. The tragedy of the commons. *Science*. 162:1243-9.

Mensah-Abrampa, K.E.1998 Challenges and threats to communal coping strategies: the case of the poor and sustainable development in Ghana. *Local Environment* 3(2):137-57.

Ninsin, K.A. 1991. Economic Modernisation and social change: evidence from Mumford, a Ghanaian fishing village. *Africa* 61(1):98-116.

Ntiamoa-Baidu, Y.1991. Conservation of coastal lagoons in Ghana. The traditional approach. *Landscape and Urban Planning* 20:41-6.

Mohan, G. 1996. Adjustment and decentralization in Ghana: a case of diminished sovereignty. *Political Geography* .15(1):75-94.

Porter, G., Young, E. 1998. Decentralized environmental management and popular participation in coastal Ghana. *Journal of International Development* 10:515-26.

Ray, D.I. 1996. Divided Sovereignty: traditional authority and the state in Ghana. *Journal of Legal Pluralism* 37-38:181-202.

World Bank. 1995. Staff Appraisal Report. Republic of Ghana. *Fisheries Sub-sector Capacity Building Project*. Report no. 13877-GUA. Washington: World Bank