

THE CHANGING ROLE OF FISHERIES IN DEVELOPMENT POLICY

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Fish and fisheries – both marine and inland – are an intrinsic part of the livelihoods of many in developing countries. Recent work indicates the important contribution to food security made by fish caught as a part-time occupation of essentially agricultural households. The interface between the resource and people's livelihoods – especially those of the landless development – has so far been largely disregarded in the policies of governments and donors, which tend to be dominated by high seas fishing interests and other aspects of sectoral policy. Considerations of this kind suggest that a review of the orientation of fisheries policies would be opportune.

Policy conclusions

- Artisanal coastal and inland fisheries have so far been relatively neglected in policy. The introduction of a livelihoods perspective suggests innovative ways in which policies towards them might be formulated.
- More closely integrated approaches to fisheries, agriculture, water and other sectors need to be adopted in development policy and planning.
- To assure sustainable resource management and future food security, the Food and Agriculture Organisation's Code of Conduct for Responsible Fishing should be adopted and promoted.
- The capacity for sustainable fisheries management needs to be increased and developed at all levels – regional, national and community.
- The capacity for access to information that is relevant and in the appropriate format needs to be increased at regional, national, and in particular, at community levels.

Background

During the 1950s and 1960s there was a five-fold increase in world fisheries as technology improved. From the 1970s, however, production from capture fisheries, as recorded by the Food and Agriculture Organisation (FAO), has remained more or less on a plateau of 80–90 million mt. In marine fisheries, there has been something of a shift among the major players. In recent years, developing or emerging countries have been taking an increasing proportion of the catch, with China and India featuring increasingly, so that now these countries take more of the world catch than the developed nations. By contrast, over the same period, there has been a sustained increase in aquaculture. Most recent records show global aquaculture production to have increased to 28 million mt annually. By far the greatest contribution to this is from China, South Asia and South East Asia, parts of which have an aquaculture tradition going back for more than a millennium but where modern concepts and developments have been met with a ready acceptance. By contrast, production from Africa and South America remains minimal despite, in the former case, the provision of much technical and financial assistance.

Marine capture fisheries can be broadly divided into two categories:

- Coastal or inshore fisheries – most often artisanal in nature.
- Offshore fisheries – which are largely commercial; requiring mechanised ocean-going fleet for their exploitation.

The offshore marine stocks can be fished by vessels of the coastal state or, through fishing agreements, by distant water fleets (DWF) of a developed country. Regardless of whether a developing country decides to sell its assets or develop its own fishing capacity, the position of the artisanal fishery must be safeguarded because of the economic, nutritional and employment benefits to the coastal artisanal communities. At present it is estimated that some 44% of marine fish stocks are maximally exploited and 16% are over exploited. It is

unlikely that major increases in marine catches will be possible in the future, and that the most practical objective will be to maintain the present level. Demographic trends indicate increasing pressure on the resource as more individuals seek livelihoods from fisheries and as global demand rises.

Inland waters also have significant capture fisheries. They are often difficult to record, owing to their relatively diffuse nature, but they currently produce at least 10 million mt each year. With regard to rural development, generally inland fisheries can have the most impact. In floodplains, for instance, many – including women and children – engage in casual fishing which makes a significant addition to the high-grade animal protein available to a household. The extensiveness of river systems also reduces the distance over which fish need to be transported. For example, fish from coastal areas are transported relatively long distances, with the risk of loss and spoilage before they can make a nutritional impact on the hinterland regions. Dams and reservoirs may fulfil a similar role, particularly when constructed in areas commonly short of other water bodies.

Both marine and inland artisanal fisheries tend to include the poorest sectors. It is often one of the few livelihoods open to the landless and often becomes the default livelihood. For this reason, as the human population increases and land becomes at a premium, there will be increasing pressure for people to adopt fishing as a livelihood. Aquaculture offers some response to this pressure but is far from a panacea. The commoner types of aquaculture require ownership or access to ponds and water, which often mitigates again the poorest. It is probably not an accident that the most successful country for aquaculture is China where land was nationalised.

Sectoral conflicts

Marine fisheries

Within the marine fisheries the major potential conflict is between the artisanal fishery which is coastal and inshore,

and the commercial mechanised fleets exploiting the offshore resources. This conflict may be further complicated when the developing country decides that it does not have the resources to build its own commercial fleet but that it should sell the rights to a DWF of another nation, often of an industrial nation. Such decisions should be based on detailed knowledge of the sustainable quantities of fish to be taken since this defines the economic scope for development, but this is often not reliably known. Many countries take the easy option and enter into fishing agreements with DWF of developed countries either on a country to country basis or on a company to company basis or, in the case of the EU, on a supra-national basis. Conflicts with artisanal fisheries may be directly for fish but may also include the price-depressing impact of fish landed locally by commercial boats.

There is some evidence that more fish are being landed in developing countries now than previously. Over the last decade, for example, DWFs have accounted for around half the yield taken in the productive fisheries off West Africa (Brandt, 1999).

The conflict is most marked within those countries or bodies which are significant donors whilst also having major DWF fishing interests such as Japan and the EU. The EU both negotiates fishing agreements with developing countries on behalf of the member states, whilst also having a policy of assistance to coastal states for fishery development. These responsibilities are split between two directorates until recently DG14 and DG8 (now DG Fish and DG Development).

A further complicating factor is the existence of subsidies for many DWFs. Cautious estimates suggest that these amount to 17–25% of fishing revenues in industrialised countries but are much lower in developing countries (Milazzo, 1998). The over-capacity generated by subsidies puts further pressure on the stocks. In any event, adequate information is rarely available to allow sustainable levels of off-take to be determined. Information is a key factor for the sustainability of fisheries stocks.

Inland fisheries

By contrast with marine fisheries, the major potential conflicts with inland fisheries come from other sectors. Agricultural expansion is leading to a progressive modification of floodplains. More than 40% of the floodplains of Bangladesh, which themselves cover more than 69% of country, have been modified and impoldered for rice growing. The use of water resources from rivers and lakes is increasing. More than 60% of the water flow of the Ganges River is abstracted for irrigation and other purposes and whilst some is returned, the quality has suffered. Agriculture is also increasingly using agro-chemicals which get into the water bodies where they may affect the growth and mortality of fish or accumulate in their bodies to be passed on to consumers.

Pollution in the wider sense, from industrial and domestic sources, also presents conflicts for inland fisheries. There exists, therefore, a great need for policies on inland fisheries to be closely integrated with those of agriculture, water resources and also power, where hydroelectric structures are a significant feature. Any degenerative practices in a catchment area will have a potential impact on aquatic habitats, most of all on fish and fisheries.

Aquaculture

Here, conflicts with agriculture are similar to those with inland fisheries in some ways. Competition with agriculture for land and water, and water quality are critical factors. In addition, there may be competition with agriculture for inputs such as fertiliser or supplementary feed. In fact, livelihood needs for aquaculture are far more similar to those for agriculture than

to fishing itself. Indeed, farmers tend to make better fish farmers than people who primarily fish for a living. Aquaculture may have downstream impacts on other sectors where intensive culture may generate polluted effluent. When aquaculture generates high returns (for instance, in shrimp culture in South Asia), this may cause land to be lost to shrimp culture at the expense of rice production.

Policy positions

The first thing to be clear about is that there is a distinction between *policies for fisheries in development* and *fisheries policies* as such, certainly from the point of view of donors and fishing nations. The latter will always possess an element of self-interest. The clearest example of policies is provided by the World Bank which withdrew support to the fisheries sector after a fairly fraught history, but maintains a strand of fisheries interest within the Rural Development Department. Most countries do not make clear their position on fish as such but lump it in with general development policy. An exception is Denmark, which does have a stated policy (DANIDA, 1993). With regard to DFID, the most recent formulation of development policy in the White Paper of November 1997 makes little direct reference to fish or fisheries but the implications of its principles for fisheries can be drawn out easily enough (Box 1).

The European Union

A clear expression of EU principles in respect of fisheries is to be found in the Lomé Convention. Titre III of Lomé is entitled Development of Fisheries and it contains eleven articles. Six of these articles define the objectives and mechanisms of the EU towards fisheries development and assistance with regard to ACP states, whilst the remaining five articles relate to agreements between the EU and the ACP countries by which member states gain access to waters

Box 1 Implications of current UK development policy for fisheries and aquaculture resources

Political aspects

- Relates directly or indirectly to the 1997 White Paper. The Sustainable Agriculture Strategy also includes fisheries.
- Fisheries and aquatic resources administered through the Rural Livelihoods Department at DFID.
- Strengthen coordination between EU member states in fisheries.

Institutional

- Supports the UN system and the FAO's Code of Conduct.
- Co-funding with multilaterals to improve 'quality' of deliverables. Community management of common resources to be promoted. Integrated water management for catchments and basins, and inland fisheries and aquaculture to be promoted.

Economic

- Promote economic growth with environmental protection through income-generating activities targeted on the poor throughout economic exclusion zones (EEZs) and catchment areas.
- Support for private sector and optimum exploitation of resources.

Human resources

- Partnerships to transfer skills and knowledge at all levels. Invest in research through the Renewable Natural Resources Knowledge Strategy, including four fish programmes, and land–water interface of systems programme.

Sustainable resource management

- Promote community management for future sustainability. Ethical trend includes certification of sustainably managed fish stocks.

of the ACP countries. It is this division which can create conflict and consequently lead to coherence issues within EU policy. The conflict and coherence difficulties are further compounded by the fact that the 'compensation' payments, made by the EU as part of the agreement, is deemed to pay for the monitoring, assessment and overall management of the fishery by the local state, thereby absolving the negotiating body from any responsibility. This disregards the capacity of the coastal state to conduct relatively expensive and sophisticated assessments and the right to hypothecate payment – in what is essentially a trade agreement – is questionable. As a result neither side knows how much fish is on the table which jeopardises the sustainable use of the stock.

As an example of the range of support that donors can give to fisheries in developing countries it is worth examining Article 59 of Lomé. This states that the EU will help to:

- improve knowledge of the fisheries environment and its resources
- increase the means of protecting fishery resources and monitoring their rational exploitation
- increase the involvement of the African, Caribbean and Pacific (ACP) states in the exploitation of deep-sea fishery resources within the EEZs
- encourage the rational exploitation of the fishery resources of the ACP states and the resources of the high seas
- increase the contribution of fisheries to industrial development by increasing catches, output, processing and exports
- increase the contribution of fisheries, including aquaculture, non-industrial fishing and inland fisheries to rural development by giving importance to the role they play in strengthening food security, improving nutrition and the social and economic conditions of the communities concerned. This implies, inter alia, a recognition of and support for women's work at the post-harvest stage and in the marketing of fish

It is the last paragraph which is the clearest commitment to the wider role of fisheries in rural development at the community level within a convention which is otherwise dominated by issues of exploitation of marine fisheries. By contrast, the World Bank has withdrawn from engagement in anything other than the final paragraph. The EU, as a major fishing bloc, as well as a major donor, retains an interest in these elements. The fact remains that marine fisheries are only one aspect of the role that fisheries and aquaculture plays in the development process.

A further article of Lomé highlights the role of trade in fish products in relation to developing countries. Article 168 gives exemption to custom duties of fish products from ACP countries providing they comply with EU standards. Some 60% of fish imports to the EU originate in ACP countries and have a value exceeding Euro 1 million per year (Brandt, 1999). It should be noted, however, that Lomé provisions do not uniformly apply beyond the ACP countries, and that the EC's wider rural development and fisheries policies are currently being re-formulated.

The EU estimates that accumulated waived import duties have exceeded Euro 100 million. This is clearly significant but probably does little to help the poorest people. There are exceptions, such as small-scale shrimp farmers in Bangladesh where the shrimp is solely for export, but benefits to poorer people are generally more likely to be in the form of employment in processing, i.e. adding value within the coastal state.

However, lack of tariff barriers clearly makes it more viable to export fish. As fish gains in value globalisation of trade

may suck more fish out of the developing countries into richer nations, thereby exacerbating food security issues in developing countries.

Food and Agriculture Organisation

Strong commitment to sustainable resource management is expressed in the Code of Conduct for Responsible Fisheries drawn together by FAO following the Cancun Conference in 1992 (FAO, 1995) (see Box 2). The Code takes in all aspects of fisheries and is basically a code of best practice based on existing knowledge. It includes both general principles and guidelines for all aspects of fishery and aquaculture operation and development. Article five of the Code refers specifically to the Special Requirements of Developing Countries. It indicates the need to take into account the capacity of developing countries to implement the Code, especially the poorest and small island states. It emphasises that their needs should be supported in areas of financial and technical assistance, technology transfer, training and scientific cooperation with respect to fisheries, to enhance their abilities to develop and promote their own fisheries.

There is nothing radical in the Code but it draws together preconditions for fish production to be maintained or increased into the future. It is a voluntary procedure but many fishing nations and the EU have undertaken to follow it and to take it into account within their own policies. It points the way forward to promote the full role of fisheries in development.

Pointers for fisheries in future development policies

From the poverty reduction viewpoint, the areas of greatest

Box 2 Some key elements of FAO's Code of Conduct for Responsible Fisheries

Political aspects

- Code of Conduct for Responsible Fisheries, 1995. Non-mandatory but with obligatory elements of Law of the Sea, 1982 and Agreement to promote compliance with international conservation and management measures by fishing vessels on High Seas, 1993.
- Committed to provide assistance for Code implementations.

Institutional

- Help developing countries to follow the Code of Conduct.
- States, NGOs, international organisations to promote understanding and acceptance of the Code.
- Assistance for regional cooperation, decision making and consultation.
- Control of flagged vessels and peaceful resolution of disputes to be promoted.

Economic

- Trade to be carried out in accordance with the World Trade Organisation Agreement (has no application for fish trade at present but probably will in the future).
- Use aquaculture to promote income diversification.
- Multiple use of catchment areas and coastal zone to be ensured.

Human resources

- Decisions to be based on research and traditional knowledge. State promotes training for responsible fishing.
- Protect fish workers' rights.
- Facilities and equipment to be safe for healthy, fair work.

Sustainable resource management

- Right to fish has obligation for responsibility.
- Precautionary principle is applied.
- Guidelines for protection of biodiversity.
- Guidelines for prevention of over-fishing.
- Responsibility for future of stock promoted.
- Conservation of species and habitats to be promoted.

significance are coastal inshore fisheries, inland fisheries and aspects of aquaculture. Coastal and inland fisheries are mainly based on artisanal fishing with low capitalisation and mechanisation in what are essentially rural communities. Further, not all fishers are full-time, some are part-time or occasional. On the floodplains of Bangladesh only 20–30% of the total catch is taken by full-time fishers. Part-timers have other occupations, often seasonal, but fisheries remains an essential component of their livelihoods. This is a reason to recognise the interdependence of fisheries with agriculture or petty trading and, therefore, the need for a well integrated cross-sectoral development policy.

Artisanal fisheries are mainly community-based and tend to be organisationally weak and have poor access to information. They are also often in debt to money-lenders since they can offer little collateral, such as land, for formal credit. This may pressurise them into over-fishing and in an open-access situation, communities and interlopers scramble competitively for dwindling resources with damaging results on the stocks. Structured ownership or right of access by communities are crucial particularly where government institutions are weak. However, water bodies are often large and fish are very mobile so there is a limit to the extent a single community or administrative district can manage and control its own resources. There needs, therefore, to be an extensive network of linkages between participating communities to enable full management of the resources. Estimates of the impact of fishing on the stock is the most important piece of information communities need in conducting their own management. This is also typically absent from traditional management systems so far investigated. It is generally the case that it is at the institutional level of the community that information, in the appropriate format, is least available. In general, mechanisms for community management are less understood in fisheries than in other

sectors such as forestry or wildlife.

The Code of Conduct has guidelines that are as applicable to artisanal communities as to high seas fisheries, and also highlights the institutional support required from donors. Help with information and the capacity to gather information is one of the features emphasised. In many ways the Code points the way for future actions and fills a gap that exists in many development policies. It also underlines the fact that access to a fishery gives a responsibility for its management which underpins equally the basis of community management as it does for the role of distant water foreign fleets.

Finally, it is possible to summarise some of the key points to be taken into account for the proper inclusion of fisheries into development policy in the future as shown in Box 3.

Ultimately, the hand of developing countries in international negotiations needs to be strengthened. One way of doing this is by strengthening flows of relevant information. The management of fish stocks needs regular feedback of relevant information, otherwise rational decisions on stocks under pressure cannot be taken. Most donors, particularly bilaterals, have access to considerable information collecting and analytical capacity and this is used to some extent. But the supply of information to each level is critical in assisting decision-makers. Regional management of fisheries must have an element of information sharing; this is another crucial issue given that waters extend over the boundaries of more than one country and many fish species are migratory. The support to regional bodies such as the Southern African Development Community or those of the riparian states of the African lakes, is also a vital part of a consideration of fisheries in development policy.

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Box 3 Some key points for consideration of the role of fisheries in development policies

- FAO's Code of Conduct for Responsible Fisheries should be adopted and promoted.
- Improved development of community/co-management systems in coastal/inland fisheries, with responsible ownership or access to resources, is required.
- Interdependence of fisheries, agriculture and water sectors should be recognised, leading to integrated policy and planning (e.g. basin or coastal zone management).
- Aquaculture may not be for the poorest but ways should be explored by which the poor can gain access to appropriate technologies (e.g. cages) as part of a livelihood diversification strategy rather than a production-led strategy.
- Stock enhancement (i.e. the artificial addition of young fish) and/or habitat restoration are the only realistic ways of increasing yields from capture fisheries – the need for cost-recovery links this to community management.
- Assistance needs to be provided for the development and implementation of sectoral plans and enabling legislation to developing countries for the planned, integrated use of resources and production of benefits for the poorest.
- The impact of globalisation on fish availability in developing countries and the role of trade agreements needs to be assessed.
- Employment generation in developing countries needs to be promoted through adding value to fish products by processing.
- The capacity for joint action in managing the resource needs to be enhanced.
- Credit and micro-credit schemes are needed that help to release the artisanal sector from dependency – increasing informal credit and traders.
- The capacity to collect key information needs to be increased and decision-making enhanced at all institutional levels.

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ISSN: 1356-9228

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