



Environmental Fiscal Reform in the Commercial Fisheries Sector



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What is Environmental Fiscal Reform?

“Environmental Fiscal Reform” (EFR) refers to a range of taxation and pricing measures which can raise fiscal revenues while furthering environmental goals. This includes taxes on natural resource exploitation or on pollution. EFR can directly address environmental problems that threaten the livelihoods and health of the poor. EFR can also free up economic resources or generate revenues that can help to finance access of the poor to water, sanitation and electricity services.

There is renewed interest in EFR for several reasons. The international development agenda is now strongly focused on the Millennium Development Goals (MDGs). These include the goals to eradicate extreme poverty and hunger and ensure environmental sustainability. The World Summit on Sustainable Development (WSSD) held in South Africa in 2002 re-affirmed the MDGs and stressed that poverty reduction and improved environmental management go hand in hand. The WSSD Plan of action calls upon governments to “... *continue to promote the internalisation of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the costs of pollution, with due regard to the public interest and without distorting international trade and investment*”.¹ The Financing for Development Conference, held in 2002 in Monterrey, also emphasised the importance of mobilising domestic resources for development including through efficient tax systems. EFR is one of the ways to increase domestic resource mobilisation.

Environmental Fiscal Reform in developing countries

Experience shows that, despite their potential fiscal, poverty reduction and environmental benefits, EFR measures are constrained by political and institutional factors. Overcoming these factors requires an understanding of the political economy of EFR. This includes identifying likely “winners” and “losers” from proposed reforms, how coalitions for change can be developed and nurtured, and how best to deal with those likely to oppose progress. Successful design and implementation of EFR reforms therefore depend on careful choice of policies and instruments, detailed analysis of the perspectives and interests of main stakeholders concerned, and consideration of the various steps involved in managing the reform process.

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focuses on EFR in the commercial fisheries sector.**

¹ WSSD Plan of Action, paragraph 18b.

EFR in the Commercial Fisheries Sector¹

The primary objective (of the growth and macroeconomic stability policy) will be to ensure full mobilisation of domestic revenue... non-tax revenue will increase largely as a result of fishing fees and fines. (Mauritania Poverty Reduction Strategy)

Fish are critically important to the developing world as a source of food for millions and the large economic benefits from employment, export income, and government revenue. Consumption of fish is by far the primary source of animal protein for many coastal, rural communities, where many people in the developing world live.

Fishing takes place on the high seas, in coastal or inland waters on a commercial or artisanal scale.² Here we concentrate on commercial fisheries operating in developing countries' waters, which raise important issues at the interface of poverty reduction, resource management and economic rent capture, thereby providing important opportunities for EFR. A particular focus is on "access agreements" between fish-rich, low-income countries and foreign distant water fleets. These agreements mostly apply to coastal nations in west and southern Africa, and island nations in the Pacific and Indian Ocean who could generate significant revenue from these resources. In these countries, moreover, many communities rely on fisheries for their livelihood. Falling stock, and competition between commercial-scale operators and subsistence fishers over the same stocks can undermine the livelihoods of fishing communities.

Key features of the sector: overview

As in other extracting sectors, such as forestry, fisheries resource degradation and depletion are key concerns. Even if complete and irreversible stock depletion remains rare, it may be a concern for the fisheries sector.³ For now, however, the main challenge in the fisheries sector relates to fish stocks which are exploited in a sub-optimal way, i.e. which could yield more fish with better management. This occurs when excessive fishing constrains stock re-building, leading to a lower than possible equilibrium stock level.

About 75% of the world fishing stock is "fully fished" (47%), "over-fished" (18%), "depleted" (10%) or recovering slowly from depletion (FAO, 2002). A stock is described as "fully-fished" if it is exploited at its maximum long-term sustainable yield. A stock is described as "over-fished" not necessarily because of a threat to its survival, but because it could yield more fish later if the current catches (which include immature fish which could still grow if given a chance) were reduced. This implies that *more fish* (in terms of total weight) could be caught *sustainably* by reducing fishing "effort". From an economic point of view, reducing fishing effort in an "over-fished" stock increases the total production while reducing the total costs of production, leading to a much more favourable outcome.

Reducing fishing effort can be done by reducing the number of fishing boats, reducing the capacity of each boat or a combination of the two. How to achieve this reduction depends on the relative importance of various policy objectives. If the objective is to maximise the overall economic value of the catch, it may entail restricting access to a small number of highly cost-efficient fishing boats, whose profit could be shared with the state through taxes, auctioning

of access rights or other mechanisms. If, however, employment and the protection of subsistence fishing communities are the primary concern, a larger number of less cost-efficient vessels may be allowed access. If the objective is to maximise food production and (therefore total catch) irrespective of costs, a mid-way solution will be needed.

Pressures on high seas fisheries have accordingly increased in recent years – both from OECD and non-OECD countries. For example, fishing pressure in west Africa has increased significantly since the 1960s from EU, Russian and Asian fleets. Key factors behind this trend include radical advances in fish harvesting technology; ever larger fishing fleets operating in ever-distant waters; direct and indirect government subsidies in many OECD countries, which encourage over-investment in fishing capacity as well as illegal, unreported and unregulated fishing.

Policies and instruments

In the absence of taxation, the financial benefit from exploiting fisheries resources are fully captured by the private sector, without compensation to society at large. In addition individual operators have no direct incentive to restrict their catch, since they do not, individually, derive any direct benefits from doing so. Imposition of levies on volume caught, in combination with proper management measures – which may include restricting access to fishing grounds – can generate revenues to compensate the owners of the resource, (*i.e.* the country whose fishing stocks are being exploited) and help reduce fishing efforts.

The United Nations Convention on the Law of the Sea (UNCLOS), which sets out coastal states' rights and duties with their “exclusive economic zone”, includes provisions for states unable to fully harvest their fisheries resources to provide access to the available surplus to other states, through appropriate agreements.

In many developing countries, “access agreements” are the main mechanism to manage access to national stock by foreign fleets (known as distant water fleets, DWFs). These are negotiated between governments or between the host government and the foreign fishing operator(s). The main DWFs nations are Spain (within the EU⁴), Japan, the United States, Russia, China, Korea and Chinese Taipei. The EU, for example has fishery agreements with 20 developing countries – over half in west Africa – under the Common Fisheries Policy (CFP), aiming to secure access to their stocks and waters for fleets of its member States.

Access agreements generally provide for financial compensation paid by the DWF country (or private operator) to the country in whose waters the fishing takes place. This serves the dual purpose of allocating to the coastal state a share of the profits generated from resource extraction *and* of regulating the harvest. Access agreements sometimes include other provisions such as preferential access to DWF country markets; joint-venture agreements; requirements to include a certain proportion of domestic workers in the crews of the DWF vessels; etc.

Countries which have entered into “access agreements” include some of the poorest and least developed, such as Angola, Guinea Bissau, Mauritania, Mozambique, Sao Tome and Senegal. For some, these agreements represent significant financial resources. For example, it is estimated that EU agreements provide as much as 30% of government revenues in Guinea Bissau, 15% in Mauritania and 13% in Sao Tome (IFREMER, 1999).

While in the past these agreements managed to capture only part of the revenue generated (van Santen, 2001), the situation has been improving over time. One reason is that their provisions have been subjected to increased scrutiny by NGOs as well as within the European Commission. Concerns include the management and exploitation of fisheries resources in developing countries and their impact on the livelihoods of local communities, and the fact that resources from extremely poor countries are, in effect, exploited by foreigners with insufficient compensation. Developing countries themselves have also become more assertive in expressing their concerns over preserving their fish stocks and developing their national fisheries sectors (OECD/DAC, 2002b).

Under pressure from the developing countries concerned and NGOs, the EU fisheries council shifted in 2002 from relatively narrow fisheries agreements to much broader “partnership agreements” which include a range of measures aimed at addressing social and environmental concerns related to the fishery sector in the partner country (see Box 6.2).

Negotiating and enforcing access agreements poses unique challenges. Most importantly, fish stocks may be very mobile and difficult to monitor by developing countries. Countries with limited financial and technical capacity can therefore find it very difficult, in the context of access agreements, to determine the limits which should be placed on catch in order to ensure optimal management and sustainability. Second, for technological, administrative and other reasons it is difficult, notably for very poor countries, to effectively monitor access by foreign boats and enforce restrictions to fishing. The level of financial compensation secured by the host country depends on its negotiating skills and influence relative to the DWF. Other important factors relate to the capacity of governments to manage complex processes such as the auctioning of access rights in a transparent and open manner and with due safeguards to prevent corruption and other forms of abuse.

Perspectives and interests of main stakeholders

Interests of subsistence fishers communities. Subsistence fishers are amongst “the poorest of the poor”. In general, there is a direct link between the volumes caught offshore by commercial vessels and the possibilities for exploiting the same species in the coastal zone. A major concern in such cases is competition between coastal artisanal fisherfolk and domestic and foreign commercial fleets over the same fish stocks. Artisanal fishers are politically marginalized, and typically have little influence on the negotiation of access agreements, so they get only limited benefits.

Interests of commercial domestic fishers. Although subsistence and commercial fishermen often compete directly with each other, both have a common interest in limiting the fishing opportunities provided to the distant water fishing fleets (DWFs) through Access Agreements, e.g. by restricting access to particular species, use of certain methods and zones. Namibia is the extreme example of a commercial domestic industry that was built up by strong policies to limit access by DWFs (see Box 6.1). On the other hand, in some countries, which have no fishing tradition, such as Mauritania offering access to foreigners may be the best way to maximise the economic benefits from their rich fisheries resources.

Interests of distant water fishing fleets. Stock fluctuations, over fishing, depleted resources in developed as well as the policies of many DWF countries to subsidise investment

Box 6.1. Improved fishery management and increased rent capture – the case of Namibia

Prior to independence in 1990, access to Namibia's fisheries resources was largely uncontrolled and coastal waters were massively over-fished, primarily by foreign fleets. The newly elected government instituted a new policy, legal and management framework to effectively manage its fisheries and develop a domestic industry. Quota fees – based on total allowable catch for major species – and license fees were introduced with fishing rights biased to Namibian vessels. By-catch fees and a Marine Resources Fund levy were imposed, based on tonnage of landed catch to finance fisheries research and training. As a result, the sector contributed about USD 220 million to GDP in 2000 and was valued at USD 354 million in 2001. The indirect benefits have also been substantial: the fish processing industry has grown rapidly. The number of whitefish-processing plants has grown from zero in 1991 to more than 20 in 2002, and employment in the sector has grown to about 14 000 people. The government also invested heavily in monitoring activities, with an integrated program of inspection and patrols at sea (i.e. on board observers), on land (monitoring of port landings) and in the air (via satellite). While expensive, this investment pays off. The ratio of monitoring costs to value of landed catch has declined from an annual average of 6% over 1994-1997 to under 4% in 1999, reflecting an increasing value of landed catch. Namibia's rights-based fisheries management system incorporates an effective monitoring and compliance system at a cost that is commensurate with the socio-economic value of the sector. As a result, Namibia enjoys very high levels of compliance by its fishing industry, a situation very different from 1990. In its efforts to improve fisheries management, Namibia has benefited from assistance from several donors.

Source: Nichols (2003).

in fishing vessels – leading to overcapacity – combine to encourage a search for new stocks to fish. Moreover, as will all fishing operators, DWF have inherent incentives to fish beyond catch limits and to underreport their catch. In addition the incentives for DWFs to sustain fish stocks in a given area are low as they can move to other countries once stocks are depleted. Therefore, DWF fleets have a clear interest in lobbying for increased access, notably when part of the price of access (i.e. various forms of compensations to the host country) is borne by public authorities (e.g. the EC).

Interests of DWF countries. For DWF countries, fisheries agreements provide a way to keep their fishing industry in business, to ensure security of supply for downstream industries and to generate or maintain jobs. For the EU, agreements account for 20% of fisheries production, providing both direct employment and many more “ancillary jobs”. Spain, for example, which has one of the largest fleets within the EU, is highly dependent on EC international fisheries agreements, since it obtains nearly half its catch in waters outside those of EU member States.

Interests of developing country governments. Coastal States governments have to balance a range of competing objectives in relation to fisheries management: These include maximising food production to enhance food security; promoting exports to maximise foreign

exchange earnings, preserving the livelihoods and employment of subsistence fishing communities, promoting the interest of the domestic fishing industry and ensuring the sustainability of the resource. **Fisheries departments**, which generally operate under the ministry of agriculture, are often particularly poorly funded and staffed because of the low political priority given to fishery policy. They generally face considerable resistance from affected stakeholders in their efforts to improve fisheries management, notably when this implies reducing fishing effort and strengthening monitoring and enforcement. Their authority to monitor and control the industry gives rise to rent-seeking opportunities, and so corruption is a concern. **Finance ministries** play an important role in negotiating fisheries agreements, particularly in the final stages. They tend to focus on the financial benefits to be gained from fisheries and the cost-effectiveness of monitoring and enforcement, rather than on the complexities of sustainable fisheries management, which can lead to tensions with fisheries departments.

Managing the reform process: key steps

Strengthening states' bargaining power. Negotiation skills are essential for getting good terms in bilateral agreements. Regional co-operative mechanisms can help. By getting together, states which share fisheries resources can improve their bargaining power. For example, the islands of the South Pacific, which formed in 1987 a joint Fisheries Forum Agency, have been able to negotiate improved terms with DWFs.

Allocating adequate resources for fisheries management. This includes assessing the state of the resource in order to determine optimal levels of fishing efforts, as well as monitoring, control and surveillance of fishing operators. These activities require sophisticated equipment and specialised skills, and are therefore expensive. In the EU, for example, the overall cost of monitoring fishing activities is estimated at around 5% of the value of production. Earmarking sufficient funds to finance these activities is essential. The recently completed agreement between Mauritania and the European Union earmarks funds for enhanced control and surveillance of fishery activities.

An important issue in this regard concerns cost effectiveness of these activities. In India, for example, the Ocean Tuna Commission (IOTC) is developing its inspection and control scheme by systematically analysing all known control techniques and selecting the most cost-effective.⁵ Part of the monitoring and enforcement costs are shouldered by the industry either directly (*e.g.* through compliance with documentation and reporting obligations) and indirectly (*e.g.* through licensing fees).

Encouraging DFW nations to improve the coherence of their policies. The fisheries policies of some countries contradict the objectives of their development co-operation policies. Pointing out these contradictions can foster reform. For example, the DAC Peer Review of Spain (OECD, 2002) encourages Spain “... to consider how to prevent domestic interests from taking precedence over development co-operation objectives when debating the Common Fisheries Policy as well as fisheries agreements in the European Council”. Similar arguments apply to many other DAC member countries with DWF fleets.

Box 6.2. **Hard bargaining for fishing agreements: experience in west Africa**

West African countries have recently stepped up their bargaining efforts with EU and, as a result, secured much more favourable terms. In 2001, Senegal, Mauritania and Guinea Bissau banned EU fishing, and sought to increase regional co-operation on fishery management. Subsequently, Mauritania agreed with the EU a new five-years protocol for fishing – with financial compensation of € 430 million, as compared with € 267 million under the previous agreement. This will raise fishery revenues to about 8% of GDP and close to 30% of total revenues – with some earmarked for developing the local fishery sector, enhanced control, and surveillance of fishery activities (Islamic Republic of Mauritania, 2002).

In 2002, Senegal signed a new agreement with the EU. This decreased fishing possibilities on sensitive stocks for EU vessels and provides a 2-month biological rest to give more protection to fish stocks and to minimise the risk of competition with the artisanal fleet. The financial compensation was also been increased from € 12 million to 16 million per year with a share of 18%, that is € 3 million, earmarked for a range of measures designed to support conservation of fish stocks and strengthen the Senegalese fishing sector. These include support for scientific research and evaluation of the state of fish stocks, development of the Senegalese control and monitoring system, the development of the Senegalese institutional structures for fisheries management, and provision of training for fishermen.

Source: Islamic Republic of Mauritania, 2002; Europa: Gateway to the European Union Press Release 26/06/02: Commission welcomes renewal of EU/Senegal fisheries protocol. <http://europa.eu.int>.

Notes

1. This chapter has benefited from comments by Carl-Christian Schmidt and Bertrand Le Gallic of the OECD Directorate for Food, Agriculture and Fisheries, as well as from Paul Steele of DFID.
2. The FAO (www.fao.org/fi/glossary/default.asp) defines artisanal fisheries as “Traditional fisheries involving fishing households (as opposed to commercial companies), using relatively small amount of capital and energy, relatively small fishing vessels (if any), making short fishing trips, close to shore, mainly for local consumption.”
3. A well-documented example concerns Canada’s “Atlantic Cod” stock, which has not recovered from excessive fishing despite drastic fishing restrictions for several years. There are also countries where some coastal fisheries have been exhausted. However, these remain exceptions.
4. Within the EU the biggest fishing fleets are from, in descending order, Spain, Italy, Portugal, and France. [EC, (2002)].
5. Beslier S. (2004), *Enforcement and surveillance: What are our technical capacities and how much are willing to pay?* In: Fish Piracy, OECD (2004).