

TACKLING INCENTIVES TO OVER-FISH

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by

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1. Introduction

Recent discussions in international fora have underlined the importance of addressing over-fishing. Many fish stocks, both within and outside EEZs, are in a poor state. FAO estimates² that about 52 per cent of world wide stocks are fully exploited and yet another 24 per cent are over-exploited, depleted or recovering; only 24 per cent of fish stocks are underexploited or moderately exploited. Amongst other international commitments, the WSSD Plan of Implementation calls for the restoration of fish stocks by 2015. Achieving such goals will require serious commitments by national governments and international bodies to tackling the overfishing problem.

Over-fishing is defined as “action of exerting a fishing pressure (fishing intensity) beyond agreed optimum levels”.³ Overfishing arises from multiple sources, including the lack of political will to set appropriate catch and effort levels, incentives to over-invest in fishing capacity, inadequate science to underpin management decisions, as well as inadequate resources to ensure compliance. It occurs both in domestic EEZs of countries and in international waters, with the latter being more commonly referred to as IUU fishing. Indeed, the two are inextricably linked, with much of the pressure on the high seas emanating from poor management at domestic levels.

However, at its core, over-fishing is a symptom of an underlying economic problem, rather than being the problem itself. Under present systems of governance and management, fisheries resources are not able to be correctly valued by the markets, providing inappropriate signals and perverse incentives to the fishing sector⁴. Market distortions arise from, amongst other things, poorly specified access rights, subsidies, information deficiencies for consumers, and insufficient penalties for breaching regulations, and create a regulatory environment in which fishers are not encouraged to take socially optimal decisions in their

1. This paper has been prepared within the Fisheries Division of the OECD and has benefited from comments by a number of colleagues within the OECD. Opinions expressed in this paper are those of the authors and do not necessarily reflect those of the OECD or its Member countries.

2. *The State of World Fisheries and Aquaculture*, FAO 2004.

3. *FAO Fisheries Atlas*, 2002 edition.

4. We recognise that some countries have more or less successfully tackled this problem.

production and investment activities. Correcting this economic failure requires attention at the national level in order to reduce the spillover effects that are evident at the international (high seas) level, as well as international coordination to address the symptoms of the problem.

While economic forces are responsible for over-fishing, the same market forces can be harnessed to create incentive structures that can ensure sustainable and responsible use of fish resources and maximise society's returns from resource use. The purpose of this conjectural communiqué is to suggest a set of solutions to the overfishing problem that helps to address the economic roots of the problem. This does not only mean searching for the most economically efficient outcome for the sector. Indeed, political feasibility requires that decision makers seek to balance efficiency gains and distributional impacts from policy reform. Furthermore, it is clear that economic solutions need to be nested within institutional and governance settings, some of which may need to be altered if effective and enduring changes are to be made. While this paper addresses the over-fishing issue from an economic angle, and explicitly not from a legal viewpoint, it is recognised that a solution to over-fishing necessarily will have implications for the institutional settings and governance frameworks. Hence, the paper also addresses those settings and frameworks within which the economic solutions can be nested.

2. Basic facts for this Conjecture

Given the space constraints imposed on this paper, it is necessary to gloss over many of the building blocks to the arguments in the communiqué. However, the following 6 facts are particularly important when considering the fishing sector and should be borne in mind when reflecting on the solutions posed in the paper:

1. The diversity of the fishing industry implies that a one size fits all solution is rarely possible. However, some elements that are fundamental to a durable solution can be applied across countries.
2. Some fishing communities are highly dependant on the fishing industry and have few alternative means of earning a living; consequently some parts of the sector are rather rigid and not robust in the face of changing environmental, economic and policy circumstances.
3. An increasingly globalised industry structure means that production and markets are heavily intertwined, and that the boundary between national and international spheres is becoming blurred.
4. The task of solving overfishing must start at the national level as this is where the root cause of the problem can be found. International efforts will be to no avail if the national dimension is ignored.
5. There is no single solution to over-fishing and IUU and so for a sustainable situation to emerge an integrated package of measures is required. But there are some things that already have received a lot of attention and therefore may be easier to address (e.g. eliminate subsidies that support fishing capacities).
6. Profitable fisheries are sustainable and resilient fisheries. Profitability is the power to influence behaviour in fisheries.

3. Practical Action for Moving Forward

a) Economic efficiency based actions

Presently, most fisheries are characterised by excess capacity (fleet and fishers) and low economic returns. This in turn is a driver for over-fishing. Improving economic efficiency and profitability of individual fishers is therefore an important goal.

Over-fishing is also a direct result of the provision of many forms of subsidies to the sector. Most egregious are clearly those that are directed towards construction and modernisation of vessels that should be done away with. These subsidies will contribute directly to increasing the capacity of fleets. Even when there are effort restrictions in place in given fisheries, subsidies distort the price signals faced by fishers. By making capital too cheap, fishers have every incentive to invest too much in capital. In addition, other subsidies (such as fuel tax exemptions and some forms of research support) also serve to increase over-fishing by reducing the cost of fishing. To start, policy makers should therefore agree to abolish subsidies to construction and modernisation of fishing vessels.

Capacity reduction programmes. These should be well-funded and well-targeted. They should also require physical scrapping of vessels (or at least very strong restrictions on transfer between fisheries, domestically and internationally). An innovative twist, however, would involve making the reduction programmes a one-off scheme to retire capacity with a clear and credible message to the industry that the government will no longer bail out the industry. This will remove the expectations of endless government support that have become embedded in the mindsets of many parts of the industry and more accurately reflect the risk inherent in investments in capacity.

It is essential that capacity reduction programmes be instituted as part as a package of management reforms in order to remove the incentive to over-invest and to instil an automatic capacity adjustment mechanism within the industry. The use of market-like instruments (e.g. tradable rights or permits) will help achieve this by more accurately aligning fishers' incentives to match capital needs with fishing opportunities. This should include a stronger definition of access rights, although this does not mean that only individual transferable quotas should be considered. Indeed, recent OECD work has demonstrated that there is a range of management instruments that have varying degrees of market and property rights characteristics that can be effective in improving the incentive structure facing fishers. Key desirable features include transferability of fishing rights and legal recognition of fishing rights as an asset that can then be used as financial security.

In addition to vessels and fishing gear, fishers are at the core of the fisheries management models. In the quest to reduce capacity, fishers are often disregarded; to ensure a durable solution to excess capacity active labour market policies that can channel fishers into alternative jobs are indispensable. Such active labour market policies are part of the package of the management reform that is needed to ensure that over fishing does not endure.

b) Domestic Institutional Actions

Actions aimed at improving economic efficiency of fishing should be complemented with a range of actions aimed at improving the institutional effectiveness of governance at the domestic level. Such actions seek to make the delivery of fisheries management more effective and to improve compliance with management measures as part of the effort to arrest overfishing.

To complement these economic and management measures, it is necessary to develop and implement National Plans to implement globally agreed Codes of Conduct for Responsible Fisheries. The development of such National Plans, which has already occurred in some countries, should be undertaken

as an inclusive process to ensure that a shared vision of the future of the fishing industry is developed. In addition, developing a forum for constructive dialogue between stakeholders within countries will help improve the chances that policy reform will be accepted. Meaningful opportunities for such dialogue are often missing as stakeholder forums tend to be rather superficial and without real responsibility.

Long-arm approach. Countries could do more to make fisheries-related offences by their citizens, wherever they are committed, punishable according to their national law. Some countries (New Zealand, Norway, Spain and United States) have introduced such provisions in their national legislation. The effect is that prosecution of fishing offences is likely to become more effective.

To complement increased surveillance and enforcement there is an urgent need to increase and harmonise penalties for fishing offences. Penalties for fishing offences on the high seas can only be prosecuted by national authorities. However the level of fines has proven not to be a sufficient deterrent to illegal activities and an immediate action could be to increase the penalty level. But equally important is that the penalty level between countries is not taken as “sending different messages” as to the seriousness of the offence and harmonising penalties across countries is therefore also needed.

c) International Actions (institutional and economic efficiency)

Domestic actions will also need to be complemented by international actions. Addressing issues of economic efficiency and institutional reform at the international level will require closer examination of the nature and effectiveness of the international governance architecture, particularly with respect to RFMOs. Such actions need to focus on generating an incentive structure for fishers and countries to better comply with existing and future management regimes.

There is a clear need to rethink the model for RFMOs and institute a more business-oriented approach to their operations. This will entail providing them with an appropriate set of enforcement capabilities to match their responsibilities. RFMOs also need to be better funded and to use their available funds in a more efficient way, but only if they adopt efficient management practices. Such moves will help empower RFMOs as well as augment their legitimacy. By the same token it may be an incentive to ensure that quotas allocated through RFMOs are not in excess of scientific advice.

In this respect there is a need to find a solution to the problem of allocating high seas fish stocks (whether or not under RFMO regimes at present), recognising that, presently, the high seas stock are in a global commons. Innovative ways of thinking are required. One way forward would be to examine the use of high seas ITQs. Initial allocation could be done according to fishing history. Alternatively, allocations could be given to each nation in the United Nations with fishing nations or coastal states getting a larger share of the initial allocation. Nations would then be free to trade their allocations in an open market to the highest bidder, or to use the quotas themselves. The principal problem of a system of ITQs in the high seas is the non-existence of an international comprehensive legal framework dealing with high seas property rights and an enforcement system that can ring-fence the ITQ holders against intruders and cheaters.

The need to rethink the RFMO model combined with the introduction of high seas ITQs should be done with a view to augment the legitimacy of the high seas regime which under present system is shared among the “developed and rich”.⁵ It underlines the need for buy-in from the highest political levels and with broad geographic coverage.⁶

Increasing surveillance and enforcement (MCS activities) on the high seas will work as a deterrent to illegal activities. However, this will also cost money (or improve the use of existing resources) and responsible governments need to assess if the payback of conserving stocks (including the demonstration effect) exceed the costs associated with more MSC activities. Under RFMO’s (that in the present system do not have MCS responsibilities), member countries could transfer MCS rights to RFMOs. Under current arrangements, VMS/MCS regimes are national and information sharing across countries or between countries and RFMOs is often difficult for technical and bureaucratic reasons. A broader governance/institutional effort may therefore be warranted to make this a successful way forward and thus pave the way for a deeper and improved cooperation between RFMO and national authorities. The recent development with regard to the MCS Network is a step in that direction, but more effort is clearly needed.⁷

More than half of the fish eaten in the developed world is coming from developing countries. More technical and financial resources are needed for capacity building in the developing world. This concerns the whole range of fisheries related issues, from MCS to building sustainable fisheries management models and governance structures. By the same token more focus should be placed on ensuring policy coherence for development in the developed world where fisheries and development policies often are currently sending contradictory messages.

Recent work of the OECD’s Committee for Fisheries on Illegal, Unreported and Unregulated fisheries produced a “long-list” of concrete actions. These are reproduced in Annex 1 for information recalling that the above suggested actions are the ones that may be providing the highest pay back.

d) Generic Actions

Responsible aquaculture could play an important role in removing some of the demand pressure on wild targeted fish stocks. Governments should therefore make the investment climate in aquaculture more amenable/conducive to increased aquaculture production. A concerted action towards a world wide recognised aquaculture standard and certification process and system may underpin the further development of aquaculture production as consumer confusion (for example, as to environmental quality and health and safety of aquaculture) could be reduced.

^{5.} In this respect we suggest that the international governance structure is not adequate to respond to the globalisation process that is occurring in the sector this being one of the reasons why the operation of the RFMO (e.g. membership, access to quotas) need to be addressed in an urgent way. When addressing governance structures, it is important to ensure that these new structures are acceptable to all stakeholder interests i.e. seen as legitimate (see “Global Governance and Legitimacy Problems” by Michael Zürn, paper prepared for the CIGI Meeting “The G20 at Leaders’ Level, February 29th, 2004).

^{6.} For a more detailed discussion for meeting global challenges and of the relevance of the L20 process see “Making Change Happen at the Global Level” by Barry Carin and Gordon Smith, Centre for Global Studies. In this regard, the high seas fisheries situation is a global challenge reminiscent of that of global climate change and the resulting Kyoto Protocol.

^{7.} The High Seas Task Force at the OECD may be one step in this direction; a step further is the subject of this Conference i.e. the use of an L20 approach to address the high seas governance failure.

Certification of wild stocks (both national and international) by independent but verifiable certifying agencies (for example, an international organisation with a well developed reputation) could provide market incentives to shift consumer demand towards fish from sustainable stocks.

Post-harvesting sector practices play an important role in educating consumers. In fact, the retailers and processors are key players in ensuring that consumers are receiving adequate and correct information about the products they buy, including environmentally related information such as whether the fish species is endangered, where the fish was caught etc. Based on simple criteria (to be developed), information on stock status could also be included in this “information package”.

Primary fish processors (wholesalers and in some cases supermarkets and auctions) are the first link in the value chain that has a direct contact with the fishing fleets. This “first point of sale” is of crucial importance in ensuring that the fish is “good” and not illegally fished. Training and information campaigns to heighten the information level and improve the understanding of the overfishing problem would be useful to morally engage this part of the sector.

e) Dealing with tradeoffs and transition issues to make adjustment politically palatable

Policy makers will be confronted with a series of trade-offs in adjusting the sector away from its present state of over-fishing to sustainable and responsible resource use. This is where bold political decisions based on sound economic assessment and analysis become crucial for the success of the adjustment process. This is in itself an education process that may still be needed in a number of countries; this underlines the need for capacity building and the need for a group of countries to take leadership and show the way forward (see footnotes 5 and 6).

As noted, the structural adjustment needed in the fisheries sector to move from overfishing to sustainable and responsible fisheries may be considerable. In some cases it would put serious pressure on the fisheries labour force and, to be able to make the necessary adjustment, work force adjustment may have to be supported. Policy makers should therefore assess the need for temporary accompanying measures such as early retirement programmes, job counselling, retraining, unemployment insurance etc to ease the path of adjustment. Care is needed to ensure that temporary measures do not become embedded.

In the longer term a policy framework that ensures sustainability will also need to address the role of sending the right signals to the fisheries work force. The goal should be one in which the sector can be independent and can adjust autonomously to change in the resource base.

5. Does the L20 have a role to play?

It is clear from the above discussion that the national and international dimensions of over-fishing and IUU are linked. Poor domestic management of catches and capacity leads to spillovers of effort to the high seas. In turn, the current international governance system is weak and incomplete so that any current benefits from fishing are easily captured by competing nationals and future returns from investments in stock management can be undermined by fishing activities. As a result, the payback from individual country action (and expenditure) may be enjoyed by many countries (the free-rider problem). It is necessary to bring these free-riders into the game by focusing on collective benefits from collective action. Initiatives such as an L20 action can be useful steps towards such an outcome.

Clearly there are some actions that are easier to take than others as they do not present trade offs that may otherwise be difficult to make, or because the proposed actions are inexpensive and easy to implement. While we recognise the difficulty some policy makers may face in terms of adjustment burdens we have suggested that accompanying policies, largely to address national adjustment pressures, are necessary in alleviating some of the hardship and make the desired policy outcome more palatable.

Some actions are short term fixes while others are of a longer term nature. The ultimate goal should be to ensure a sustainable and responsible fisheries sector and to do this with an appropriate mix of short and longer term policies. It is therefore important that policy makers, when embarking on such a project, have a sufficiently extended time horizon and be able to implement a holistic plan rather than focussing on “what is immediately feasible”, which may be short-lived and not be helpful in ensuring a long term commitment by stakeholders to sustainable and responsible fisheries.

It therefore appears that a potentially important role for an L20 may be in garnering broad support for domestic fisheries policy reform while, concurrently, addressing the loopholes in the international governance structure. In fact only through concerted action are we likely to be able to address over-fishing, domestic and international, and get fisheries back to a sustainable footing. An L20 process could create an environment in which change and adjustment become dynamic through a “bandwagon or follow the crowd” effect. It would seem necessary for such a process to focus on specific areas where there may be the highest chance of success and the greatest payoff in terms of changing incentive structures within the sector. For example, L20 support for capacity reduction efforts, subsidies disciplines and reducing international regulatory gaps could be timely initiatives supplementing the international processes that are already underway and generating additional impetus to reform in the sector.

ANNEX: Proposed Measures to Combat IUU Fishing Activities⁸

Reducing Revenues from IUU Fishing

- Reduce incompleteness of current international frameworks and reducing the possibilities for FONC registration
- Provide NPA states with appropriate incentives for joining RFMOs and financial “compensation” for de-registering FONC vessels.
- Improve compliance with current national and international obligations through better Monitoring, Control and Surveillance (MCS) capabilities, including broader cross country cooperation.
- Banning imports
- Listing of banned vessels/companies and countries of origin
- Introduce catch and trade document schemes, and labelling
- Encouraging education and promotional campaigns

Increasing Operating Costs of IUU Fishing

- Eliminate tax havens
- Restrict accessibility to goods and services for IUU operators (fuel, landing, insurance, communications and navigation services etc).
- Ratification and implementation of conventions relating to crews on fishing vessels.
- Improve economic and social situation in countries/regions supplying cheap crews.
- Apply extra territorial domestic sanctions to citizens engaged in IUU operations.
- Make flag states legally liable for lack of appropriate insurance.
- Augment MCS capacities
- Increase penalties and sanctions (prison, confiscation of vessels and catch)
- Harmonise flag state fine levels
- Identify beneficial ownership of vessels
- Encourage private initiatives (including wanted rewards schemes)
- Improve knowledge of the social, economic and environmental consequences of IUU through education programs
- Use cooperate governance initiatives and guidance programs
- Apply the OECD Convention to combat bribery of foreign public officials.

Increasing Capital Costs of IUU Vessels

- Setting and enforcing minimum vessel standards (port state control)
- Reduce vessel capacity potentially available for IUU operations (scrapping and appropriate management regimes)
- Restricting outward investment rules on IUU vessel capital
- Restrict banking laws use of IUU vessel capital as collateral
- Make flag states legally liable for damage resulting from the lack of appropriate maintenance
- Improve macroeconomic conditions in countries supplying low cost crew.

⁸ Source: *Why Fish Piracy Persists: The Economics of Illegal, Unreported and Unregulated Fishing*, OECD, (2005)