

Chapter 6

Addressing the Policy Challenges

As demonstrated in this study it is the closer economic integration of fisheries production chains and markets that has characterised the developments in the fisheries sector over recent decades. The major differences between the last decades and previous “rounds of globalisation” relate to the speed of change as facilitated by more fluid capital markets, access to information and other technologies, better and faster modes of transport, and the increasing interdependence between developed and developing markets, and the need for co-operative management arrangements.

Globalisation and the closer economic integration has manifested itself through trade (increased cross-border movement of goods), growth in foreign direct investment (*e.g.* buying up processing plants, vessel operations, permanent acquisition of fishing quota including through joint ventures, aquaculture installations abroad) and the use of foreign services (*e.g.* processing parts of the products abroad, use of service facilities abroad, leasing of fishing quota), setting up operating companies abroad and fishing further afield through various kinds of arrangements (*e.g.* fishing under regional fisheries management arrangements). In essence, trans-border production networks have emerged where different elements of the value chain, to varying degrees, take part in the globalisation process by using the most profitable location or source for their activities. Over time and across locations, various value chain elements will take part in this process to various degrees, as opportunities are not equally distributed.

The globalisation process has brought huge net benefits to the world economy, measured by a substantial increase in global wealth. The effects in terms of benefits and costs of globalisation, including in fisheries, can be dispersed or concentrated and may also be short- or long-term in nature. Meanwhile, in the fisheries globalisation case, long-term or sustained benefits will only accrue if sustainable and responsible fisheries management and governance systems for both national international fisheries are in place. Policy makers therefore need to address the risks that globalisation may give rise to, in particular, by ensuring sustainable fisheries.

It is important to keep in mind that fish is just one of many food items in the consumer’s basket. In this respect, it may not always be easy to disentangle the numerous concurrent events that take place and which all may influence the demand for fish and fish products. The entire fisheries value chain faces sharp competition with other food providers (*e.g.* chicken, beef and vegetables) that do not face the same economic environment, and competition exists as well between harvested and aquaculture fisheries products. More generally, food and agriculture policies influence fisheries and fish markets. Also, the fisheries sector is just one sector of the overall economy subject to the process of globalisation; other changes take place that also may influence the fisheries economy, *e.g.* population growth and wealth increases fostering further increases in the demand for food, including fish. Hence, there are exogenous variables to the globalisation process that are outside the realm of fisheries policy makers, although these variables clearly affect the fisheries value chain. Increasing demand for food, changing geographical wealth distribution, and increasing populations are such variables.

The key objective for policy makers is to enable legitimate activities in the fisheries value chain in an efficient, effective and non-discriminatory rules-based trading system, and whether it being in fishing, aquaculture, processing, trade, etc. However as noted in this study, there may be illegitimate (illegal or unsustainable) products and activities throughout the value chain, benefitting from the lack of appropriate governance. In such cases a stronger policy framework and governance, and better implementation of existing policies is critical. In particular, and with a view to building a supporting policy framework for globalisation, variables that fisheries policy makers are expected to address include:

- i) implementation of effective governance and management frameworks;
- ii) managing fishing industry adjustments;
- iii) policy coherence;
- iv) compliance with existing international rules and regulations and setting new standards where appropriate;
- v) market access; and
- vi) fisheries food safety.

For each of these policy areas, this chapter seeks to identify how policies can be put in place to further globalisation while minimising potential risks, draw attention to instruments and policy frameworks already available that aim to deal with the matter, and highlight policy gaps or options for future actions. At the end of this chapter some concluding remarks are offered.

Implementation of effective governance and management frameworks

To sustain the increased demand for fish and fish products – and hence competition and trade – brought about by globalisation, fish stocks can contribute when managed in a sustainable and responsible way (for instance, through ensuring maximum sustainable yields). By ensuring sustainable harvesting and production, including recovery planning where needed, the implementation of effective governance and management frameworks can contribute significantly to the achievement of sustained growth, and to the globalisation process. In fact, the better fish stocks are managed the more benefits are likely to accrue from globalisation; in turn this will increase the prospects for increased wealth. Also, as population and wealth grow global demand for fish and fish products increases. In particular, this is happening in a number of emerging economies such as China, Brazil, the Russian Federation and India. This will influence fish prices and, as the price of fish rises, pressure on fish stocks is likely to increase, increasing the stakes for fisheries managers to ensure sustainable management.

FAO¹ data suggest that in 2005, around one-quarter of global stocks were underexploited or moderately exploited, about half of all stocks were fully exploited at or close to their maximum sustainable limits, and one quarter overexploited, depleted or recovering from depletion. The FAO furthermore notes that the situation seems more serious for certain fish resources in the high seas, straddling stocks, and highly migratory species including tuna and oceanic sharks. Among OECD countries, while many fisheries are well managed, a number of important fisheries have come under pressure; some have closed, and some are under rebuilding programmes.

Critical success factors in managing fish stocks are nested in ensuring the implementation of a domestic fisheries governance and management framework that can deliver responsible and sustainable fisheries. Work undertaken by the Committee for Fisheries in this area has suggested ways of including more use of market-based economic instruments (*i.e.* rights-based fisheries), wide stakeholder involvement, which can make participants more responsible, and sufficient resources dedicated to control, surveillance and enforcement. Besides the OECD, other international organisations and institutions have also provided advice for good management (*e.g.* guidelines associated with the FAO Code of Conduct for Responsible Fisheries). In fact the toolkit for achieving sustainable fisheries is well known. But lack of implementation is the most important and urgent problem to tackle, an observation that also has been at the centre of the recent work at the OECD on the political economy of fisheries reform.

While OECD countries have the technical expertise to build strong management frameworks, the developing world faces additional challenges. For fisheries in developing countries that may have the potential to enter international trade and thus benefit from the globalisation process, it is imperative that those resources also be managed in a sustainable manner. This may require more specific outreach and information sharing, transfer of technology, capacity building and know-how than is presently the case. The pressure in developing countries' "industrial" fisheries is highlighted as a particularly challenging area as these often lack sufficient control and surveillance, and developing country fleets may be in competition with foreign fleets that are fishing under access arrangements.

The same is applicable to the use of the global commons (*i.e.* high-seas resources). More interaction across borders and increased use of high-seas resources is putting pressure on the international governance of fisheries and highlights the need for a strong governance and management framework here as well. Also, as markets become more integrated and globalisation takes root, the consequences of policy initiatives taken in one country are more easily transmitted to other countries. Taken together, these developments beg the question as to whether the present architecture that governs fisheries is sufficiently strong and what policy actions can be taken to reap additional benefits from globalisation. In this regard there is a need to ensure further international co-operation and co-ordination of national policy initiatives with respect to the fisheries sector.

Over the past decades, many new international instruments that form the foundation of the international architecture in fisheries have been developed. Examples include the FAO Code of Conduct for Responsible Fisheries and the UN Fish Stocks Agreement. More broadly, in Annex A, Table A.4 provides a list of international instruments relating to fisheries. Generally, the United Nations system, including specialised bodies such as the FAO, has been the main conduit of advancements in international fisheries instruments. Some commentators observe that this may not in itself be sufficient to deal with the changing nature of international fisheries.² If implemented in an effective manner, an international governance and management framework will contribute to the better achievement of the potential benefits of globalisation. It remains however, as evidenced by continued IUU fishing, that there continue to be weaknesses in the international governance framework.

While considerable advances have taken place – including with regard to enforcement and surveillance³ and co-operation on vessel registers and port state measures – an important element of high-seas governance is the issue of allocation, *i.e.* who gets what, under what conditions and how secure such allocations are. Failing to address the allocation issue may

push fishing capacity to undermine good governance by fishing in contravention of, or outside, the RFMO framework. Furthermore, Regional Fisheries Management Organisation (RFMO) participation is by governments who have a dual role: as administrators of the commons and concurrently allocating resources to domestic fishing interests (and often in competition with other contracting parties). This may result in a conflict of interest. More economically efficient resource allocation mechanisms could contribute to furthering the benefits of globalisation and would contribute to better stewardship of high-seas resources.

Another concern about high-seas arrangements is the degree to which the rules are subsequently applied through their implementation into national legislation on fisheries and governance, and the extent to which they are subsequently respected. Implementation of some of these frameworks is still lacking in some countries. At the outset, however, it would be useful to ascertain countries' own interest and incentive structure; i.e. while advocating more international co-operation, it may turn out that some countries find themselves better off if acting unilaterally.

It would thus seem that further benefits of globalisation can be added by simply managing fish stocks better and by ensuring better international co-operation for both the high seas and domestic fisheries. Critical to the globalisation process is a strong fisheries governance and management system that can ensure sustainable and responsible use of the resource base.

Managing fishing industry adjustment

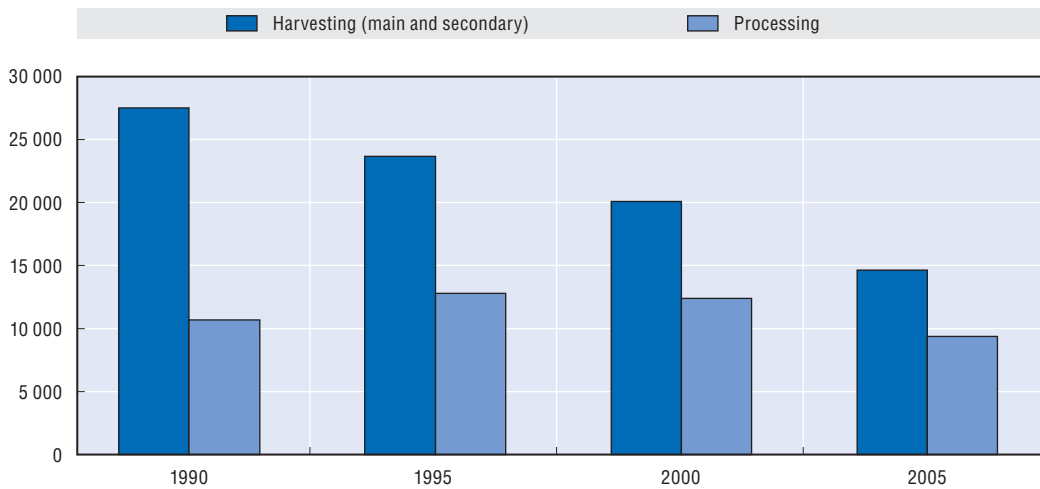
As globalisation proceeds, the wealth-generating effects are, in part, happening because new technologies and organisations of production replace old ones. In this process value chains and production processes are created, destroyed, and re-made and the industry is constantly adjusting. Economists refer to this as “creative destruction”.⁴ Meanwhile, labour is constantly challenged to either improve skills or change occupations. The more flexible and fluid labour markets are, the more creative destruction will contribute to the achievement of the gains from globalisation. The fisheries sector is no different than other economic sectors. In this respect, the fisheries management system can play a key role in ensuring a flexible use of vessels and fishers.

OECD studies suggest that globalisation leads to wealth generation and job creation. In the meantime, many fisheries support remote fishing communities with few alternative employment opportunities. Displacements of fishing industry jobs (for example through outsourcing of some primary activities to lower-cost, less-developed economies) pose particular adjustment challenges, considering that fishing industry workers often have relatively low educational backgrounds.

Overall, employment in the fisheries sector in OECD countries has decreased (for illustration, see Figures 6.1 to 6.3 demonstrating employment in Norway, Iceland and Japan). This has taken place in the capture fishing, processing and aquaculture sectors for which some country data are available. Furthermore, it seems that the process has accelerated, in particular since 2000.

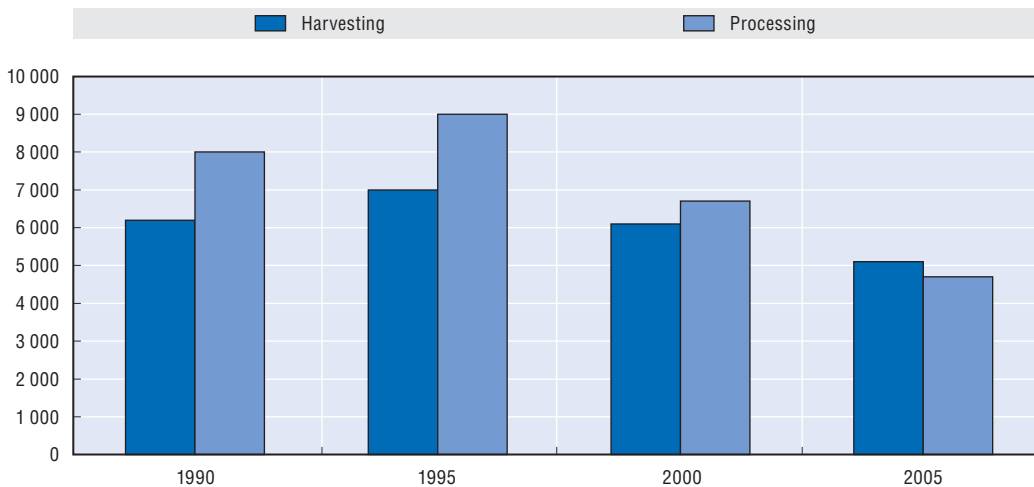
It should be noted that a general evolution is occurring in moving economies from primary and via secondary to tertiary activities. The fishing industry is also following this evolution. Developed markets increasingly focus on secondary (production of higher value-added fish products) and tertiary (fisheries trade and logistic services) activities as primary production (filleting) occurs predominantly in developing countries, e.g. China, where

Figure 6.1. Norway, number of employees



Source: OECD Secretariat.

Figure 6.2. Iceland, number of employees



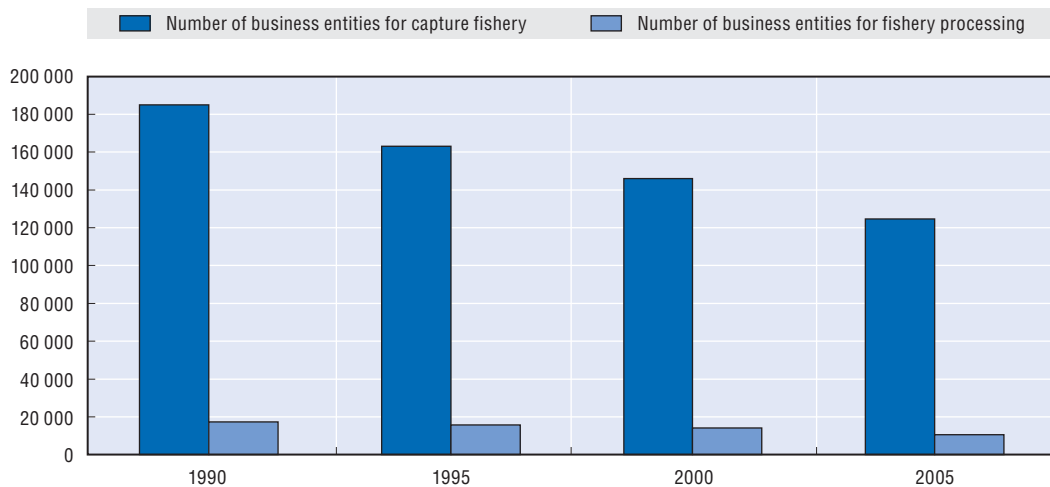
Source: OECD Secretariat.

production costs for such products are lower. Similar shifts are likely to occur in developing countries as their economies develop. For example, at the Workshop on Globalisation it was evident that primary production is gradually moving from China to lower cost countries like Viet Nam and India.

Structural adjustment in the harvesting sector

In the harvesting sector, increased fishing costs (which may have been caused by inefficient fisheries management arrangements) combined with pressure on fish prices (due to increased competition) may, over time, reduce fishers' income to below comparative levels in other industries. Such developments may be best addressed by introducing fisheries management frameworks that allow for a flexible use of capital and labour (i.e. vessels, gear and fishers). This may, in addition, assist in reducing overall fishing costs⁵ and may add value through better handling/quality. For example, arrangements where fishers can plan

Figure 6.3. Japan, number of businesses



Source: OECD Secretariat.

how and when they wish to catch or not to catch fish to meet market needs, transferring/selling unused quotas, and employing the necessary fishing inputs can contribute to sustaining income levels and help to realise the benefits from globalisation more generally. Likewise, the challenges created by closer integration of markets (e.g. lower prices of fish and fish products) can best be met by flexible fisheries management arrangements. In this regard, fisheries policy makers should consider moving towards rights-based fisheries management models that allow additional flexibility in fishing. As many fisheries use the share system of remuneration and hence may be spreading the effects of reduced fishing income to larger parts of the coastal fisheries communities, the move to rights-based models may be even more important to consider.

In the meantime additional public policy initiatives can support coastal fishing communities in becoming more resilient and flexible by ensuring that the necessary education and skills are firmly in place for a smooth transfer into other occupations. This may also include policies that support regional diversification. In the Committee for Fisheries work entitled *Transition to Responsible Fisheries: Economic and Policy Implications* (OECD, 2000) a selected country review of fisheries adjustment programmes was provided. Although these adjustment programmes were specific to fisheries characterised by overcapacity, there are some commonalities in the programmes worth highlighting, including:

- provisions for early retirement and earlier pension payments;
- licence retirement (in some cases through buy back) and mandatory retraction of licences upon vessel scrapping, decommissioning or retirement; and
- adjustment and economic development measures for displaced workers and affected communities.

As highlighted in the Committee for Fisheries' work on the human dimension of structural change⁶ in fisheries, it is important that each fisheries case be dealt with in a flexible manner. Success in fisheries adjustment is based on flexible policies seeking to adapt to the objectives of steady rationalisation, job creation and re-skilling, while providing incentives for young people to enter the industry. A whole-of-government approach is essential.

Structural adjustment in fish processing

As the examples in Figures 6.1 to 6.3 suggest, there have been some profound changes in the OECD fishing industry over the past decade. In particular, fewer people are involved in fish processing. This may be due to two reasons: outsourcing of production processes to other countries; and the replacement of labour with capital. It is likely that further adjustments will happen as fish processors adapt to, and take advantage of, new opportunities offered by globalisation. As highlighted in this study, consolidation in the fisheries value chain is likely to continue as economies of scale are pursued. Modern capital-intensive fish processing technology is also likely to reduce the need for lower skilled jobs. This is very much in line with the observation that fish processing in developed OECD markets will increasingly focus on high-technology value-added products while more basic labour intensive fish production (e.g. filleting) will move to countries with low labour costs (e.g. China, Viet Nam, and India).

For OECD fisheries policy makers, building communities resilient to both natural fisheries fluctuations and adjustment pressures should be at the core of the policy response, including a strategy of reducing dependence on the fishery, upgrading workforce skills and improved mobility, both geographically and into other professions. A more holistic approach⁷ may be warranted, taking into account several policy domains, including, but not limited to education, training, regional development, taxation, pension reform and the portability of health benefits. The central objective is to ensure that the workforce is mobile, both between profession and geographically, recognising that fishing communities may have particular characteristics such as remoteness, few alternative job opportunities, cultural attachment to fisheries, and relatively low educational background. Hence the challenge for policy makers is to build a multipronged but coherent response across a number of policy areas, taking into account the specificity of the fisheries sector labour force.

Experiences reviewed in *Transition to Responsible Fisheries: Economic and Policy Implications*, highlight that often problems have built up over many years without being addressed by policy makers. Fishers may move into other fisheries that are under less pressure from adjustment but this may be a short-lived strategy. Meanwhile, the fact that fishers and fish workers in coastal communities may be difficult to reorient into other occupations has important ramifications for how to design adjustment policies and management models that can support change and resilience. In the context of developing countries, with mixed fisheries for subsistence and commercial fishing, this may be a particular challenge to deal with (see also Box 6.1).

The important message this highlights is that to deal with the adjustment burden of coastal fishing communities, fisheries policy makers need to consider other policy domains in order to be able to construct a viable long term solution. Other policy domains that fisheries policy makers need to draw from include education, regional, rural and social policy. The challenge for policy makers is to be able to work across different ministries/departments, and hence cultures, to identify and implement a policy mix that is able to address the complexity of the adjustment, while ensuring coherence and cost effectiveness.

Box 6.1. Trade and Structural Adjustment

In its work on *Trade and Structural Adjustment*, the Trade Committee of the OECD adopted a number of recommendations including how to deal with labour in a changing world. These are also applicable to the fisheries sector. One of them was to:

Adopt sound **labour market policies** that facilitate the reallocation of workers towards higher productivity employment and so help economies – and their citizens – reap the gains from trade. These entail:

1. Income-replacement benefits that provide adequate income security for displaced workers while fostering their reintegration into employment. Thus, welfare benefits should support work incentives and not be used as a way to withdraw displaced workers from the labour force.
2. Active labour market programmes, including job-search assistance, counselling, training, moving allowances and proactive measures in anticipation of mass layoffs.
3. Employment protection policies that achieve a balance between lessening adjustment costs and not restricting business dynamism.
4. Flexible wage-setting systems, pension portability and fluid housing markets.
5. Education and training systems that foster the development of human capital and help ensure that labour skills meet evolving labour market needs.

Note: The Trade Committee encourages frank and open dialogue among OECD members and undertakes and disseminates rigorous, objective trade policy analysis.

Policy coherence⁸

In an increasingly interdependent world, policy coherence – both across domestic policy areas and for development – is important and offers additional benefits as globalisation proceeds. The case for coherence across the domestic policy areas may seem obvious. For the fisheries sector, which is highly dependent on the developing world for both imports and for access to fisheries resources, policy coherence for development is of particular significance.

OECD countries are an important outlet for fish from developing countries. More than half of the fish imported by OECD countries originate in developing countries. Also, for some fishing fleets of OECD countries, fishing grounds in the developing world provide fishing opportunities, often under bilateral fisheries-access agreements.

Concurrently, for many fishing communities in the developing world, fishing is the single most important source of food and protein. UNEP estimates that one billion people, mostly in low-income countries, depend on fish as their primary source of food.⁹ Without access to fishing, coastal communities would be unviable and employment would rely on the creation of alternative livelihoods, which may involve migration to urban centres.

Increasing internationalisation of fisheries markets and the importance of fish to food and protein supplies for major populations in the developing world may create incentives for increased exploitation of fish stocks. This may also augment prices for fish and alternative protein sources. Hence, this may prove a considerable challenge that policy makers need to address, in particular, for those who are dependent on food fisheries. This is reflected in the Millennium Development Goals, through the call for eradicating extreme poverty and hunger and ensuring environmental sustainability.

As globalisation proceeds, this calls for the setting up of appropriate institutional and governance mechanisms that can effectively manage fisheries resources in the developing world in a sustainable and responsible way, while ensuring that those resources benefit the poor. However, by the same token, more efficient and transparent food markets are important to be able to deliver substitutes to populations that are dependent on a single food source.

The OECD's Development Assistance Committee (DAC) has worked on the links between pro-poor growth and natural resources, including in fisheries.¹⁰ Addressing the need for development and the role fish plays as a mainstay in the food basket for the poor, the OECD work suggests a multipronged strategy around the following key areas:

1. Increase growth through fisheries management by:
 - reducing fishing effort in a pro-poor way;
 - rising productivity without creating overcapacity; and
 - combating illegal fishing.
2. Ensure the poor benefit through:
 - ensuring that industrial fisheries do not harm the poor;
 - increasing public revenues from fisheries;
 - ensuring that revenues raised are used for pro-poor expenditure; and
 - enhancing opportunities for small-scale fishers.
3. Sustain fisheries for pro-poor growth through shaping rights-based institutions.

Central to achieving this strategy – and thus to capturing the benefits from globalisation – is the development of an appropriate national institutional framework to deliver fisheries governance. For this to be implemented, donor agencies need to focus on sustainability issues associated with fisheries development, which itself is dependent on strong public governance and institution building.

It should also be mentioned that in the developing world context, a return to sustainable and responsible fisheries may, in the short term, imply lower yields from some capture fisheries. It is therefore important that development agency strategies address the overall supply of food while ensuring more sustainable fisheries management practices.

An important dimension to policy coherence for development in fisheries is the issue of market access for developing countries' products. Issues revolve around market-access difficulties for value-added products due to tariff peaks and escalation, private buying specifications going beyond internationally agreed sanitary and hygiene standards, and a variety of state and private technical barriers and standards (*e.g.* certification for sustainability and legality of fisheries products) and subsidies. To further benefit producers in the developing world and consumers in OECD countries, it is important to address the trade challenge and in particular abolish, as feasible, unnecessary or unjustified trade barriers in place. The adoption (June 2008) of the FAO technical guidelines for responsible international trade in fish and fish products may contribute to the achievement of coherence and hence to increased benefits from globalisation for both developed and developing countries.

Compliance with existing international rules and regulations, and setting new standards where appropriate

As mentioned above, over the past decades many new international fisheries instruments have been agreed to and implemented, including the FAO Code of Conduct for Responsible Fisheries, the UN Fish Stocks Agreement and the Compliance Agreement. There is also considerable work in progress related to port state and market state measures, and flag state responsibility. The more global the fisheries value chain becomes, the more important it is to ensure a coherent and internationally co-ordinated response, and compliance with internationally agreed rules frameworks. The same applies to the use of the global commons (*i.e.* high-seas resources). If all countries, OECD and non-OECD countries alike, complied with the current and emerging international architecture, a considerable synergy would be created and benefits of globalisation would be greater.

The principal concern about international rules and regulations is the degree to which they are implemented by states and RFMOs, and the extent to which they are observed by the fishing industry. The implementation of some of these frameworks is still lacking in some countries and even when implemented into domestic regulations, industry may not themselves be compliant. It would thus seem that there is an issue of incentive structures which works across countries (*i.e.* lack of co-operation on the implementation of internationally agreed rules and regulations) and, within countries fisheries sectors, among individual fishers and industry.

Many developments have taken place in international fisheries architecture and governance in recent decades or are currently under discussion. While considerable advances have taken place – including with regard to enforcement and surveillance¹¹ – and there has been co-operation on common positive and negative vessel lists, an important element of the challenge of high-seas governance is the issue of allocation, *i.e.* who gets what, under what conditions and how secure such allocations are. It is this point that the incentive structure among participating countries (and for that matter non-participating countries as well) is created.

As observed at the Workshop on Opportunities and Challenges of Globalisation, the freedom to fish on the high seas is conditional.¹² An important imperative for all countries is to co-operate on conservation, even for those countries that are not members of RFMOs. More work may be needed on developing allocation models that are based on sound economic principles. The OECD Fisheries Committee through its work on the Political Economy of Reform is considering how it may contribute to this end. In the meantime, more co-operation among both members and non-members of RFMOs is needed to build trust and end non-co-operative behaviour, which is central to an effective international governance architecture.

There are a number of other areas where the international governance architecture can give further impetus to create additional benefits from fisheries. These include frameworks related to trade (*e.g.* WTO, CITES), food safety (*e.g.* Codex Alimentarius), investment and corporate social responsibility (*e.g.* OECD) and labour (*e.g.* ILO). These frameworks are not unique to fisheries and their further development will, in all likelihood, not only be based on new challenges and issues created by fisheries globalisation but imperatives from other policy domains will be mixed. This underscores the need to consider policy coherence across a number of domestic policy areas.

Market access

As highlighted in earlier work of the Fisheries Committee¹³ and as repeated at the Globalisation Workshop, there are still a number of traditional tariff barriers in place in the trade for fish and fish products. Average trade weighted tariffs for fish and fish products are low when compared to other foods and are furthermore sustained by an extensive use of tariff suspensions and preferential arrangements. It remains that there are certain tariff peaks and tariff escalation in place that are of particular concern for developing countries that have difficulties in promoting value addition in their countries. Further efforts to reduce tariff rates and addressing peaks and tariff escalation would be a welcome outcome of the Doha Development Round.

Against the background of an increasing proliferation of private and public environmental, social and sanitary/hygiene standards in many OECD countries in recent years, developing countries have increasingly complained about difficulties in accessing markets.¹⁴ Small holders/artisanal fishers argue that in many ways they have been cut out of the value-added portion of the global value chain, and hence have difficulties in benefitting from globalisation, as they have not been able to meet standards (private and public) set by developed markets. However others also argue that the same standards have helped globalisation and developing states alike, by forcing the dissemination of mechanisms to ensure developing states' fisheries products can indeed access developed-state markets smoothly. As such, smallholders may have the most difficulties in directly benefitting from the globalisation process.

In this respect, a number of possible solutions have been identified:¹⁵

- Improved access to information, predictability and transparency.
- Transfer of know-how to deal and comply with standards and requirements.
- Involvement in standard setting and/or standards that are not applicable to the country/region of production.
- Identification of areas of mutual recognition/equivalence of standards.

A crucial issue is related to the role and possibilities of fishing companies and public authorities to help developing country operators comply with standards. Key to achieving this is to ensure that standards are transparent, predictable and that their application is equitable, and more generally to ensure that developing countries understand the reasons for their application. As many of the *de facto* standards that are applied in fisheries trade are developed and implemented by private operators (and may be more stringent than public minimum standards), it may be expected that fish buyers themselves provide assistance to overcome these problems in order to secure supplies. While some cases of private to private help were revealed at the Globalisation Workshop, it is clear that most fish retailers and processors consider that this would only occur where raw material cannot be obtained from alternative sources. In other words, fish companies stated clearly that they do not see "development assistance" as their role. At the same time exceptions also exist where some companies are actively cultivating and developing their longer-term supply chain relations.

To further increase the benefits developing countries and OECD consumers obtain from globalisation it would be important to help build and sustain the necessary capacity and know-how in the developing world and to ensure that the systems in place in developed markets are predictable and transparent. The investments needed to comply

with standards are high and may put developing countries at a disadvantage, but largely affect small-scale fishing communities.

As highlighted¹⁶ at the Globalisation Workshop, there is a need for developing countries to pursue the following actions from their governments, development partners or through private/public partnerships:

Capacity building:

- Training of Trainers (TOT) in various fields relevant to trade and food safety.
- Building capacity (human resources and equipment) and maintaining effective quality and safety assurance systems.
- Building negotiation skills.
- Improvement of infrastructure, especially the cold chain.
- Establishment of testing and referral laboratories.
- Building of good and credible scientific databases, through regular sampling and analysis of samples to counter any false claims.
- Development of bankable project proposals to help in accessing financial resources.
- Participation in standard setting committees.

Financial resources:

- Establish a sustainable funding mechanism.
- Mobilisation of funds from governments and development partners.

Policies:

- Development of sound policies and strategies for food safety and quality.
- Development of an effective and relevant legal framework to facilitate good hygiene practices to ensure compliance with importers' requirements.

Co-ordination and harmonisation of important requirements:

- Given the complexity of sanitary and phytosanitary (SPS) issues and other requirements by importing countries, harmonisation or equivalent standards would be the best option. Developing countries are therefore required to actively participate in international standard-setting meetings for the harmonisation of standards and legal requirements.
- Developing countries ought to request adequate time to implement new regulations and standards developed by importing countries.
- Developing countries should strive to demonstrate the equivalency of their own standards with those of the importing country.

Fisheries food safety

The increasing internationalisation of food supply chains carries with it major benefits including easier availability of food, access to novel food products, new tastes, lower prices and more diverse diets. As such there are important benefits from further globalisation in the fisheries sector. Concurrently, increasing cross-border trade through the fisheries supply chain also carries risk when food and food products, both fresh and frozen, are moved around. Chief among these is the appearance of new pathogens that are not indigenous to local markets. Seafood, in particular, has characteristics that make it easy to deteriorate and become unfit for human consumption unless handled properly (see Box 6.2).

Box 6.2. Magnitude of foodborne illness

The global incidence of foodborne disease is difficult to estimate, but it has been reported that in 2005 alone 1.8 million people died from diarrhoeal diseases. A great proportion of these cases can be attributed to contamination of food and drinking water. Additionally, diarrhoea is a major cause of malnutrition in infants and young children.

In industrialised countries, the percentage of the population suffering from foodborne diseases each year has been reported to be up to 30%. In the United States of America (USA), for example, around 76 million cases of foodborne diseases, resulting in 325 000 hospitalisations and 5 000 deaths, are estimated to occur each year.

Source: WHO, www.who.int/mediacentre/factsheets/fs237/en/.

According to the World Health Organization (WHO) food contamination creates an important social and economic burden on communities and their health systems. In the USA, diseases caused by the major pathogens alone are estimated to cost up to USD 35 billion annually (1997) in medical costs and lost productivity. The re-emergence of cholera in Peru in 1991 resulted in the loss of USD 500 million in fish and fishery product exports that year. Therefore, for the public authorities and private operators there is an important economic and human dimension to seafood safety.

The introduction of HACCP (Hazard Analysis and Critical Control Points) has had considerable impact on the process of controlling the safety of fish and fish products. By identifying hazards and where in the production process they take place, it is possible to control the critical points with regard to food safety along the value chain. For the international movement of fish, once an operator has been verified (mostly by the importing nation's food safety regulators) and approved to HACCP standards, that operator can export to the international market.

Food traceability, "from sea to the consumer's plate", offers many possibilities of containing seafood risks and effectively reducing risk of contamination. Box 6.3 illustrates how a number of important markets have implemented traceability systems in recent years to help ensure food safety. What at present seems to be missing and where further work may be required is to have one "integrated traceability" system in place for all the various standards and requirements, including sustainability verification and legality checks. That would lower the costs for operators along the fisheries value chain and could contribute to the advancement of global trade.

Some countries also require companies that wish to export fish to their market to be pre-approved, thus ensuring that the processors, whether an on-land processing facility or a factory vessel, comply with food regulations.

Fish retailers and processors frequently impose more stringent seafood safety standards than those developed by public authorities. This is implemented through buying specifications that companies operate. In essence, seafood safety is important for retailers and processors to protect their reputation, brand values and guard against costly product recalls. In this respect, there has been some discussion regarding the potential trade effects of hygiene and sanitary standards, in particular the ability of developing country fishing operators to gain market access.¹⁷

Box 6.3. Traceability

The United States, as of December 2006, has had a mandatory traceability requirement for all food including seafood. All links in the food supply chain and transporters of food stuff are to establish and maintain records that can be used to track suppliers and buyers.

Japan does not have mandatory traceability requirements for seafood. Importers of seafood need to keep records of imported material.

The EU has mandatory traceability for all food pursuant to Council Regulation 178/2002. Mandatory traceability came into effect on 1 January 2006. Regarding imported fish and fish products, the EU requires that the last (usually the exporter) holder of the food be recorded by the importer; the importer also is responsible for ensuring that the imported good meets other EU requirements with respect to sanitary and hygiene.

In Australia and New Zealand (food standards are shared for these two countries) a traceability requirement has been in place as from May 2007 and it applies to both domestic and imported seafood.

Source: *Seafood Traceability: A Practical Guide for the US Industry*, www.ncseagrant.org/files/seafood_traceability.pdf.

A recent survey by the OECD¹⁸ suggests that companies in the food value chain believe that governments should set minimum standards for food safety. The Codex Alimentarius is highly regarded and serves as a tool in this respect. The OECD survey also highlights that private operators are becoming much better equipped to deal with food safety issues and risks through the buying specification that they impose on suppliers. With regard to this, the role of legal liability in courts is crucial. It may well be that a more appropriate balance and combination of legal liability, penalties and private insurance against food safety combined with public minimum standards may deliver a more efficient market response to the issue of food safety. As a corollary, however, the combination of private food standards, modern production and marketing developments towards more concentration (economies of scale) may well make the system more exclusive *vis-à-vis* smaller producers in both developed and developing countries.

Concluding observations

There is general agreement at the OECD that economic growth is best underpinned by more open economies.¹⁹ In turn, growth improves material living standards. Developments in the fisheries sector towards more internationalisation contribute to such effects. As an immediate outcome, consumers have improved access to a diverse range of fish and seafood products, and, all other things being equal, at a lower price.

Companies are also benefitting from globalisation through more efficient use of resources, and by exploiting comparative advantages and scale effects. In addition, increased competition will lead to further investments in more efficient production processes, lead processors to reduce inefficiencies, and increased output and employment. OECD work shows that, in aggregate, globalisation has led to increased employment.²⁰

However, for international fisheries this is not without risk unless those fisheries are managed to a universally high standard. It would be unfortunate if the globalisation process were to result in a migration of irresponsible fishing effort to areas where controls are not effective. For developing countries where capacities for good management are relatively weaker, this would be a particularly troublesome outcome. This requires efficient

institutional arrangements and good governance in both developed and developing countries. Thus, in the harvesting sector the sustained opportunities created by globalisation are closely linked to the way that fisheries management systems are implemented. In countries with a poor fisheries management record or capacity to implement sustainable and responsible fisheries, globalisation may lead to increased fishing pressure, thus endangering the resource.

Paramount to the realisation of benefits in the harvesting sector is sustainable, economically efficient and responsible fisheries management. Managing sustainably and responsibly can, in principle, be done through biological management approaches including ecosystem-based approaches to management that cap the total harvest. Concurrently, however, increased competition from external sources (alternative wild fish or aquaculture) may put price pressure on the harvesting element of the value chain. Depending on how access to the fishing sector is managed, fishers' income may subsequently come under pressure. This observation underlines the importance of introducing management frameworks in which the harvesting sector can adapt to the changing competitive environment that globalisation fosters.²¹ In OECD countries that have implemented management frameworks that allow for an endogenous adjustment (including, for example, in Iceland, Norway and New Zealand), the economy of the domestic fisheries sector has been thriving.

It is in the aquaculture, processing and retailing elements of the value chain that internationalisation is most pronounced, and where further and deeper international integration is most likely to occur. This is linked to less regulation and to vertical integration (i.e. control) of production assets; conversely in the harvesting sector, foreign investors shy away, in particular when no secure rights system are in place or where fisheries outcomes are unpredictable due to poor management frameworks. Fragmenting production, outsourcing, foreign direct investment, building partnerships along the value chain and a wider sourcing policy are features of how operations across borders take place in the pursuit of a more profitable way of doing business. It remains, however, that a key to success in an internationalised fishing sector is security and control of supplies.

There is still scope for further market liberalisation in the fisheries sector.²² This concerns trade, investments and services. Hence, there are potential additional benefits from globalisation in the fisheries sector that are yet to be reaped, in particular if efficient fisheries management frameworks are implemented concurrently. A characteristic of the benefits of globalisation is that they are shared among many, i.e. the welfare gains benefit consumers, processors, distributors, etc. Conversely, costs of globalisation in terms of structural adjustment, etc., are fairly easy to identify and tractable, are more local in nature and concentrated on a few well-identifiable groups (e.g. fish-processing workers).

The previous sections suggest that there is an international institutional architecture being put in place that is able to "capture and deal" with fisheries globalisation and, as the case may be, be able to generate additional benefits from the process. A number of institutional frameworks have been identified, including the WTO (trade, services, SPS, TBT, subsidies), OECD (investments, Corporate Social Responsibility [CSR]), the FAO (Code of Conduct, Guidelines, IUU-related measures such as port and flag state measures), UN (UNCLOS, UNFSA and various other fisheries arrangements). If these arrangements were fully implemented, then benefits from globalisation would be augmented, and the potential risks of globalisation further contained.

Sustainability issues are clearly a major concern among consumers and stakeholders in the fisheries value chain. The environmental pressures in the food value chain are growing and are likely to continue for the foreseeable future. This is not just “fisheries sustainability” in its narrow sense, but it also includes issues of biodiversity, climate change, water use and transport. Nowadays fish consumers are increasingly interested in gaining information on how and where the fish and seafood they buy are caught and produced.²³ Large retailers have gained major market shares in fish and seafood sales, and are likely to become more capable of satisfying consumer demand for information. Their role and function as information providers to consumers is likely to change the way fish businesses around the world operate as the large retailers seek to guard the value of their brands.

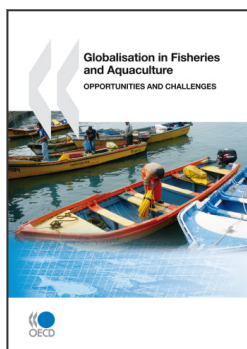
When embarking on this study, the Fisheries Committee observed that the policy challenges of dealing with globalisation in fisheries are anchored in formulating, developing, adapting and implementing management frameworks that can accommodate the pressures stemming from the process of globalisation without compromising the sustainability of the resource. Key features of these challenges include the implementation of appropriate management models, dealing with structural adjustment and garnering the political will to move forward. In this respect it is important to keep in mind that fishery globalisation is a continuing process that is generating wealth and can benefit the sector and the economy as a whole. Policy makers will constantly be challenged and there will be a continued need to identify and address new policies to address externalities that the globalisation process may give rise to.

A fully globalised and integrated world economy will contribute to global welfare, and the fishing sector can add to this. To contribute, fisheries markets throughout the fisheries value chain need to continue the process of liberalisation while, at the same time, more robust and efficient fisheries management models are implemented. Political will to move ahead is important if additional benefits are to accrue to the fisheries sector, and hence from the fisheries sector to the economy at large.

Notes

1. FAO, *State of the World Fisheries and Aquaculture* (2006).
2. See for example, “Oceans Governance and the Implementation Gap”, by Lennox Hind, in *Marine Policy*, Vol. 27, Issue 4, July 2003.
3. This was for example one of the outcomes of the High Seas Task Force.
4. “Creative destruction” was coined by Joseph Schumpeter, in *Capitalism, Socialism and Democracy* (1942). See also *Trade and Structural Adjustment: Embracing Globalisation* (OECD, 2005).
5. It should be noted that when capital substitutes labour the latter may migrate out of the sector or into alternative fisheries and may create new challenges.
6. *Structural Change in Fisheries Dealing with the Human Dimension* (OECD, 2007).
7. See “Open Markets Matter: The Benefits of Trade and Investment Liberalisation” (OECD, 1998) and Box 6.1.
8. “... policy coherence means different policy communities working together in ways that result in more powerful tools and products for all concerned. It means looking for synergies and complementarities and filling gaps among different policy areas so as to meet common and shared objectives” OECD (2002), “Development Co-operation Report”, *The DAC Journal*.
9. www.grid.unep.ch/product/publication/download/ew_overfishing.en.pdf.
10. *Natural Resources and Pro-Poor Growth: The Economics and Politics* (OECD, February 2009).
11. This was for example one of the outcomes of the High Seas Task Force.

12. See “Are Present Intentional Highs Seas Governance Structure Sufficient to Reap the Benefits of Globalisation?”, by Michael Lodge, in *Globalisation and Fisheries: Proceedings of an OECD-FAO Workshop* (OECD, 2007).
13. *Liberalising Fisheries Markets: Scope and Effects* (OECD, 2003).
14. This issue was raised in a number of papers and interventions at the Workshop on the Challenges and Opportunities of Fisheries Globalisation including Minister Iyambo, Nancy Gitonga and Cherif Toueilib. The issue was also raised by major retailers.
15. See *Globalisation and Fisheries: Proceedings of an OECD-FAO Workshop* (OECD/FAO, 2007).
16. Nancy Gitonga: “Fish Safety and Quality Challenges by Developing Countries: The East African Nile Perch Case”, in *Globalisation and Fisheries: Proceedings of an OECD-FAO Workshop* (OECD/FAO, 2007).
17. See for example WTO Committee on Sanitary and Phytosanitary Measures document “Private Standards and the SPS Agreement”, G/SPS/GEN/746 of 24 January 2007.
18. “Final Report on Private Standards and the Shaping of the Agro-Food System”, unclassified document [AGR/CA/APM(2006)9/FINAL].
19. *The Sources of Economic Growth in OECD Countries* (OECD, 2003).
20. *OECD Employment Outlook* (OECD, 2005), *Economic Policy Reform: Going for Growth* (2007).
21. Central to this is the use of rights-based or economic instruments that allows for adjustment in the harvesting sector. The degree to which this is the case in the OECD countries has been the subject of a major study by the Committee.
22. *Liberalising Fisheries Markets: Scope and Effects* (OECD, 2003).
23. OECD’s Working Party of the Trade Committee: “CSR and Trade: Informing Consumers about Social and Environmental Conditions of Globalised Production.”



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