

SECTION 1

**World trade in seafood: key trends  
and issues**

# Challenges for the global seafood industry

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## ABSTRACT

Fisheries are one of the fastest growing food sectors in the world. This development has not occurred without problems: over-fishing, IUU fishing (illegal, unregulated and unreported), overcapacity, discards and coastal degradation are widely reported in the world's media. A recent FAO study on the effect of fish trade on food security in developing countries concluded that fish exports generally had a positive effect in terms of food security and in generating income, employment and foreign exchange. However, the study also pointed out that to increase or maintain fish trade, effective management is required to ensure the sustainability of the resource.

The growing strength of large retailers is also affecting the fisheries sector. In Organisation for Economic Co-operation and Development (OECD) countries large supermarkets now account for 70 percent of food sales. Supermarkets are fast gaining market share in developing countries. The rise of the corporate social responsibility movement makes it very important for large food retailers to maintain a good reputation. They have to meet consumers' expectations with regard to a number of issues besides food safety and quality, such as environmental impacts and animal welfare, which were previously seen as the responsibility of public and international authorities. There is now a push for private food safety standards that are more demanding than current national standards.

There is a need to promote a wider understanding of the new risk approach to food safety. This is particularly important when communicating food safety risks to the public. Balanced information about the positive and negative aspects of fish consumption, emphasizing a science-based approach, must be readily available.

The Codex Alimentarius Commission (CAC) has been actively strengthening its work based on the Strategic Framework 2003-2007. The framework has identified six major objectives that serve to strengthen the scientific basis of Codex decision making, to improve capacity building and to enhance its ability to deal effectively with new issues. It specifically mentions promoting the collection of data from developing countries.

This paper provides an overview of the current challenges facing the seafood industry worldwide. It calls for a greater emphasis on risk-analysis to ensure the health and safety of products, and for greater harmonization of the rules underpinning global trade in fish and fish products.

## INTRODUCTION

Global fishery production amounted to a total of 132 million metric tonnes in 2003. The most significant increase in fishery production in recent years has been through increasing aquaculture production, which reached almost 41 million tonnes in 2003 (FAO 2004). Fishery products are the most internationally traded food in the world.

More than half of the world's fish imports by weight (and 77 percent of the total world imports by value) are concentrated in three areas: the European Union (EU), Japan and United States of America. Those areas dominate world markets both in terms of prices and quality requirements. Yet over half of international fish trade now originates in developing countries, generating for them a net fishery trade surplus of almost US\$18 billion annually. For many of these countries fish exports are a major source of foreign currency. For developing countries to have been able to comply with the complicated requirements of the most demanding importing countries is indeed impressive. It has taken a clear and sustained focus as well as investment and training.

Fish enjoys a good reputation as a nutritious and healthy food. However, there are growing concerns about environmental contaminants in fish as well as about the poor management of fisheries in many parts of the world. The fifth IAFI Congress in 2003 identified a number of issues regarding safety and quality that needed to be addressed. These included more harmonization of sanitary requirements and a more holistic approach to communicating to consumers the risks associated with seafoods as well as its positive nutritional aspects. This involves a shift from zero tolerance policies and less reliance on end product sampling to a more risk-based approach to quality and safety. This paper describes some of the current challenges facing the global seafood industry.

#### **AN OVERVIEW OF GLOBAL FISH TRADE**

In 2003, total world trade of fish and fish products increased to US\$63.3 billion (export value), representing a 14 percent increase relative to 2000 and a 43 percent increase since 1993. In terms of quantity, exports were reported to be 48.6 million tonnes (live weight equivalent), having grown by 16 percent since 1993, but showing a slight decline compared with 2000 levels.

A large share of fish production enters international marketing channels, with about 37 percent (live weight equivalent) exported as various food and feed products. Developed countries exported more than 21 million tonnes of fish (in live weight equivalent) in 2003. Although a part of this trade may be re-exports, this amount corresponds to nearly 70 percent of their production. Exports from developing countries (28 million tonnes) were around one-quarter of their combined production. The share of developing countries in total fishery exports was 49 percent by value and 56 percent by quantity (FAO 2005).

The net receipts of foreign exchange derived from fish in developing countries (i.e. the total value of their exports less the total value of their imports) increased from US\$13.2 billion in 1993 to US\$18.3 billion in 2003. These figures were significantly higher than those for other agricultural commodities such as rice, coffee and tea, even if combined. Low-income food-deficit countries (LIFDCs) play an active part in the trade of fish and fish products; in 2003, they accounted for more than 20 percent of the total value of fishery exports, with net export revenues estimated at US\$8.8 billion (FAO 2005).

In 2003, about 75% of the import value of fish was concentrated in three main areas: the European Union (EU), Japan and the United States of America. In terms of quantity, developed countries imported over 31 million tonnes (live weight equivalent), of which 70 percent was fish for human consumption, while developing countries imported 19 million tonnes (live weight equivalent), of which 48 percent consisted of fish for food.

With the entry of China into the World Trade Organization (WTO) in 2001, all major fishery countries other than the Russian Federation and Viet Nam (which have started negotiations to become members) are now members of the organization. Parallel to the increase in the WTO's membership, a number of bilateral trade agreements with strong relevance to fish trade have been signed. The full impact and long-term effects of

these agreements, in addition to, or as a substitute for broader multilateral agreements, remains to be seen.

An FAO study was conducted in 2002-2004 to examine the impact of fish exports on food security in 11 selected developing countries (Kurien *et al*, 2005). The study showed that this fish trade generally had a positive effect on food security through increased export earnings. For the countries involved, the export trade did not have a detrimental effect on fish consumption. However, the study emphasized that sustainable resource management is a necessary condition for maintaining fish trade.

### SCIENCE BASED APPROACHES TO FOOD SAFETY

The approach to ensuring food safety has moved away from relying on end product inspections with accompanying laboratory analyses, towards the preventive Hazard Analysis and Critical Control Point (HACCP) approach. Assigning responsibilities to operators throughout the food chain establishes shared responsibilities among primary producers, processors, as well as the consumers themselves, with regard to the safety of food products. This risk-based approach, formally adopted in the Sanitary and Phytosanitary Agreement (SPS Agreement) of the WTO, mandates a transparent science based approach which acknowledges that food can never be made risk free for all people at all times. Extensive surveys of food show a continuing prevalence of pathogens in the products as well as in food processing establishments even where stringent HACCP programmes have been applied (Gudbjornsdottir *et al*, 2004).

New approaches are being implemented along the lines of 'Performance Standards', where pathogen prevalence in different products is monitored and consequently realistic standards set for performance. For example the Performance Standard for broiler chicken in the United States of America is presently set at maximum 25 percent contamination for salmonella (The National Academy of Sciences 2003). That means that the 'failure rate' of a particular food production system is being monitored to keep it within the set limits deemed achievable by the whole production system. This sets a new stage for food control. The problem facing the food industry seems to be that, while these new approaches appear sensible and are beginning to show tangible results, they have become additional layers of control rather than replacements for more traditional control methods. Despite the fact that the preventative HACCP approach has been implemented by industry for over a decade, end product analysis does not appear to be diminishing. This, however, may be the inevitable cost of transition; to maintain old approaches until there is sufficient confidence in new ones.

The 1995 SPS Agreement of the WTO prescribes further development of HACCP by stating that all SPS measures must be risk based. The "appropriate level of risk" or more descriptively the "tolerable risk" must be scientifically established. There must be a clear distinction between the scientific evaluation of the risk associated with the food and the political risk management part. The latter refers to the process of deciding on options for dealing with risk. It is important that the inevitable risks are communicated to all parties (risk communication). Options on how to achieve maximum practical achievable food safety levels are actively debated between the risk assessors and risk managers. The different options can have significant and diverse economic consequences.

The high level of rejection of fish and fishery products in international trade due to 'filth' indicates that there is room for improvement in production and distribution systems. FAO has emphasized the need for more human capacity building and more harmonization of the control measures in place. Fish trade is still increasing, particularly from aquaculture in developing countries, and the entry onto the market of a more diverse range of value-added convenience products. This definitely poses new challenges.

The practicalities behind the necessary controls in seafood trade are noteworthy. The United States of America imports seafood from 160 countries representing 13 000 individual processors. Less than half (48 percent) of importers in that country could document that foreign suppliers complied with United States HACCP requirements in the fiscal year 2002 (albeit up from 27 percent in 1999). Moreover, the United States Food and Drug Administration (FDA) have as yet no fish inspection equivalence agreement in place with other countries. Indeed, the FDA has expressed the view that “the time and resources required to develop equivalence agreements for seafood may outweigh the benefits” (GAO 2004).

For international markets in fish and fishery products, one of the most serious difficulties faced by exporters is the different standards and regimes being imposed by importing countries on producing countries to ensure that products meet the requirements of their domestic markets. Huss and others (2004) noted that for selected microbiological criteria in the EU, standards are both complex and diverse, are not based on current Codex principles, “and do not appear to be meaningful in terms of consumer health protection”. They pointed out that France for example, has more than 80 microbiological criteria for foods, whereas Germany has none, except for those applying through European Commission (EC) Directives. The industry has repeatedly complained about the difficulties this creates for trade, and points to the need for more harmonization.

#### **A TRANSPARENT WORLD TRADING SYSTEM**

The WTO is the only global international organization dealing with the rules of trade between nations. WTO verifies that trade has been growing on an average of 6 percent annually over the last 50 years. Trade rules are embodied in the various WTO agreements signed by its 148 member countries (September 2005) and ratified by their respective parliaments. Therefore, these agreements are legally binding for all WTO members. They form the legal ground rules for international commerce, by guaranteeing members important rights but at the same time obliging them to keep their trade policies within agreed limits. The objective is to assist producers of goods and services, both exporters and importers, to conduct trade so that it flows smoothly, freely, fairly and predictably, with the overall goal of improving the welfare of people in member countries. It is also important to note that trade liberalization is placed at the heart of the development agenda, as spelled out in Chapter 2 of Agenda 21 (Rio 1992) stating that the international economy should “promote sustainable development through trade liberalization”. This commitment is very important, especially for developing countries.

The SPS Agreement confirms the right of WTO members to apply measures they deem necessary to protect human, animal and plant life and health. It is important to note that the provisions of these agreements have developed over time. This right was included in the original 1947 General Agreement on Tariffs and Trade (GATT) Agreement provided that “such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade”. The SPS Agreement requires that, with regard to food safety measures, WTO members base their national measures on international standards, guidelines and other recommendations adopted by the CAC, where they exist. This, however, does not prevent a member country from adopting stricter measures if there is a scientific justification for doing so. Members are encouraged to accept the SPS measures of other countries as equivalent, even if different, where they can provide the same level of protection as their own regulations.

The spirit of the new global arrangements is clear. It is to ensure a level playing field for all parties by applying scientific principles, taking a science-based risk approach,

promoting transparency of the process, and emphasizing the preventive approach rather than end product inspection. It is acknowledged that there must be a distinction between legitimate food safety measures and protectionism. However, there is a long way to go before a level playing field is achieved. There is no agreement yet on what constitutes an “Appropriate Level of Protection” (AOLP), each WTO member decides for itself. A very important part of the WTO trading system is the procedure for resolving trade disputes, the Dispute Settlement Understanding, which is crucial for enforcing the rules. Countries bring disputes to the WTO if they think their rights under the agreements are being infringed. Since October 2004, 315 cases have been brought to the attention of the WTO. The most famous case involving food safety is probably the ruling in favor of Canada and the United States of America against the EU relating to the use of growth hormones in beef.

A clear framework that gives primacy to scientific methods when evaluating food safety is crucial for fending off politically motivated rejections, as well as for responding to calls by NGOs and reports in the media for people to avoid eating fish (claiming high levels of contaminants). This sensationalism in reporting calls for food safety authorities to have readily available material with correct and balanced information. A good example is a report by the European Food Safety Authority, on the safety assessment of wild and farmed fish in Europe, where both the negative and positive aspects of different fish species was presented in an unbiased way (EFSA 2005).

### **MAJOR DEVELOPMENTS IN FISH SAFETY AND QUALITY**

After numerous food scares in the 1990s, the public is now far more sensitized towards food safety issues. This is having a big impact on the food industry, retailers and food safety authorities. It is tempting to conclude that consumers are now better informed and able to make educated decisions about the quality and safety of the food products they purchase. Current work on risk perceptions indicates that this is not necessarily the case. Consumers may be driven more by perceptions than hard data relating to food risks.

Fish products are subjected to close scrutiny regarding safety for consumption, not least because of how widely they are traded internationally. For years FAO has been studying the reasons for rejections and detentions of fish and fishery products at the borders of the main importing countries. The results show considerable divergence in reasons for detentions and suggest the need for harmonization of the procedures and methods that govern imports (Ababouch *et al* 2005). Seafood may be beginning to acquire a reputation for being less safe than other animal protein foods. A recent report from the United States stated: “Seafood products represented about 15% or 26 of the 169 food borne illness outbreaks from a confirmed source - a level greater than that associated with meat or poultry products, which are consumed at 8 and 6 times the rate of seafood, respectively” (GAO 2004). Similarly, the EU alert system for food and feed indicated that fish and fishery products were responsible in 2002 for the largest category (over 25 percent) of food safety and quality alerts (EU 2003). Drawing conclusions by comparing outbreaks can be very misleading. For example, the number of cases per outbreak related to meat and milk products, is usually much larger than for fish. There needs to be more analysis of the epidemiological data to determine the relative safety of meat compared with fish.

Efforts are now underway to integrate fish safety and quality policies at national, regional (e.g. EU) and international (e.g. CAC) levels. In the EU, the established health rules affecting the production and placing on the market of food products have been contained in a large number of Directives. These contain common principles such as those related to: the responsibilities of manufacturers, the obligations of Competent Authorities, the technical requirements for establishments handling food products, the minimum hygiene requirements to be complied with, the procedures for the approval

of establishments, the conditions for storage and transportation, and the health labelling of products. These hygiene rules have now been subjected to a complete recasting to simplify them and to eliminate the inconsistencies that have arisen during their implementation, while at the same time securing a high level of consumer protection. The new legislation gives food producers primary responsibility for the safety of food through self-checking and modern hazard control techniques. It integrates 16 existing product specific Directives and Directive 93/43 (on the hygiene of foodstuffs) into a package of five hygiene regulations and directives (Ababouch *et al* 2005). They also take into account the international obligations laid down in WTO Agreements on SPS and TBT and by the CAC.

In addition, the EU has instituted the European Food Safety Authority (in 2002) to ensure that scientific advice strengthens the new food hygiene rules. The implementation of these hygiene rules will be guided by objectives such as pathogen reductions targets or performance standards. Likewise, the EU Alert System for Food and Feed, initiated in 1999, is now fully operational and their reports are regularly posted on the internet. Considering that traceability of food and food ingredients along the food chain is an essential element in ensuring food safety, the new EU traceability rules for fishery products, (EC 1999, EC 2001) require that at the point of consumer purchase, the following aspects should be documented:

- species (trade name and/or Latin name);
- production method ('caught at sea' or 'in inland waters' or 'farmed'); and,
- catch area for fish caught at sea the area must be stated. For fish from inland waters the country of origin must be given and for farmed fish the country of the final development of the product must be given.

The United States of America has continued implementing the Federally Mandated Seafood Rule (FDA 1995), along with the Good Manufacturing Practices (GMP) (21 CFR part 110) and Sanitation Control Procedures (21 CFR part 123). Likewise, application of the updated Fish and Fishery Products Hazards and Controls Guide issued by the FDA to assist the fish industry has been broadened. The Seafood HACCP Alliance has been strengthened but this is a national education programme designed to complement the Guide. This programme involves academic and regulatory expertise in every state plus numerous international training efforts (Seafood HACCP Alliance 2001). Risk assessment work for specific pathogens related to seafood was also carried out.

Of particular interest is the 2003 FDA Interim Final Regulation (21 CFR Parts 1 and 20) promulgated under the Public Health Security and Bio-terrorism Preparedness and Response Act. This regulation requires that domestic and foreign facilities that manufacture or process, pack, or hold food for human or animal consumption in the United States register with the FDA and submit prior notice electronically to FDA before the shipment arrives in the United States of America. Several fish exporting countries fear that the implementation of these requirements may disrupt fish trade flows from exporting countries into the United States of America.

A recent review (the National Academy of Sciences 2003) of the use of scientific criteria and performance standards for safe foods in the United States of America recommended that, for seafood, the FDA:

- includes a process validation protocol in the fish and fisheries products hazards and controls Guide and appoints an appropriate advisory committee to periodically update this guide; and,
- develops strategies to ensure the safety of imported seafood by focusing on pathogen intervention strategies prior to shipment and international harmonization of standards.

In Japan, the application of HACCP-based food control regulations is being pursued, including those applying to sanitary and hygienic requirements for fish

handling and processing establishments, and conditions for storage and transport. Risk analysis principles are being incorporated, along with spot checks at the entry border, with the quality control schemes of the Japanese fish industry, which often controls imports at the source.

At the international level, the Codex Alimentarius Commission (CAC) has been actively strengthening its work based on its Strategic Framework 2003-2007. The framework identified six major objectives that serve to strengthen the scientific basis of the Codex decision making, improve capacity building and enhance its capacity to deal effectively with new issues. It specifically mentions “promoting the collection of data from developing countries”.

The general principles of GHP/HACCP have been adopted by the CAC in 1997 and 1999 (FAO/WHO 2001). They include requirements for the design of facilities, control of operations (including temperature, raw materials, and water supply, documentation and recall procedures), maintenance and sanitation, personal hygiene and training of personnel. Similarly, the Codex Committee on Fish and Fishery products is working on a draft Code of Practice for fish and fishery products, including aquaculture products, which integrates these general principles and adapts them to the fish industry. Sections of the Code have been adopted by the CAC (CAC 2005). Unfortunately, this Code is not intended to cover extensive fish farming systems or integrated livestock and fish culture systems that dominate production in many developing countries. The Code also describes the requirements for surveys and monitoring of mollusc bivalve growing areas.

In addition, significant changes are taking place within the CAC to strengthen its role as the internationally recognized body for deliberations regarding food safety, consumer health and fair trade. The CAC has initiated a plan of action encompassing six major elements:

- improved efficiency and speed of the Codex process and consensus building;
- further strengthened scientific support and science-based decision making;
- increasing the participation of developing countries in CAC deliberations;
- establishment of a Trust Fund by FAO and WHO to help the participation of developing countries;
- greater transparency and participation of non governmental organizations; and,
- increased support from FAO and WHO.

### **THE RISE OF SUPERMARKETS**

The supermarket sector has risen to have an important and often dominant share of food retailing, commonly 70 percent in developed countries (OECD 2004). This share is also rising sharply in many developing countries. The rapid spread of supermarkets has resulted in a restructuring of the food markets in many countries of the world. As supermarkets increasingly influence the distribution from primary producer to retailer, there is a power shift from suppliers and wholesalers to retailers. This may have an important impact on how benefits are shared along the distribution chain. This is particularly relevant in the case of small-scale fisheries in developing countries. The fragmented nature of the industry and their lack of access to information often puts small-scale fishers at a competitive disadvantage in relation to the retail sector. Supermarkets, which are increasingly incorporating social, environmental and ethical benchmarks in their operating procedures, should recognize the organizational constraints facing small-scale fisheries in developing countries and try to ensure a fair distribution of benefits.

Supermarkets are also increasingly adopting private safety and quality standards, either to replace missing or incoherent public standards, or to impose standards that are higher than the public standards. Examples are the British Retail Consortium Global Standards or the Global Food Safety Initiative. Leading supermarket chains are shifting

towards higher quality and increasingly safe products through private standards imposed on suppliers. There are several reasons for this:

- Higher product quality and safety are being used to further entice consumers away from small shops and markets.
- Standardization reduces costs and allows more efficiency of product flow in the procurement system.
- Bringing the attributes of local supply into conformity with private standards of European or United States retailers reduces costs in regional or global procurement systems of a given chain.
- Centralized purchases (with better monitoring ability), qualified specialized wholesalers, and preferred supplier programs of selected producers, raises the capacity of retailers to apply higher standards than is possible prior to purchasing from general-line wholesalers who purchase from and sell to a wide variety of firms.
- Public food regulations for the domestic market, where they exist, are not easily enforced by governments. Private standards and private enforcement are a way to ensure food safety in retail outlets.

The adoption of private safety and quality standards makes economic sense for supermarkets. However, supermarkets must also recognise that the adoption of these standards will require adjustments throughout the distribution chain. For many developing countries, meeting minimum SPS (Sanitary and Phytosanitary Standards) is already a major challenge. In many instances the imposition of even higher safety and quality standards may be impossible. Supermarkets that require higher safety and quality standards should provide assistance to suppliers from developing countries to ensure they can continue to provide products which meet requirements. A recent survey in OECD countries showed that 70 percent of consumers felt that food safety was primarily the responsibility of governments and only 10 percent felt it was the responsibility of the private sector.

## CONCLUSIONS

Given how globalized fish trade has become, it is imperative to continue harmonizing the rules by which it is governed, including relevant inspection procedures. Countries should make data on detentions and rejections available so that producers can adjust their safety and quality regimes accordingly. The risk analysis approach needs to be further implemented throughout the production chain. All food safety standards should be risk based.

The fish industry faces new realities that stem from the ease with which information is now exchanged. Consumers are more demanding than ever. Companies need to do more than pay lip service to these demands. However, it is important that they do not overstep the mark by imposing standards that are unrealistic and that create barriers to producers selling their products. This is crucial for developing countries that might already be struggling to develop quality and safety control systems to that meet agreed international standards. An open, transparent, and harmonized system is imperative for the smooth and fair functioning of global trade in fish.

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# International seafood trade: the rules and the rorts

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## **ABSTRACT**

This paper examines how the rules that underpin the conduct of international seafood trade are interpreted into practice, and how certain practices, often masquerading as rules, could be undermining them.

## **INTRODUCTION**

The term ‘rort’ is quintessential Australian English. Colloquially, a rort is a shady practice rather than out an outright act of dishonesty; for example, when a food seller weighs your purchase, with accurate scales, but leans on the scale slightly to add some weight. The relevance of this concept to international seafood trade will be revealed below, following a brief description of the fundamental features of international trade in seafood products, and an overview of the rules applying to that trade.

## **INTERNATIONAL SEAFOOD TRADE: A SNAPSHOT**

More than 40 percent of global fish production, whether from capture fisheries or from aquaculture, is traded internationally. About 50 percent of the international export trade by value stems from developing countries. Most developing country fisheries are therefore significantly export oriented. Most of that trade is directed to developed country markets. Indeed, international markets are dominated by four import markets. More than 80 percent of global imports of fish and fish products is by Japan, the European Union (EU), the United States of America and lately China. Of these countries, Japan, the EU and the United States of America have significant net supply deficits from domestic sources. China is different, as much of the seafood that is imported there is being further processed and then re-exported to the three main developed country markets. Within this global set of trading relationships, the expectation of developed country consumers is that all the seafood they have access to will meet first world standards of safety and quality.

The key message to be taken from this description of international seafood trade, is that while the international import markets for seafood products are highly directed towards a small number of developed countries, these markets are uncompromising in their expectations that the product will be safe to eat and will meet expectations of quality. Therefore, regardless of domestic capacity and infrastructure in developing countries, the seafood products that they export must meet developed importing country expectations or they will be excluded from trade.

Developed country markets have only recently, within the last one to two generations, become heavily import dependent. There is a lingering misconception among consumers that their markets can be self-sufficient. Imported seafood products, especially where they are direct replacements for previously abundant domestic

products, are often vulnerable to a xenophobic back lash. This is especially the case when imported products are linked to instances of food-borne illness.

The once dominant domestic fishing sectors in developed countries can be seen to exploit these resentments from time to time. One of the latest examples, in this case in aquaculture, has been the reaction of the United States catfish producers to cheaper product being imported from overseas. The case involved claims of ‘dumping’ resulting in anti-dumping action on the part of the United States of America, and included a dispute about whether the imported product could even be called ‘catfish’, which it clearly was.

### **TRADE RULES**

The General Agreement on Tariffs and Trade (GATT) was one of the post-World War II Bretton Woods institutions. It was conceived as an institution to assist the world to avoid a return to pre-war protectionism. The fundamental basis of the original and subsequent agreements is that members treat imported products no less favourably than they treat their own domestic products (‘national treatment’) and that they accord that treatment to all other member states (‘most favoured nations’).

Until it eventually morphed into the World Trade Organization (WTO), the GATT was instrumental in facilitating global tariff reductions and trade liberalization in the non-agriculture goods sectors. Until the Uruguay Round of negotiations, agriculture remained firmly off limits to the application of trade liberalization agreed for other goods.

Seafood trade was initially perceived to be part of agriculture. In 1995, the Uruguay Round detached seafood trade from agriculture, thereby extending the general rules of trade liberalisation applying to non-agriculture goods to trade in fish and fish products.

The GATT and now the WTO, safeguard the rights of member states to protect public health and safety (Article 20). But the Uruguay Round established a number of new agreements to clarify the extent to which protection can be extended. Most significantly, the Uruguay Round produced a robust and binding dispute settlement system. Seafood trade has been in the forefront of testing its effectiveness. Two cases stand out: the Canadian and United States of America’ case against Australia’s restrictions on imports of fresh and frozen salmon, and the Peruvian case against the EU to clarify the definition of sardines.

The Sanitary and Phytosanitary (SPS) Agreement determines that members must base their protection of public health on science-based risk assessment, referenced wherever possible to internationally agreed norms. The salmon case tested this element and Australia was required to carry out a proper risk assessment that led to the opening of its market under prescribed terms. The most significant element of the agreement, apart from science based risk assessment, is that members are encouraged to harmonise their protection measures with each other. If this is not achievable, the SPS Agreement encourages members to recognise equivalency of the outcomes of differing regulatory regimes. Wherever possible, members are encouraged to extend recognition of equivalency to mutual recognition.

The Technical Barriers to Trade (TBT) Agreement applies to all goods trade, including trade in food products. It specifies that the SPS Agreement has precedence for food safety issues. For seafood, the TBT Agreement is primarily relevant to issues of technical conformance and measures to protect consumers from fraud arising from dishonest product presentation, especially issues like labelling and the naming of products. As with the SPS Agreement, the TBT Agreement encourages the adoption of regulatory systems that have the least impact on trade but are sufficient to produce the intended outcomes. Again, the preferred approach is for countries to reference their regulatory systems to internationally agreed standards and norms.

Both WTO agreements require that members notify each other of new regulatory developments and provide enough time for them to adjust to those changes. They also provide a frame for negotiation and early settlement of potential disputes before recourse is had to formal dispute settlement.

### **TRADE RULES IN PRACTICE**

So much for the internationally agreed machinery; how is life in the real world of seafood trading developing? What follows is a brief description of two key recommendations of the SPS Agreement, harmonization and equivalency, and four problem areas associated with them.

### **HARMONIZATION**

Harmonisation of national measures between WTO member states is rare. The outstanding example is the EU. However, harmonisation in the EU is a result of another political process altogether, not the WTO. It arises from the EU's basis as a customs union, and is more akin to the harmonisation that takes place within federal states to ensure that inter-state trade is conducted on a consistent basis and is compatible with measures taken by federal authorities at the national frontier.

New Zealand and Australia have attempted elements of harmonisation in food standards governed by a Treaty. However, the two countries have found that harmonisation in food safety standards is too problematic, so they have opted for mutual recognition.

### **EQUIVALENCY**

Equivalency may be making better headway. However, in seafood trade the outcome of seeking equivalency is heavily affected by the inequalities of trading strength between the negotiating parties. Equivalency continues to stray towards the imposition of 'equivalent' practices by importing countries on exporting countries. In practice, importing states impose their practices on exporting states, rather than the process being a recognition of an equivalent outcome from the practices adopted independently by the exporting countries. Even where there is relative equality in negotiating strength, as between the EU and the United States of America, true mutual recognition of equivalency remains some way off.

### **SECURITY ISSUES**

The relatively new concern about how to protect nations from terrorist threats that might arrive in the food chain through international trade, is not well addressed at present through transparent and internationally agreed norms and standards. In the United States of America in particular, attempts to address security concerns has led to conflicting oversight from different agencies, who are still struggling internally with inter-agency communication. It has enabled some agencies to require traders to supply more detailed and time bound information than was previously deemed necessary to safeguard public health and food safety.

Considerable capacity for ad-hoc and costly interventions and subsequent interruptions to trade appears to be inherent. Intervention measures have been put into place, but their impacts have yet to be seen in the event of a security alert or incident.

### **PRIVATE SECTOR RISK AVERSION**

Regardless of internationally agreed norms and standards of food safety, the international food marketing brand owners, processors and retailers, are heading rapidly towards imposing even stricter measures on their suppliers as part of their intense competition to attract retail customers. Corporate responsibility is a new marketing tool to differentiate the market.

The approach can be inconsistent. There have been examples of zero tolerance for 'fashionable' pathogens, the imposition of shorter shelf lives than required by regulators, and concerns about heavy metals and contaminants in some products, but not necessarily all.

At present there is no ready recourse to WTO dispute settlement when these strict measures are imposed. Concerns are being expressed by mainly developing country WTO members of the SPS Agreement, who see a need to find a solution to this creeping return to zero-tolerance.

At a local or state government level, there is also capacity for local government to go beyond norms agreed at the national level. A current example is legal precedent in California clashing with Federal norms in relation to requiring labelling to warn consumers of mercury in tuna and swordfish.

### **DECEPTION**

Passing off a less desirable fish species as other more desirable species is a long standing rort in the seafood business. There are well over 1000 species of fish in international trade. Many are related to each other, while others can be genetically very different but appear to closely resemble familiar and favoured species.

The trade in seafood has not only grown enormously in the last 30 years, the number of species in trade has positively exploded. A common and legal practice in some jurisdictions is to group species into common local language generic names, as in the case of some hake and squid species in Europe.

The desire to protect consumers from this abuse, of traders passing off one species as another, is a legitimate one. However, it is a daunting task, as Australia appears to be finding. It is constantly updating its prescriptive fish naming regulation to cope with the continuing influx of new and exotic species.

A literally hidden issue is the woefully out of date harmonised system of customs classification as it is applied to fish and fish products. More than half of the fish being traded is unidentified and therefore runs the gauntlet of higher tariffs applying to unspecified tariff lines, while identified species can often enter markets at low or zero duties.

### **COUNTRY OF ORIGIN LABELLING**

A debate on country of origin labelling is occurring currently in Australia. Consumers have a legitimate right to know where their food originates from, especially if that is a real concern for them. Problems occur when country of origin labelling is turned into a protectionist tool and becomes the basis for favouring domestic products over imports. Certain aspects of the debate in Australia are straying towards undermining the fundamental basis of the WTO system of 'national treatment' mentioned above.

There is a capacity to obfuscate and imply a domestic origin to an imported product through application of 'Product of', 'Made in', 'Manufactured in' description. There are new proposals being developed to require country of origin labelling for unpackaged fish, and also to competing meat products, leaving an impression in the minds of consumers that meat is of domestic origin, whether it is or not.

In the fish trade, as more fish are caught in one ocean, processed in another country and consumed in a third, determining origin is becoming a real challenge. Country of origin labelling requirements differ from country to country and there is a need to standardise.

The use of origin documentation and labelling is also a growing practice in regionally managed fisheries to positively identify legally caught fish and to exclude non-conforming and presumably illegal fish from markets. This is leading to a proliferation of conflicting, cumbersome and expensive paper based systems. For example, a Pacific Bluefin tuna caught in the Pacific and exported to Japan must now be accompanied by

verification documents from three other regional agreements that do not apply in the Pacific, essentially to verify that it did not originate from those fisheries.

## **CONCLUSIONS**

The WTO has provided a set of rules that are a legally binding basis for managing safety and the risk of fraud in a transparent and least trade impacting way. Yet national authorities can become torn between their obligations under international agreements and local private sector and consumer demands for levels of protection that exceed agreed international norms. Marketing demands in the private sector to differentiate products to make them stand out are creating private sector demands that can restrict market opportunities or access, especially for products originating from developing countries that already struggle to meet internationally agreed risk management norms. At present there are no adequate means for redress in the case of private sector requirements being more risk averse and trade impacting than the requirements of WTO agreements. Moreover, new demands for safeguarding other risks, including national security, natural resources and biosecurity are bringing new agencies into the game that have little experience in working with international rules based on science and norm-based risk assessment. Finally, xenophobia continues to exist around the world and impacts on international fish trade. It presents itself disguised as concerns about transparency, country of origin labelling, or in the naming and identification of fish species. These are all issues that will need to be addressed if the rules, and the intentions underlying those rules, are to triumph over the potential rorts.

# Fish to 2020 in changing global markets: trade liberalization and market access constraints for developing countries

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## **ABSTRACT**

The global outlook for fish suggests a growing dependence on aquaculture. According to a study by the International Food Policy Research Institute (IFPRI) and the WorldFish Center (Delgado *et al* 2003), by 2020 more than 40 percent of fish consumed will come from fish farms, as aquaculture production nearly doubles and the supply of wild caught fish from oceans and rivers stagnates. Overall consumption of fish is projected to dramatically increase to 128 million metric tons in 2020 from 91 million metric tonnes in 1997.

Increased trade has integrated many local and domestic fisheries in developing countries with foreign markets all over the world. Continued access to foreign markets is a major factor for developing countries to increase and maintain their high performance in fish trade. Removal or easing of many traditional barriers to trade such as tariffs and quantitative restrictions through the General Agreement on Tariffs and Trade (GATT) and more recently the World Trade Organization (WTO) have played a significant role in increasing fish trade. Despite significant tariff reductions in both developing and developed countries, the selective use of tariffs, and several different types of non-tariff barriers related to food and environmental safety standards, continue to limit access to international markets.

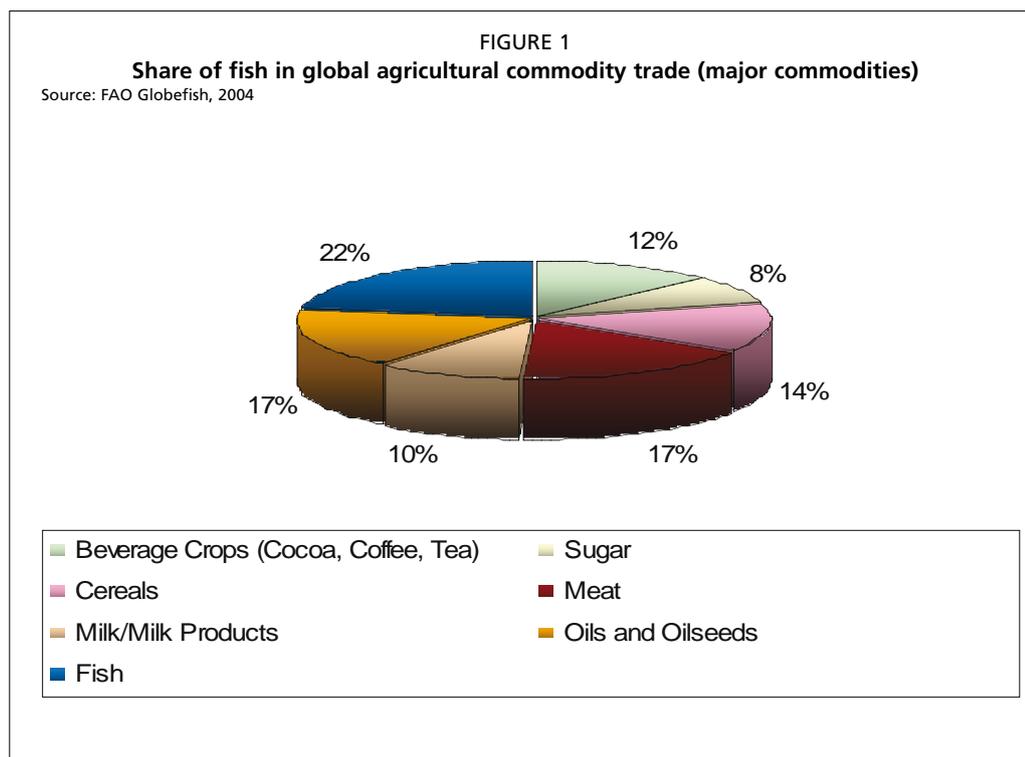
This paper provides a prospective analysis of future supply and demand for fish, and analyses critical market access and trade liberalization issues in fisheries. It also focuses on constraints faced by developing countries from both demand and supply perspectives. Demand side constraints include those related to international trade such as tariff and non-tariff barriers, while the supply side constraints reflect domestic challenges in developing countries, including issues related to the sustainability of natural resources.

## **INTRODUCTION**

Currently, the value of global fish trade is close to US\$60 billion compared to about US\$15 billion in the early 1980s. Developing countries account for over 50 percent of the global export value of fish. Net fish exports from developing countries are worth an estimated US\$18 billion and have surpassed all traditional agricultural exports, such as beverage products, cocoa, coffee, sugar and rice (FAO Globefish, 2004; Figure 1). For many of the developing countries, especially the food deficit or net food importing ones, fish trade represents a major source of foreign currency earnings paying for the bulk of food import bills (other than fish). It also benefits millions of fishers, farmers,

processors and others involved in micro level production, input and commodity supply chains (Ahmed *et al.*, 2002; Kurien, 2004).

Continued access to foreign markets and improved terms of trade are recognized as an important factor for poorer countries to meet the Millennium Development Goals (UN Millennium Project, 2005). Increased emphasis is also given to fairer rules for international trade, investment, finance and migration, which take account of all interests, rights and responsibilities to enable all to participate in the opportunities offered by globalization (ILO, 2004).



This paper provides a prospective analysis of future supply and demand for fish, and analyses critical market access and trade liberalization issues in fisheries.

### GLOBAL FISH PRODUCTION AND TRADE: OUTLOOK TO 2020

The creation of exclusive economic zones (EEZs)<sup>1</sup> in 1977 and UN Convention on the Law of the Seas (UNCLOS) significantly influenced the shift of production in favour of developing countries. The EEZs also stimulated international trade since countries that had fished widely in unclaimed coastal waters around the world became importers, while countries with large national fishery resources and low domestic demand became exporters. Fish production in the developed world has also declined or become stagnant since 1989 due to stringent fishing quotas applied in the North Atlantic and the disappearance of the Eastern block that contributed significantly to fish catch in the developed region. Declines in wild caught fish in the developed region can also be attributed to over-fishing. On the other hand, most of the recent expansion in fishery production came from the faster growing aquaculture sector that grew at an average rate of 9 percent between 1970 and 2002. Today, aquaculture contributes 32 percent of total fishery production, accounts for an increasing share of global trade, and provides approximately 40 percent of the world's total food fish supply (FAO, 2002; FAO, 2004). Technical innovations, private

<sup>1</sup> EEZs currently cover 40% of the world's oceans and 90% of living marine resources (Deere, 2000).

sector growth and increased market demand are the main drivers in the expansion of aquaculture in developing countries, particularly in Asia (Ahmed and Lorica, 2002).

Recent studies forecast that aquaculture from developing countries will continue to increase its share in global fish production and trade (Delgado *et al.*, 2003). At the same time, demand for fish in Asia and other developing nations, will certainly expand as wealth, population, and urbanization continue to increase. These factors imply a rapid expansion of trade in fish commodities among developing countries, otherwise called 'south-south trade. Developed countries, on the other hand, will exhibit a lesser increase in total demand for fish due to stagnant or declining population. As a consequence, it is likely that producers in developed countries will gradually leave the sector and policies in these countries will probably come to favor import-friendly regimes for fish (Delgado *et al.*, 2003). Aquaculture will continue to expand especially since its predictable supply patterns and high quality products are ideally suited for supermarket chains, which are expected to supply an increasingly larger proportion of food demanded worldwide.

Fish and fishmeal prices are predicted to rise unless aquaculture growth declines or efficiency in feed conversion increases significantly. The prices of low value fish are also expected to increase, affecting the food security of lower income households. On the other hand, economic growth in developing economies will create opportunities for artisan and small-scale fishers to specialize in entrepreneurial modes of operation. Fish will become an increasingly high-value commodity and the shift in traded products from frozen low-grade whole fish to value-added products processed in developing countries will continue (Delgado *et al.*, 2003).

Delgado *et al.* (2003) also predicts that sustainability concerns will increase and motivate environmental regulations and institutions, first in developed countries and then in developing countries. Over-fishing will remain a major concern, and the use of pelagic stocks for fishmeal and fish oil will become an important policy issue. The link between pollution and food safety in the fish sector, including pollution sources from outside the sector, will receive more attention worldwide. In this regard, institutional developments in the sector will be necessary to reduce poverty and to ameliorate the social impacts of increased global trade, such as the elimination of marginal and small-scale enterprises resulting from fisheries and aquaculture development.

### **FISH AND THE WORLD TRADE ORGANIZATION (WTO)**

On a global level, WTO and the UN organizations are the main actors that shape the regulatory framework on fish trade. The WTO provides the institutional structure for the opening of world markets while UN organizations address the issues of sustainable development, trade and its impacts on the environment, environmental conservation and food security. The Food and Agriculture Organization of the United Nations (FAO) programme areas cover every aspect of fisheries management including global fisheries assessment and analysis, policy development, treaty monitoring, coordination, and technical assistance.

To date, WTO discussions regarding trade issues in the fisheries sector have focused on market access for developing countries, the distributional impacts of international trade (e.g. impacts on food security), the effects of subsidies, and concerns that trade-related environmental measures may constitute disguised protectionism. Concerns such as how the mismanagement of fishery resources can lead to trade distortions, and fears that trade rules may interfere with or impose constraints on environmental management or conservation efforts relating to fisheries, have also been discussed from time to time.

Negotiations facilitated by the WTO have succeeded in reducing average tariffs for fish by 25 percent. After the Uruguay Round, the average tariff on fish produce is 4.5

percent for developed countries and below 20 percent for developing countries. However, this success masks the tariff peaks and tariff escalation that remain, applied predominately to processed or value-added fish products in key import markets. Such import duties, as well as countervailing duties and the proliferation of non-tariff barriers (often in the form of technical, safety or hygiene standards), continue to hinder processing and the economic development of fishery industries in many developing countries (FAO-Globefish, 2000). Many of these constitute demand side constraints, which limit market access. On the other hand, supply side constraints act similarly and involve institutional constraints.

The removal or easing of many traditional trade barriers such as tariffs and quantitative restrictions through the General Agreement on Tariffs and Trade (GATT) and more recently WTO have significantly increased fish trade in the past decade. Despite significant tariff reductions by both developing and developed countries, the selective use of tariffs, including tariff peaks, tariff escalations, countervailing duties, and several different types of non-tariff barriers related to food and environmental safety standards, continue to limit access to international markets. Despite the 'Doha Mandate' (the Ministerial Declaration of November 2001) to negotiate on Non-Agricultural Market Access (NAMA), disagreements on approaches and modalities toward liberalization, unpredictable adjustment costs due to changes in revenue structures in developing countries, and concerns about the negative impacts of tariff elimination on the sustainable use of fish resources, are all seen as major obstacles to the speedy liberalization of fish trade (Ahmed, 2005). Overall, market access and liberalization in both developed and developing countries have a significant bearing on the future patterns of fish trade, both among developing countries and between developed and developing countries (Delgado *et al.*, 2003).

## **MARKET CONSTRAINTS RELATED TO INTERNATIONAL FISH TRADE<sup>2</sup>**

Although traditional barriers to trade such as tariffs and quantitative restrictions have been partially removed through GATT and more recently WTO, the issues of market access and trade liberalization for fish commodities are seen as somewhat different than for most types of agricultural or industrial products. Fish came under the stricter trade rules that govern industrial products under the NAMA negotiations, resulting in about a 25 percent cut in import tariffs by developed countries against an overall reduction of 40 percent on industrial products. Major importing countries or regions (e.g. Japan, European Union (EU) and the United States of America) have adopted various approaches including preferential rates, duty-free access and near-total removal of tariffs for certain fishery products from developing countries. Major sources of conflict between exporting developing countries and importing developed countries are high tariffs on most processed products and tariff escalation that often discourages local processing in developing countries (Bulte and Barbier, 2005). On the other hand, developing countries (e.g. China, Thailand and the Philippines), wary of structural rigidities and decreased market shares due to trade liberalization, have also taken steps to reduce tariffs, quotas and subsidies in fish production and processing. However, a variety of conventions and special agreements of bilateral and multilateral cooperation (i.e. free trade agreements or reciprocal preferential agreements), which govern the negotiations on tariffs and access of fish products to developed country markets, are seen as clear obstacles to market access by many fish exporting countries.

Several new and emergent regulatory measures such as sanitary and phytosanitary (SPS), quality and composition standards, and labelling of source and origin, could have negative impacts on market access similar to previous tariff and quantitative restrictions. Many developing countries continue to face frequent rejections of exported fish, despite taking measures to conform to the food safety standards of importing

<sup>2</sup> Further details of this section can be found in Ahmed (2005).

countries, with serious economic implications. For example, the EU's five-month ban in 1997 on shrimp imports from Bangladesh cost at least US\$14.7 million in short-term losses. While the ban may have been justified in terms of sanitary standards not being met, it could be argued that lack of capacity to address the concerns of the EU and to meet required standards construes a barrier to trade (Rahman, 2001). Many developing countries argue that they did not have input into the SPS and technical barriers to trade (TBT) agreements established during the Uruguay Round of multilateral trade negotiations, and consider many of the resulting regulations and requirements as unfair and a significant obstacle to their market access.

### DOMESTIC CONSTRAINTS RELATED TO INTERNATIONAL FISH TRADE

The inability to respond to changing safety and quality standards is a major concern for developing countries. The high cost of compliance is a major economic obstacle to suppliers. Countries also face different economies of scale in meeting safety standards. This is true even at the level of individual processors and exporters within each country (Table 1). There is typically a higher unit cost of compliance for small-scale producers. Further analysis of these issues will need to focus on the following (Ahmed, 2005):

- assessing the existing pattern of post-harvest fish handling and processing and the technical capacity to comply with the health and sanitary standards;
- evaluation of the costs and benefits of food safety standards and other regulatory measures as they apply to exporters, processors, and poor fishers and fish farmers in developing countries;
- determining the characteristics of production, supply chain, trade policy processes and policy environments in developing countries, and identifying principal interest groups and institutional frameworks to vertically integrate the supply chain to meet the challenges of globalization;
- assessing the capacity of developing country institutions to link fisheries trade policies to fish supply chains (institutions, stakeholders, and processing industries) so that a comprehensive institutional network can be established to manage the quality of fish and seafood cost-effectively.

TABLE 1  
High cost of food safety compliance in selected Asian countries

Country	Total Investment of a Plant (000 US\$)	Yearly Operating Cost of a Plant (000 US\$)	Cost per Kg of Fish Processed (US\$)
Bangladesh	277.2	34.9	0.03 – 0.09
India	309.3	41.2	0.21 – 0.28
Malaysia	795.8	113.7	---
Thailand	380.9 – 404.8	47.6 – 71.4	0.01 – 0.014

Source: Dey *et al.* (2005)

Other constraints faced by developing countries are the adjustment costs and longer gestation gaps in restructuring government revenue sources. For many developing countries customs tariffs contribute significantly to government revenues, which are subsequently used as development expenditure targeting the poor. There is also evidence of a significant imbalance in the participation level between developed and developing countries in international negotiations. Many developing countries lack the capacity (technical and financial) to enable them to analyse the issues, to participate effectively in, and thereby to influence negotiations (Ahmed, 2005).

Developing countries also need to review their own trade policies in order to remove structural and institutional rigidities for trade within developing regions. The role of regional free trade agreements such as the Association of South East Asian Nations (ASEAN) Free Trade Agreement (AFTA) or East Asian Free Trade Agreement (EAFTA) will be significant in removing barriers to south-south trade.

Export restrictions and export taxes are common forms of regulation in developing countries. These create gross imbalances in trade between importing and exporting developing countries. (Ahmed, 2005).

### **IMPACTS OF TRADE LIBERALIZATION ON DEVELOPING COUNTRIES**

Increased liberalization of trade through the removal of tariff and non-tariff barriers will have multi-dimensional effects: on foreign exchange earnings, employment, profitability, as well as on societies and the environment. These effects will differ depending on: methods of fish production (i.e., capture or aquaculture), domestic fisheries management policies, and country-specific social, cultural, economic, and political factors. Fishers and fish workers are a highly heterogeneous group; changes in trade will impact on their livelihoods differently. However, some generalized costs and benefits of trade liberalization can be identified. These are discussed below, as are the impacts on three areas of key importance: vulnerable groups, producers and consumers, and the resource base.

#### **The benefits of trade liberalization**

There is general consensus that trade is good for economic development and can bring benefits to many people (Leadbitter, 2004). Deere (2000) suggests that the positive effects include specialization in areas where a producer nation has a comparative advantage, and the potential to generate higher economic growth, which can be used to alleviate poverty, reduce prices, and provide greater choice for consumers. A World Bank study demonstrated that during the 1990s per capita income in developing countries that were open to globalization, such as China and India, grew three times faster than other developing countries (Dollar and Kraay, 2001). The economic impacts of trade liberalization in fisheries are considered to be relatively high for fish exporting developing countries, where it can serve as a significant contributor to employment, income, and economic growth, thereby supporting poverty reduction strategies.

Other benefits of sustainable trade include (Kent, 2003):

- increased food security<sup>3</sup>;
- stabilized or reduced fish prices for consumers;
- improved quality fish products in local markets;
- employment generation where other income sources are scarce, including for women<sup>4</sup>;
- increased fishers' well-being, provided that increased wealth is equitably distributed;
- access to and diversification of overseas markets with a resulting increase in incomes in the fisheries sector, including the artisan sector;
- increased intra-regional trade;
- improved foreign exchange earnings from the export of high-value food products, which can be used to import much larger volumes of low-cost foods with large net nutritional gain;
- access to technological improvements;
- efficient resource use;
- increased competitiveness in international markets of some local fishing companies through better organization of production and management; and
- spill-over effects: such as when undersized or off-grade fish might be provided to the local community at very low cost, and pressure for improved working conditions and labour-based entitlements for workers, etc.

<sup>3</sup> Current food fish imports to LIFDCs are consciously utilized to enhance both direct food and indirect food security through imports for value-added re-export (Kurien, 2004).

<sup>4</sup> There is relatively easy labour absorption into the fishery sector, mainly because access is fairly open in nearly all of these countries.

It should be noted that the positive effects of trade in developing countries, such as increased employment as well as income and economic growth, do not immediately translate to or trickle down to the poorer segments of the population unless supported by proactive measures. Effective governance is central to managing the effects of trade.

### **Negative effects of trade liberalization**

Trade may increase food security and promote economic prosperity in general, but the negative impacts on welfare may be serious in particular locations and groups of people (Kurien, 1993). Local deleterious effects can include reduced fish supply for consumption, because of the reduction in fishing stocks or the diversion of staple food to fishmeal for aquaculture production, which can affect food security in areas with few natural food sources. Higher domestic prices of fish due to excess demand can particularly affect those who spend a relatively large proportion of their incomes on food.

Indirect effects can include, competition from artificially low-priced fish due to remaining subsidies in other exporting countries, and environmental degradation from aquaculture or harmful technologies, such as trawling, which seriously impacts on sustainability and long-term food security and incomes. Fish production for export can also divert government and foreign investment and other resources (e.g. land) away from fish for domestic markets, which in turn can displace fish workers from their traditional livelihoods. This can compound the already poor conditions in fishing communities where malnutrition problems, low standards of living, and high dependence on fish (a traditionally cheap and highly nutritious food) are known to proliferate (Kent, 2003). Governments do not always use the profits from fish trade to improve domestic production, increase food security, or to minimize conflicts between local and foreign fishers over access to fisheries, all of which might help to offset some of these negative effects.

Other costs of trade liberalization include:

- incentives for commercial fishing operations, including overseas' fleets, to enter the market, which may displace traditional fishers and threaten the livelihoods of fishing-dependent poor segments of society;
- increases in illegal, unregulated, and unreported fishing in response to increases in fish prices;
- degradation of the environment and promotion of transport-related pollution;
- technological impacts on natural resource sustainability in fish exporting developing countries, which may have severe long-term impacts, including negative ecosystem impacts resulting from excessive removal of target species or through by-catch;
- pressure to lower production costs including by weakening protection for workers and the environment, such as inadequate laws on pollution control, resource management, and child labour;
- potential non-transparent, unpredictable, and inappropriate use of non-tariff barriers to protect domestic industries, resulting in large economic losses;
- erosion of decision-making at various levels in the absence of adequate reforms in governance. Governments may not have the capacity to adjust institutions and policies to realize the benefits of trade, or to compensate for the negative impacts;

- inadequate capacity for involvement in trade negotiations may result in lower terms of trade;<sup>5</sup> and
- difficulties faced by small countries, especially small island developing states, in achieving the scales of production needed to compete in a global marketplace.

### **IMPACTS ON THE SUSTAINABILITY OF NATURAL RESOURCES IN FISH EXPORTING DEVELOPING COUNTRIES**

Unlike other highly traded agricultural commodities, almost 70 percent of tradable fish is still obtained from wild harvest, putting severe pressure on the sustainability of that resource. Trade-induced demand is viewed as one of the main reasons for increased fishing pressure in developing countries. Excessive removal of target and non-target species has led to overexploitation of specific fish species, and to a wider ecosystem impact on predator-prey relationships. In most fisheries, there are now less long-lived species and more short-lived opportunistic species (Brown and Ahmed, 2004). Rising trade is also a major reason behind the expansion of live reef food fish (LRFF) fisheries in the Indo-Pacific region, resulting in some of the more vulnerable species like groupers (the most desired fish species in the LRFF trade) to be heavily fished (Sadovy *et al.*, 2003).

Higher potential export earnings from fish may make domestic fish resources, especially high-value species in developing countries, more vulnerable to overexploitation. Efforts to recover stocks that have already deteriorated may be sacrificed or traded for short-term economic gains. The open-access nature of fisheries in some parts of the oceans, provide perverse incentives to over-fish. Subsidies aggravate this pattern by artificially lowering production costs.

Questions are increasingly being raised as to whether developing countries are mining their resource stocks and the environment in pursuit of immediate economic gains. This is especially the case where access agreements involve fees, which comprise a small percentage of the value of the landed catch. The biomass of most fish populations is at a low point. The biomass of most commercial species reached 20 percent of pre-fishing levels within 15 years of introducing industrial fishing, while that of large predatory species is now at 10 percent of pre-industrial levels (World Bank, 2004). Many believe that the failure to understand the dynamics of fishing and a lack of good governance are the main causes of this fisheries crisis (Pew Oceans Commission, 2003).

Forecasts of the impact of trade liberalization on resource sustainability are hampered by the lack of information. There is a lack of empirical evidence on the effects of trade flows and the potential application of trade rules and measures on fish, fish products, and services, as well as on the sustainability of fisheries and marine ecosystems. Knowledge about the structure of fisheries markets and of the links between market structures, prices, trade liberalization, and sustainability issues is also limited. The Organisation for Economic Co-operation and Development (OECD) predicts that liberalizing trade through further removal of trade barriers will increase prices in exporting countries and lower prices in importing countries until a new equilibrium is reached (OECD, 2003). The magnitude of these changes will depend largely on the management system in place. If an open access system exists, fishing efforts by exporting countries will increase, resulting in the decline of fish stocks in the short term and possibly a loss from trade in the longer term. In contrast, importing countries will reduce fishing efforts in the short term, which is expected to lead to a 'double dividend' as gains from decreased prices are realized, resources are transferred to higher yielding uses, and fish stocks recover in the longer term. The predictions are fairly similar for

<sup>5</sup> The conventional terms of trade in fishery products for the LIFDCs deteriorated in the WTO phase with considerable losses on potential earnings and food security implications (Kurien, 2004).

countries where the catch is controlled, although exporting countries may receive small gains from trade because there are no constraints imposed on individual fishers, leading to high levels of capitalization and effort. If both exporting and importing countries have efficient management systems in place, then both countries can gain from trade, similar to when trading in agricultural products.

Similarly, tariff reductions on value added processed products will result in increased supply and trade in processed fish. If there is effective management, then supply and demand will reach a new equilibrium level at a higher quantity of processed products. However, if there is open access, exporting countries will suffer stock overexploitation and importing countries will reap a double dividend as mentioned earlier. Since the majority of exporting countries are developing countries characterized by open access to fisheries resources or with poorly managed systems, and since the larger share of imports are bound for developed countries, this has serious implications on the long term sustainability of natural fish stocks. Under this scenario, an effective fisheries management regime is the most important determining factor for the outcome of trade liberalization: if trade increases without management improvements, fisheries may collapse.

To maximize welfare gains, policies should concurrently target market liberalization and improvements in fisheries management. The full benefits of market liberalization can only be achieved without compromising sustainability if proper fisheries management schemes are in place and if concurrent national policy reform is carried out to protect vulnerable groups and enable larger investments in capacity and infrastructure (OECD, 2003). Increased trade can bring increased financial resources that would enable the implementation of sustainable management programmes.

#### **ADDRESSING DIFFERENT BARRIERS BY DIFFERENT POLICIES: FISHERIES IN THE WTO PROCESS**

Currently, fisheries are subject to the disciplines of the Agreement on Subsidies and Countervailing Measures (ASCM), which deals with two types of subsidies relevant to the fisheries sector: prohibited and actionable subsidies. There is disagreement within the WTO negotiating group as to whether the provisions of the ASCM could be utilized to address sustainability concerns. The 'Friends of the Fish' countries argue that there is a need to adopt special disciplines on fisheries subsidies that aim to preserve fish resources. Others argue that any new policies promoting sustainability would need to be safeguarded with an appropriate means to minimize the institutional systemic risk, which the current proposals by Friends of Fish do not include (Seung, 2003). Some commentators question whether the WTO is the appropriate forum, suggesting that the FAO or UN more broadly is a more appropriate arena for negotiating the protection of global fisheries (Grynberg, 2003). Indeed, FAO, the UN Environment Programme (UNEP) and OECD are currently conducting research on these issues (Seung, 2003). The Doha Round launched negotiations to clarify the relationship between existing WTO rules and obligations set out in multilateral environmental agreements, and the trade measures taken under each type.

There is great concern that the WTO NAMA negotiations will hasten the negative impacts of trade such as the overexploitation of fisheries, by removing trade restrictions designed to protect the environment (e.g., tracing and labelling of fish products, certification and eco-labelling, and general tariffs). It is argued that even partial liberalization could increase trade and consumption if it affects the actual tariff levels applied (FOEI, 2004). Certain sectors, including fish and fish products, are being proposed for complete liberalization by countries such as the United States of America, Canada and Singapore. Perceived threats to fishery resources posed by such measures are major sources of concern for other WTO members including Japan, Korea and Taiwan (WTO, 2003). Another view held by countries such as India is the 'less than full reciprocity' approach.

Although the positions of individual WTO members vary on approaches and formulae for the reduction and elimination of tariff barriers, it is clear that further accelerated trade liberalization on fisheries products has the potential to benefit developing countries significantly, provided that they are able to comply with food safety and quality standards, and that fisheries governance is improved globally. The implementation of health and safety processes requires legal and institutional reform as well as investment to improve management systems. Although initial investment costs as well as ongoing operating costs to achieve compliance with SPS and other health and safety standards are considerable, data shows that compliance delivers value in the longer term by way of higher prices and easier access to world markets. (Dey *et al.*, 2005). For example, Thailand receives higher product prices in the international market because of its consistently higher performance in terms of standards compared to many other countries (Dey *et al.*, 2005). Consumers are willing to pay a premium price for safe and high quality food. Technical assistance or investing in safety standards in developing countries is one way to ensure the quality and safety of products on the international market.

### CONCLUSIONS

The view that trade will induce overexploitation and cause long-term harm to fishery resources needs critical and careful investigation. As mentioned above, the root causes of fisheries overexploitation are failures of resource management and governance, and weaknesses in the current property rights system. If developing countries are able to put in place proper management systems, trade will bring larger benefits. Poor governance and lack of accountability and transparency can cause misallocation and inequities in the flow and distribution of the benefits from trade to poorer segments of the population, and hence hinder progress toward poverty reduction in developing countries. Therefore, policies should focus on creating institutions, infrastructures, and capacity building to enable small-scale fisheries and farmers to participate in and take advantage of globalization, thereby preventing their exclusion and marginalisation. Agreements and actions must also be directed towards liberalizing imports in developing countries, to take advantage of growing south-south trade.

The primary focus of policy actions at WTO should therefore be to:

- harmonize trade policies, both tariff and non-tariff barriers;
- ensure social and environmental sustainability; and
- create a level playing field in negotiations on trade and market access issues including increasing the capacity of developing countries to participate in technical, institutional and legal areas.

A three-pronged strategy involving simultaneous progress in WTO agreements, national policy reforms, and multilateral and non-governmental organization outreach and assistance will be necessary to achieve a full and fast liberalization of fish trade. This would involve the complete abolition of all forms of tariffs. It would require a commitment to and action on investments in food safety standards, especially in developing countries with poor institutional capacities. A global agreement within the orbit of the WTO on fisheries governance and management, under which all open waters including trans-boundary fishery resources would be covered, is also needed. For the latter however, a separate body should negotiate the global agreements and their implementation in alliance with FAO, UNEP, and similar agencies of the UN.

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# Free trade agreements: implications for global seafood supply and demand

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## ABSTRACT

Free trade agreements (FTAs) have spread very rapidly since the mid-1990s. There is increasing acceptance that comprehensive FTAs can expand trade and act as a building block for World Trade Organization (WTO) liberalization. They have come to be seen as vehicles for deeper, faster and broader liberalization. The Australian Government, for instance, is open to considering FTAs which are comprehensive and in line with our WTO obligations, and which can deliver market access gains not achievable in a similar timeframe elsewhere. The paper considers the proliferation of FTAs in the context of their implications for the seafood industry in Australia and the global seafood industry more broadly.

## INTRODUCTION

Free trade agreements (FTAs) have become an important focus of international trade initiatives in the last decade or so, including for Australia. This paper ranges quite broadly over aspects of FTAs, including their characteristics and the reasons they are spreading so rapidly. Their implications, in particular for the global seafood industry, are considered against the backdrop of recent trends in the industry, although the main focus of the paper is on Australia's interests.

What are FTAs and why are they spreading?

In essence, FTAs liberalize trade in goods and services between two or more countries. Unlike customs unions, they do not involve common tariffs and other barriers for countries which are not part of the agreement, but they can, and increasingly do, cover a variety of other measures designed to facilitate trade between the parties, ranging from provisions on electronic commerce to intellectual property and competition policy.

FTAs are sanctioned under the World Trade Organization (WTO) under certain conditions. To comply with the WTO, agreements on goods must cover substantially all trade, and eliminate barriers between the parties within a reasonable timeframe (usually 10 years<sup>2</sup>). Agreements on services must have "substantial sectoral coverage" and eliminate "substantially all discrimination" within a reasonable timeframe.

There is increasing acceptance that comprehensive FTAs can expand trade and act as a building block for WTO liberalization by achieving deeper, broader, and more

<sup>1</sup> Views expressed are those of the author and should not be considered as representing the views of the Department of Foreign Affairs and Trade, portfolio Ministers, or the Australian Government.

<sup>2</sup> According to the Understanding on the Interpretation of Article XXIV of the General Agreement on Tariffs and Trade 1994, the time taken to eliminate barriers should exceed 10 years only in exceptional cases.

innovative outcomes between FTA partners, than might reasonably be expected to be achieved through the WTO, which requires consensus among its 148 members. However, there are also potential risks. These may arise from trade diverted away from other countries to FTA partners because of the preferences agreed to, lessened benefits due to the exclusion from FTAs of sensitive sectors such as agriculture, the cost of applying different rules among agreements, and the development of trade blocs. In general, the more liberal and forward looking an FTA, the greater is the likelihood that benefits will outweigh any costs.

FTAs have spread rapidly since the mid-1990s. A recent report to the WTO noted that a total of about 300 preferential agreements had been notified between 1948 and October 2004, although many of them were no longer in force. The striking statistic, however, is that more than half of these agreements, nearly 180, were notified after January 1995. The report forecast that some 300 agreements might be in force by the end of 2007, although the pace at which they are spreading in our region suggests that this might be a conservative estimate<sup>3</sup>.

There are a number of reasons for rapid growth in FTAs and other preferential agreements. The examples of European and North American integration (through the European Union's Single Market and the North American Free Trade Agreement (NAFTA)) were a spur in the early 1990s. In recent years, a variety of factors have been driving growth. FTAs have come to be seen as vehicles for deeper, faster and broader liberalization than the multilateral system can deliver. Countries have also moved to negotiate FTAs because they fear the costs of exclusion from key markets as their rivals negotiate better access. Doubts about progress in multilateral rounds have also encouraged countries to look to alternative options.

The costs associated with FTAs, for example, trade diversion costs, or adjustment costs, have declined as general trade barriers have declined. Some countries, for instance the United States of America in the Middle East, have sought to use FTAs to promote broader political or strategic objectives.

In East Asia, FTAs were slow to take hold, but are now spreading quite rapidly, with a large number of negotiations under way. There is a complex set of dynamics here.

- The Association of Southeast Asian Nations (ASEAN) has been actively seeking new agreements to underpin stronger economic growth and attract further investment. Within ASEAN, Singapore and Thailand have been particularly active in seeking bilateral FTAs. This has encouraged other ASEAN economies, such as Malaysia, to seek their own FTAs.
- There has been an historic shift of policy by Japan and Korea, both of which had long ruled out participation in FTAs. Japan, for example, which was one of the last countries to negotiate an FTA, has now concluded FTAs with Singapore and Mexico, and is at varying stages in considering or negotiating others.
- China and Japan are looking to increase their influence in East Asia, including by developing agreements with ASEAN economies.
- The United States of America has showed interest in FTA options in the region. To date, it has concluded only one FTA (with Singapore) in East Asia, and is negotiating with one other (Thailand).
- Other countries from outside East Asia (for example, India) are looking to FTAs with East Asian economies to further develop trading and investment links with them.

The number of agreements could well increase rapidly in the next few years. For instance, China has around nine FTA negotiations in process, and is pursuing a number

<sup>3</sup> Sutherland P., Bhagwati J., et al., *The Future of the WTO: Addressing Institutional Challenges in the New Millennium*, Report by the Consultative Board to the Director-General Supachai Panitchpakdi, World Trade Organization, Geneva, 2004.

of other possibilities. Korea is considering a number of new agreements since signing its first agreement with Chile in February 2003.

### **AUSTRALIA'S APPROACH TO FTAs**

Historically, Australia's FTA agenda focussed on New Zealand, first through the 1966 NZ Australia FTA and then through the 1983 Australia-New Zealand Closer Economic Relations Trade Agreement (known as CER). CER has developed into one of the world's most open and successful trade agreements, resulting in an impressive expansion of two-way trade between Australia and New Zealand. Australia also participated in some non-reciprocal arrangements with others, in particular in the South Pacific and Papua New Guinea. For some time after 1985, however, Australia did not enter negotiations for new FTAs.

In recent years, Australia has become open to considering FTAs with other economies which are comprehensive and in line with its WTO obligations, and which can deliver market access gains which could not be achieved in a similar timeframe elsewhere.

Agreements have now been concluded with Singapore, the United States of America and Thailand under this new approach. The agreement with Singapore entered into force in July 2003 and those with the United States of America and Thailand in January 2005. New FTAs are currently being negotiated bilaterally with China, Malaysia, and the United Arab Emirates, and along with New Zealand, with ASEAN as a group. An FTA feasibility study with Japan is also under way.

Australia's active approach on FTAs does not, of course, mean that it has abandoned the multilateral trading system. A substantial outcome from the Doha Round remains Australia's top trade priority and the primary focus of its trade diplomacy. For instance, Australian trade negotiators are working closely with other like-minded nations to secure an ambitious outcome for the seafood industry in the Doha Round. Disciplining fisheries subsidies that are production and trade distorting is a key objective.

In particular, the different levels of trade diplomacy can be pursued simultaneously and are mutually reinforcing. By delivering access gains faster in priority markets, bilateral and regional agreements can help set a high benchmark for the multilateral system and stimulate further liberalization under it. At the same time, WTO rules and commitments provide a basis for further bilateral or regional liberalization.

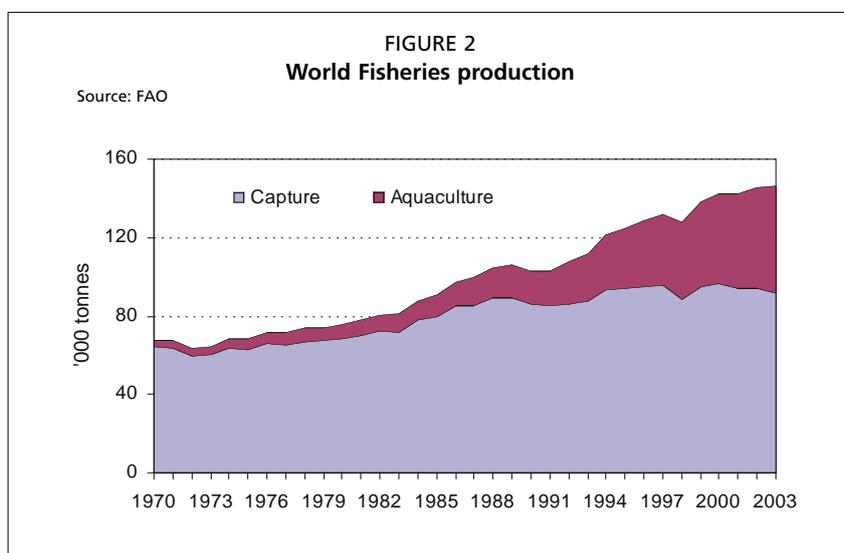
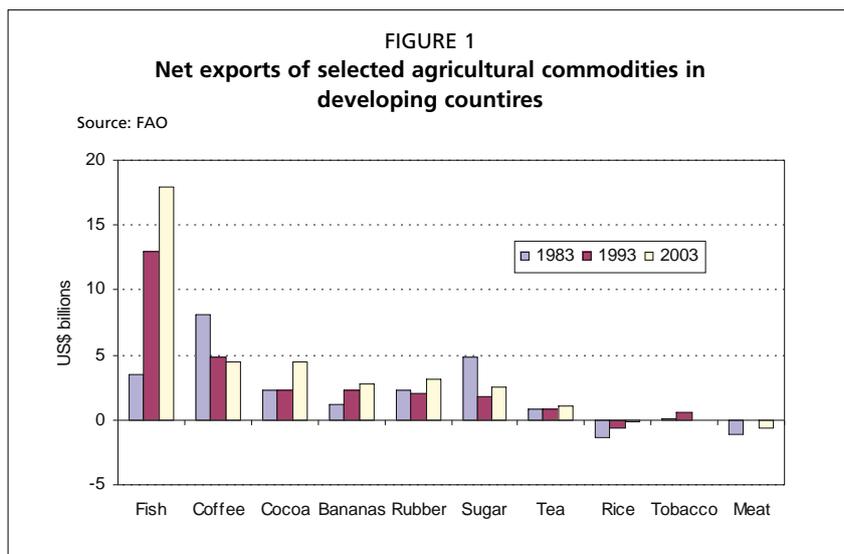
All this, as the Deputy Prime Minister and Trade Minister, Mark Vaile, has pointed out, makes for the most active trade agenda in Australia's history.

### **THE GLOBAL SEAFOOD INDUSTRY**

International trade in fish and fishery products has roughly quadrupled over the last twenty years. The value of world fish exports has risen from US\$16 billion in 1980 to US\$58 billion in 2003, with developing countries accounting for around half of that trade. Developed countries account for around 80 percent of total world imports, most of which is imported by the European Union (EU), Japan and the United States of America.

For many developing countries, trade in fish is a significant source of foreign currency earnings, in addition to the sector's important role of income generation, employment and food security (Figure 1).

Because fish is highly perishable, over 90 percent of seafood products are traded internationally in frozen or in processed form. In 2003, 62.6 percent of the world fish supply came from capture fisheries production. The remainder came from aquaculture (Figure 2). As natural fisheries approach their optimal level of utilisation, growth in fisheries production to meet demand can be expected to come from aquaculture. This can already be seen in recent trends in the relative contribution of aquaculture and capture fisheries to food fish consumption, especially in China.



More generally, trade in developing countries is gradually evolving from the export of raw materials for the processing industry in developed countries to high-value live fish or value-added products. Some countries are also importing raw material for further processing and re-export.

There are clear efficiency gains to be realised by avoiding imposition of trade barriers and reducing tariffs on seafood products. In particular, freer trade will encourage the efficient, cost-effective, development of aquaculture and the processing of fish from capture fisheries.

#### **IMPLICATIONS OF FTAs FOR GLOBAL SEAFOOD TRADE**

The challenges faced by the global seafood industry exist regardless of FTAs. This applies especially to the challenges to developed country

producers from developing countries, with their access to lower labour costs as well as emerging aquaculture technologies. FTAs can, however, help to harness many of the potential gains from more efficient and effective use of resources and market access opportunities available to the industry, including through the use of new technologies. This can benefit not just FTA partners. It can also help to pave the way for broader agreements elsewhere, including in the WTO.

After the Uruguay Round, completed in 1993, average weighted tariffs on fish were reduced to 4.5 percent in developed countries. However, this low rate hides some high tariff peaks for selected species and products, and cases of tariff escalation, where tariffs escalate as fish products are processed and subject to value adding. Seafood tariffs are generally higher in developing countries. This not only inhibits trade with the developed world, but also trade between developing countries.

Seafood trade is also hampered by non-tariff barriers. For instance, local regulations often complicate and disrupt the efficient management of supply chains. These can stall the implementation of arrangements to capitalise on new technologies for cost effective ways to ensure freshness and greater safety.

It is hoped that the Doha Round will deliver substantial further liberalization. In the meantime, for seafood as for other industries, FTAs can generate access gains faster in priority markets, both bilateral and regional, and set new benchmarks for further liberalization.

FTAs not only improve access for seafood exporters in key markets by eliminating or reducing tariff and non-tariff barriers, they can also:

- boost market security for producers by diversifying the range of markets open to them if one or other major markets are disrupted, such as during the Severe Acute Respiratory Syndrome (SARS) crisis;
- boost investment, output and employment in the seafood industry, particularly in fishing communities, including through investment in new technologies, and in joint ventures, boosting development of the local industry all along the supply chain, including in the fast emerging aquaculture sector;
- benefit other sectors participating in or affected by seafood supply chains (including, for example, the construction industry and transport and related logistics sectors);
- reduce the cost of imported raw materials and capital equipment provided from partner economies; and
- spur industry efficiency and productivity by sharpening competition between local producers and producers in FTA partner countries.

### **IMPLICATIONS FOR AUSTRALIA**

A more tangible sense of the benefits available to Australia from its FTAs, including for the seafood industry, can be gleaned by looking at its two most recently agreed FTAs: with the United States of America, and with Thailand.

The Australia-United States FTA (AUSFTA) provides open access to the world's largest economy, and the most dynamic and technologically advanced of the major developed economies. Seafood trade became duty free from day one. United States' tariffs on all Australian fish and fish products were removed, including the 35 percent tariff on canned tuna, the 15 percent tariff on canned sardines and the 7.5 percent tariff on crabmeat. In all, 48 separate rates of duty on various seafood products were removed, providing Australian producers with an opportunity to access the lucrative United States market. Australia's tariffs, such as the 5 percent tariff on canned tuna, which were somewhat lower, were also all removed.

The Thailand-Australia FTA (TAFTA) similarly offers important benefits. Thailand is already an important market for Australia (its ninth largest for manufactures), but many Australian companies had been locked out of the market by high tariffs, for instance on motor vehicles. Under TAFTA, more than half of Thailand's tariffs on Australian goods were eliminated on 1 January 2005; 98 percent will be reduced to zero by 2010.

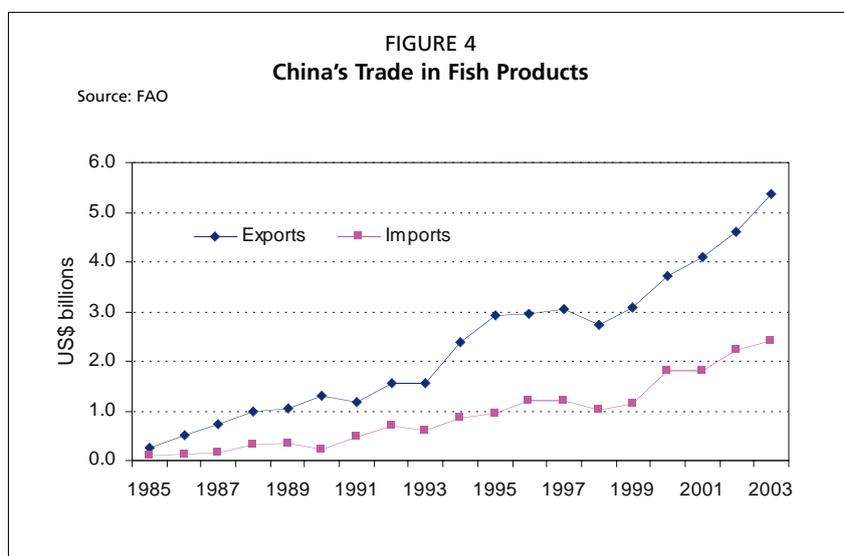
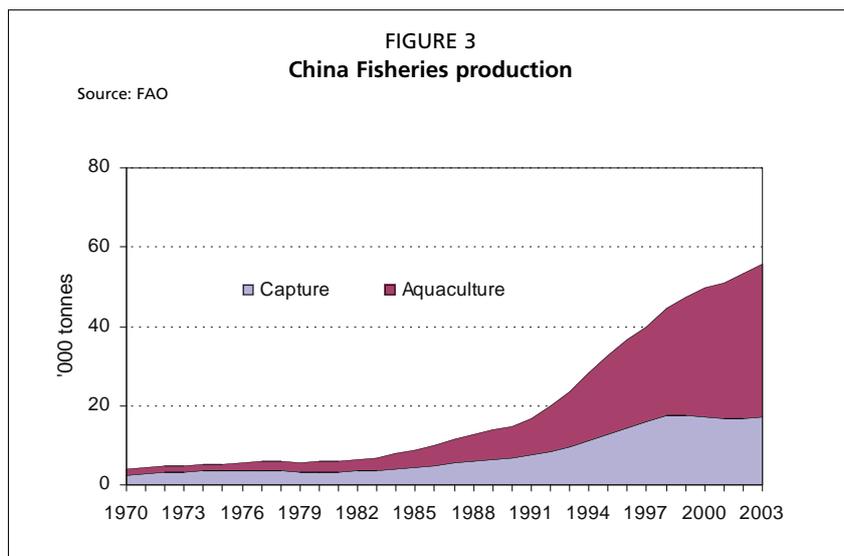
Under TAFTA, seafood trade will be tariff free. Australia reduced its tariff of 5 percent on canned tuna to 2.5 percent on entry into force of TAFTA and will eliminate this tariff in 2007. Thailand will eliminate all tariffs on fish products. These were predominantly at 5 percent, with some as high as 30 percent. Some 20 percent tariffs were eliminated on 1 January 2005. The rest will phase to zero by 2010.

In both AUSFTA and TAFTA, Australia retains its right to anti-dumping or countervailing action in the event of unfair trade causing material injury to specific industries.

### **THE FORWARD AGENDA AND ITS IMPLICATIONS FOR SEAFOOD**

The FTAs Australia is negotiating with China, Malaysia, the United Arab Emirates, and with the 10 ASEAN economies also have the potential to boost Australia's trade in seafood and deliver mutual benefits to the seafood industries in partner economies. The FTA being negotiated with China is potentially the most significant of these agreements.

With or without an FTA, China's economic emergence poses great challenges and opportunities for Australian businesses. That said, a comprehensive FTA would



offer Australian seafood producers substantial opportunities, especially in higher unit value products such as lobster and abalone, in what is now Australia's second largest market overall for merchandise exports. For seafood, China's average tariff is currently 10.4 percent, after being as high as 15.3 percent in 2001 prior to accession to the WTO, although Most Favoured Nation (MFN) seafood tariffs are still as high as 17 percent.

Australia wants to work with China to address not just tariff barriers, but also to address customs and a range of 'behind the border' issues, including intellectual property rights, to ensure that standards are transparent and applied consistently. Australia also wants to progress issues of shared interest such as the sustainability of fisheries, promoting aquaculture, and encouraging joint ventures.

Different industries will be affected in different ways by a FTA with China. The Australian Government is continuing to consult extensively with industry, including the seafood industry, building on the consultations already undertaken during the joint feasibility study completed earlier in 2005. The Government welcomes submissions on industries' interests and concerns relevant to the negotiations. As with all Australia's other FTAs, the Government is committed to maintaining effective trade remedies against imports causing material injury to domestic industry under any agreement with China.

Agreements with ASEAN, Malaysia and the United Arab Emirates similarly offer prospects of improved access, and will build on Australia's already strong links with those economies. Australia's annual seafood exports to ASEAN countries are currently around AU\$130 million, or 9.5 percent of those to all destinations. In most ASEAN economies, seafood exporters face a range of tariff and non-tariff barriers. In Malaysia, for example, average tariffs on fish and fish products are low at 2.9 percent but there are peaks that affect key exporters, with several lines as high as 20 percent. Eliminating such barriers under an FTA could open up new opportunities for both the Australian and Malaysian industries, with flow-on effects for other industries supplying inputs or

benefiting more broadly from higher incomes. In other ASEAN countries, examples of average tariffs on seafood include 5.3 percent in Indonesia and 8.4 percent in the Philippines.

Seafood exports to the United Arab Emirates amount to just AU\$1.2 million. The UAE is tariff free but there are concerns about shelf life and labelling requirements, and about legalisation of documents, which need to be addressed.

## CONCLUSIONS

The picture outlined above is one of a number of economies simultaneously negotiating free trade agreements in the region, or positioning to negotiate them. It is also part of an emerging larger picture involving the future regional order in the Asia Pacific area and, from Australia's perspective, its place in it.

Australia's approach has been to seek to deepen its economic engagement with its trading partners. This is delivering important benefits in a number of areas and across a broad range of industries, not least the seafood industry, as they adjust to take advantage of the opportunities that closer engagement presents.

In the case of the seafood industry, the key challenges are to harness the major changes under way to deliver the greatest benefits possible to both producers and consumers. In particular, the increasing role of aquaculture and the development of more advanced supply chain technologies, along with the emergence of China as a major exporter and importer of seafood, are together fundamentally changing trading patterns worldwide.

Comprehensive FTAs help to quicken the pace of integration between key markets and to set benchmarks for agreements elsewhere, including in the WTO. In doing so, they can play an important role in putting in place trade rules that encourage production to meet demand as effectively as possible, and can contribute to the continuing development of trade in seafood worldwide.

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# International food standards: trends and significance to the seafood sector

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## ABSTRACT

The FAO/WHO Codex Alimentarius Commission (CAC) or Codex is an intergovernmental body whose purpose is to develop international food standards with the dual objective of protecting the health of consumers and ensuring fair practices in food trade. Australia, as a member of Codex, and in the interest of ensuring that the international standards are based on science, participates in standards development within Codex.

Issues relevant to the seafood industry span a number of Codex Committees. These include the Codex Committee on Fish and Fishery Products, as well as a number of horizontal committees relating to all commodities, including seafood. Some standards under discussion are particularly pertinent to seafood, including the development of Principles for the Application of Traceability/Product Tracing in the Context of Food Import and Export Inspection and Certification Systems. The Codex Committee on Food Hygiene (CCFH) has also stepped up its work in the field of biological risk management, including developing risk profiles for a number of seafood. This paper covers current developments in Codex and their relevance to the seafood sector.

## INTRODUCTION<sup>1</sup>

The Codex Alimentarius, or the 'food code', has been under development by the FAO/WHO Codex Alimentarius Commission (CAC) for over 40 years and has grown to become the global reference point for national food control agencies and international food trade. Codex has an enormous impact not only on national food regulatory bodies, but also on the thinking of food producers and processors, as well as on the awareness of the end users, consumers. Its influence extends to every continent, and its contribution to the protection of public health and fair practices in the food trade is immeasurable.

The Codex Alimentarius system presents a unique opportunity for all countries to join the international community in formulating and harmonizing food standards. It also allows them a role in the development of guidelines for hygienic food processing practices and recommendations relating to compliance with Codex standards.

Like other governments, the Australian Government recognises the significant impact Codex standards can have and places significant resources into Codex

<sup>1</sup> *Understanding the Codex Alimentarius*. World Health Organisation, Food and Agriculture Organization of the United Nations, Rome 2005.

negotiation processes, especially to uphold Australian food safety and industry competitiveness and export trade interests.

Codex has relevance to international food trade and the ever-increasing global food market. The advantages of having universally uniform food standards for the protection of consumers are self-evident. It is not surprising, therefore, that the World Trade Organization (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) and the Agreement on Technical Barriers to Trade (TBT) both encourage the international harmonization of food standards. Products of the Uruguay Round of multinational trade negotiations, these Agreements cite international standards, guidelines and recommendations as the preferred measures for facilitating international trade in food. As such, Codex standards have become the benchmarks against which national food measures and regulations are evaluated within the legal parameters of WTO Agreements.

The World Organisation for Animal Health (OIE) standards are also recognised by the WTO as international sanitary rules. The OIE is an observer organization of CAC. This is useful for encouraging the flow of information and the exchange of data, and avoids gaps and duplication between the two standards setting bodies. The relationship between Codex and OIE is particularly important for addressing human pathogens carried by food-producing animals that may transfer to humans via food. The relationship between Codex and OIE also facilitates the development of 'whole of supply chain' requirements to address food hazards in a more comprehensive manner.

CAC operates under a committee system, consisting of the Commission and its Executive Committee plus commodity, horizontal, specific issue task forces and regional committees.

The Commission chooses proposals for new international standards using a set of established criteria. Work is allocated to the most suitable Committee and all proposals must then undergo an eight-step standards development process before a new standard can be adopted by a full meeting of the Commission. Throughout the development process, expert technical bodies are often engaged and more than 170 countries are consulted.

## **ISSUES FOR CONSIDERATION BY THE SEAFOOD INDUSTRY**

Issues relevant to the seafood industry span a number of Codex committees. Apart from the work programme being undertaken by the Codex Committee on Fish and Fishery Products, a large amount of work is undertaken within horizontal committees that cover issues relevant to all commodities, including seafood.

Some standards under discussion within Codex may have a particular impact on the seafood industry.

### **Codex Committee on Food Imports and Exports Inspection and Certification Systems**

The Codex Committee on Food Import and Export Certification and Inspection Systems has developed 'Proposed Draft Principles for Application of Traceability/Product Tracing in the Context of Food Inspection and Certification Systems'. A definition of Traceability/Product Tracing was adopted by CAC in 2004: "Traceability/Product Tracing: the ability to follow the movement of a food through specified stage(s) of production, processing and distribution". Product tracing is an important tool at the regulatory level to ensure that food safety incidents can be quickly identified and managed. Product traceability is also becoming an important commercial tool for quality assurance.

This CAC document relates to the application of traceability/product tracing within food inspection and certification systems and takes into consideration other work

within Codex Committees and within other international organizations such as the International Organization for Standardization (ISO).

A working group, chaired by Australia, with the assistance of two vice chairs (Argentina and Norway), prepared a revised set of Principles for the Application of Traceability/Product Tracing for discussion at a meeting of members of the working group in Brussels in September 2005. The outcomes of this working group meeting, that is, the revised set of principles, will be discussed further at the 14<sup>th</sup> Session of CCFICS in Melbourne in late 2005.

### Food Hygiene

Diseases caused by food borne microbial hazards constitute a worldwide public health concern. The incidence of food-borne diseases has increased in many parts of the world. The globalization of food markets has made managing the associated risks more challenging.

The Codex Committee on Food Hygiene covers issues relevant to seafood in particular, the Proposed Guidelines on the Application of General Principles of Food Hygiene to the [Control] of *Listeria Monocytogenes* in Ready to Eat Foods, (Adopted at Step 5 at 28<sup>th</sup> Session of Codex Alimentarius Commission)

The scope of these proposed Guidelines will be applicable throughout the food chain, from primary production through to consumption. Based on available risk assessments and epidemiological evaluation, the guidelines focus on control measures to prevent the contamination and growth of *Listeria Monocytogenes* in ready-to-eat foods. The Guidelines highlight key control measures affecting factors that influence the frequency and extent of contamination in these foods. Control measures are expressed in general terms within the Recommended International Code of Practice – General Principle of Food Hygiene (CAC/RCP 1-1969, Rev. 3-1997, Amd. (1999)), as part of a general strategy for the control of food-borne pathogens. It is assumed that these guidelines will facilitate the implementation of the General Principles of Food Hygiene. The principles reiterate the need for special attention for the control of *Listeria monocytogenes*.

The Codex Committee on Food Hygiene has increased its commitment to and the extent of its work in the field of microbiological risk analysis, particularly with respect to microbiological risk assessment and microbiological risk management. As part of this effort, CCFH has identified several pathogen/commodity combinations that present a potential significant public health threat for food subject to international trade and for which risk management strategies are appropriate.

A Codex discussion paper *Risk Management Strategies for Vibrio spp in Seafood* presents a risk profile for the occurrence of *V parahaemolyticus* in fish and shellfish. Based on these findings the authors provide recommendations to the Food Hygiene Committee on the need to review existing Codex texts depending on whether they provide sufficient information for the hygienic control of *Vibrio* in these products and, if not, to recommend the development of specific risk management guidance.

The paper recommends that the Committee request the independent FAO/WHO Joint Expert Group on Microbiological Risk Assessment to assess the impact of *V parahaemolyticus* on human health. This assessment would cover a range of areas including: the temperature of seafood throughout distribution and storage; the effects of washing with disinfected seawater or potable water after harvest; the impact on the number of food-borne outbreaks that would occur with guidelines that allow no more than certain levels of the pathogen in seafood; and the effects of different post harvest treatments.

### **Viruses in Food**

Food-borne outbreaks have occurred in which people are exposed simultaneously to mixtures of pathogenic viruses. Progress in the field of virus detection in food is slow and fraught with technical complexities.

A discussion paper, outlining progress in understanding viruses that may be transmitted through the food chain, will be considered by the Food Hygiene Committee at its next session in 2006. This document provides a sample of different food sectors and describes the potential public health problems. One area highlighted is the role of food-borne transmission of noro-viruses.

### **Biotechnology**

Codex has re-convened the Ad Hoc Intergovernmental Task Force on Food Derived from Biotechnology. This Task Force will meet in Chiba, Japan in September 2005. The main agenda item for the meeting is a discussion on the future work programme for the Task Force. In determining its priorities the Task Force will take into consideration its four-year timeline for finalising any work undertaken.

Proposals for new activities put forward by member countries include work on foods derived from transgenic animals and foods derived from cloned animals. Japan has specifically put forward a proposal for new work on foods derived from recombinant-DNA fish.

## **STAKEHOLDER ENGAGEMENT**

By having knowledge of the standards being discussed in Codex, industry members gain the advantage of being able to contribute to the development of these standards, and the opportunity to strategically plan for the future impacts the standards may have on their industry. All food producers and processors who may be affected by Codex standards should be encouraged to review and comment on standards under development. Indeed, as Codex negotiations work on a government-to-government basis, industry technical input is vital to ensure that producer and processor interests are taken into consideration.

In Australia, Codex Australia is the liaison point with the food industry, consumers, traders and other stakeholders. This liaison ensures that the government is provided with an appropriate balance of policy and technical advice on which to base Australia's input into the work of Codex. Similar 'Codex Contact Points' are in operation in other countries.

Codex Australia, together with the National Food Industry Strategy, has put significant resources into improving stakeholder access to Codex standards under development, and to facilitate their input into Australian positions in advance of Codex committee meetings. Apart from providing information regarding the structure, functions and activities of the Codex Alimentarius Commission, the Codex Australia website allows stakeholders to register to receive Codex documents and summaries pertinent to their industry sector. Stakeholders can also register to receive the e-bulletin 'Setting the Standard' that regularly reports on Codex happenings. The website also provides a map of Codex activities which summarises the issues being dealt with across all Codex committees. In addition, Codex Australia has established an annual Codex Industry Stakeholder Forum. The forum offers stakeholders an update of Codex activities, and the Australian Government an opportunity to listen to industry priorities.

Australian positions on Codex matters are managed in the following way. Stakeholder comments are collated by Codex Australia and forwarded to the appropriate Australian delegation leader. Australian positions then undergo a consultation process via inter-agency meetings and through an Advisory Panel for each committee, which includes

interested government, industry and other stakeholders. Similar Codex consultation processes have been established in other countries.

## **CONCLUSIONS**

All industry stakeholders, in all countries, should engage in the Codex process to ensure that their interests are taken into consideration in the development of these important international standards. In this way, standards will be informed by the fullest information possible and are more likely to achieve the dual objective of protecting the health of consumers, and ensuring fair practices in food trade.