Report of the

EXPERT CONSULTATION ON INTERNATIONAL FISH TRADE

Rio de Janeiro, Brazil, 3–5 December 2003
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PREPARATION OF THIS DOCUMENT

This document is the final report of the Expert Consultation on International Fish Trade, which was held in Rio de Janeiro, Brazil, from 3 to 5 December 2003. The papers are submitted as presented by the authors.

Distribution:

All FAO Members
Participants
Other interested national and international organizations
FAO Fisheries Department
FAO Regional and Subregional Fishery Officers
The Expert Consultation on International Fish Trade met in Rio de Janeiro, Brazil, from 3 to 5 December 2003 to analyse the factors influencing fish trade and their impact on the future development of trade. Special emphasis was given to a possible impact in developing countries with the aim to give guidance to the future work of the FAO Fisheries Department, particularly the Fish Utilization and Marketing Service. Fourteen experts from 12 countries, invited in their individual capacity, attended the meeting. They analysed the impact of the resource situation and its sustainability on fish trade, and discussed globalization in the fisheries sector, taking into account the vertical concentration in the distribution channels and the resulting market power of retailers and supermarket companies. The consultation covered the distribution of cost and benefits in the food chain, the importance of value addition and quality cost for developing countries. The experts concluded by drafting 19 recommendations for FAO action.
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## MAIN CONTRIBUTION PAPERS PRESENTED AT THE EXPERT CONSULTATION ON INTERNATIONAL FISH TRADE

**RUCKES, Erhard**  
“World fish trade, demand forecasts and regulatory framework”  

**MAHFUZUDDIN, Ahmed**  
“Outlook for fish to 2020 – Supply and demand in changing global markets”  

**WIEFELS, Roland**  
“Consumer requirements for supply from sustainable resources”  

**ANDERSON, James L.**  
“Aquaculture and the future: why fisheries economists should care”  

**ANDERSON, James L.**  
“Fisheries, aquaculture and trade: the future”  

**CYRIAC, José**  
“Presentation on behalf of the Marine Products Export Development Authority (MPEDA) – Advantages and constraints of the fish industry in developing countries, the case of India”
ROCHA, Itamar
“Advantages and constraints of the Brazilian fishing industry” 87

SCHMIDT, Carl-Christian
“Globalization, industry structure, market power and impact on fish trade – Opportunities and challenges for developed (OECD) countries” 93

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JOSUPEIT, Helga and FRANZ, Nicole
“National, regional and international trade, competition and complementation, including the role of small-scale fisheries” 124

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“Import requirements and quality costs” 149
EXECUTIVE SUMMARY OF THE REPORT

Resource situation, sustainability and impact on fish trade

1. Output of marine and inland fisheries stabilized during the last decade, whereas marine and inland aquaculture showed a positive trend with yearly growth rates of production in the order of about 10 percent. Aquaculture is likely to be the greatest source of increased fish production, and its share in total food fish supply by 2030 can be almost equal to the food fish supply from capture fisheries. People in the developing world will increase their consumption of both high – and low-value food fish, whereas consumption will remain static in the developed countries. The increase in aquaculture production is dominated by China. It is expected that aquaculture from developing countries will continue to play an important role also in the future.

2. Developing countries will not only continue to lead in fish production, their share in trade too will continue to expand. Trade will grow among developing countries and between developed and developing countries in response to escalating demand due to population increase, urbanization and income growth, as well as continued dependence of the developed countries on food fish imports. The opportunity to capture more lucrative export markets will require pursuing an improved quality management. Developing countries need to find ways of including smaller-scale producers, processors and fish workers in these arrangements. On the other hand, developing countries need to reduce tariffs and remove import restrictions to facilitate trade among developing countries. A continued strong demand over supply of fish products will cause increase in the overall fish prices in real terms, however, the technological advantages in aquaculture and the competition from other food commodities will keep the increase moderate. Particularly populous countries like India or Brazil, are likely to remain at low seafood consumption levels and present good opportunities for developing their domestic markets for these products. The state of development of the seafood distribution chain represent a bottleneck for domestic consumption and therefore also for seafood imports in those countries.

Globalization, industry structure, market power and impact on fish trade

3. Following the introduction of national Exclusive Economic Zones (EEZ), globalization in fisheries has shifted principally to the areas of trade in fish and fishery products, foreign direct investments in harvesting and processing (localization) and to provision of fisheries services. The earlier the opportunities and challenges are addressed and positive adjustment paths are identified, the more successful the fish harvesting and processing industry will be in reaping benefits from globalization and in avoiding negative repercussions. Fisheries markets have become more open and traditional trade barriers have been reduced significantly, but there are still obstacles along the globalization avenue; tariff escalation is a particular concern. For developing countries, difficulties are also caused by product and processing standards and other technical barriers.

4. Research on the restructuring of the food systems has demonstrated the extraordinary speed of supermarket expansion in the developing world and the way its influence is extending beyond the limits of large countries and metropolitan cities. This development is promoting a global transformation of food distribution and production systems. The effects of globalization should also focus on this reorganization of domestic food supply systems, which is now subject to radically new access conditions based on exacting quality and logistics criteria. It is to be expected that supply structures will be radically modified, as the demands for quality, consistency, punctuality and scale are imposed backwards along the fish-food chain. In both aquaculture and capture fishing, therefore, the modern distribution system is becoming more involved in the direct organization of its supply chains possibly resulting in changes of the industry structure. As in developed countries, it is likely that supermarket companies will become directly involved in fish-farming.
Cost and earnings, value addition and distribution of benefits

5. The question of how retail value is distributed through the food value chain has been of interest to policy makers for some time. Available case studies do not provide a clear picture in this regard. Given the fact that seafood products are increasingly exported as fresh products directly to the United States or the European Union markets, it might give fishers and primary processors better income if they would be able to achieve a high quality, improved handling and overall shorter marketing channels in order to obtain a higher share of the retail value.

6. Value addition in developing countries is a cost factor which needs to be analysed on a case by case basis. Value can be added by careful selection and handling of raw materials, assurance of reliable supply, meticulous packaging and presentation, careful transportation, and prompt delivery. These usually require investments in market research and in building relationships throughout the marketing chain. There is also a need for additional financing for working capital and new investment in human and physical capital. Further processing does not necessarily yield a higher value added. The test is whether the cost of value addition can be recovered and if there is a willingness to pay for it. Developing countries may have a comparative disadvantage when it comes to technical advantages, finances, customer relations and marketing but they have a comparative advantage with regard to natural resources, cost of production and flexibility within companies.

7. To be competitive in the future, developing countries need to take an active role in defining requirements of hygiene, quality and safety. The focus of the value adding should be on the entire value chain, with emphasis on vertical integration and through cooperation with other developing countries.

Main recommendations for FAO:

The full list of all recommendations is split by session, see para. 14, para. 37 and para. 51.

a) FAO should study the impact of aquaculture on international fish trade and investigate several options for developing countries.

b) FAO should develop science based criteria for issues affecting international fish trade.

c) FAO should strengthen its support to the FISH INFONetwork. The network should intensify exchange of experience regarding entrepreneurial achievements and innovations in the sustainable use of fishery resources and consumption promotion.

d) FAO should undertake a detailed analysis of the impact of global fish trade liberalization and barriers to trade in fishery products with special options (among developing countries and in domestic markets).

e) A consultation mechanism should be created between FAO and the private industry with the purpose of increasing the benefits which developing countries can derive from international fish trade.

f) FAO should assist developing countries in becoming part of the new vertical integration in the value chain, in view of the fact that concentration of purchasing power and increasing size of aquaculture companies create new challenges for smaller producers in developing countries.

g) FAO should assist developing countries in meeting requirements of technical barrier to trade (TBT) and sanitary and phytosanitary measures (SPS) in order to avoid that such standards become technical barriers to trade between developing and developed countries; a concrete program of assistance to the least developed countries should be a specific task.
h) FAO should study the impact of vertical concentration, with specific attention to supermarket companies in relation to levels of production, value-added processing and wholesaling; it should investigate transparency, trade and markets, as well as investment and trade in services.

i) The feasibility of value addition for seafood products in developing countries should be analysed and case studies by species, product and country should be prepared for advice on attractive options.

j) FAO should create a mechanism for sharing experience so that developing countries may benefit from the know how of the private sector and the developed countries.
OPENING

1. Lahsen Ababouch, Chief, Fish Utilization and Marketing Service, FAO, welcomed participants on behalf of the FAO, explained the purpose of the Expert Consultation and expressed his thanks to those who had prepared presentations for discussion. Roland Wiefels welcomed the experts on behalf of INFOPESCA expressing best wishes and his expectations for a successful meeting. Participants presented themselves providing information on their professional background and relation to the subjects of the Expert Consultation.

2. The coordinator of the background paper “World fish trade, demand forecasts and regulatory framework”, Erhard Ruckes, provided a summary of the paper highlighting main points of importance for the deliberations of the Expert Consultation with a tentative list of issues on which participants may wish to comment and possibly express recommendations. It was explained that the list was not to be considered comprehensive nor did it present a priority ranking.

3. Following a short explanation of FAO’s way of working in the context of the list of issues, industry experts informed about their perceptions of FAO which was seen as a large and reliable knowledge base. Furthermore, the organization’s expertise in developing countries was very much appreciated. Industry had a strong interest in FAO as a serious advisor which assures it to be appropriately informed and guided. In particular, FAO and the FISH INFONetwork’s capacity to disseminate information to a large number of small operators in developing countries and to encourage the application of appropriate technologies were mentioned as pertinent capabilities.

4. It was suggested to explore ways for further collaboration with the private sector, considering the creation of cooperative arrangements between FAO and industry and its supporting institutions and associations.

FIRST SESSION: RESOURCE SITUATION, SUSTAINABILITY AND IMPACT ON FISH TRADE

5. The following presentations were made during this session:

   a) Ahmed Mahfuzuddin of WorldFish Center: “Outlook for fish to 2020 - Supply and demand in changing global markets”;

   b) John Kilpatrick of Nutreco: “How do importing companies react to the changing status of resources”;

   c) Roland Wiefels of INFOPESCA: “Consumer requirements for supply from sustainable resources”;

   d) James Anderson of University of Rhode Island: “Impact of aquaculture on resource sustainability and trade”;

Ahmed Mahfuzuddin: “Outlook for fish to 2020 - Supply and demand in changing global markets”

6. In keeping with the trends in the last two decades, developing countries will not only continue to lead in fish production, their share in trade too will continue to expand, as both among developing countries and between developed and developing countries trade will grow in response to escalating demand for fish in developing countries due to population increase, urbanization and income growth, and continued dependence of the developed countries on food fish imports. In the coming years aquaculture is likely to be the greatest source of increased fish production, and its share in total food fish supply can be almost equal to the food fish supply from capture fisheries. People in the developing world will increase their consumption of both high - and low-value food fish, whereas consumption will remain static in the developed countries. The turnaround that occurred in the international fish trade in the past decade, that
created a significant net export for developing countries, will continue to work in favour of the developing countries with export markets expanding further due to growing trade among developing countries. Although China, India, and Latin America are all projected to be net exporters in 2020, only in Latin America are net exports forecast to represent a significant share of domestic production through 2020. In other developing regions, demand is likely to outstrip supply signifying a further stronger role for international fish trade, particularly the trade among developing countries.

7. While developing countries will benefit from emerging trade among developing countries, those that can address new hygiene and food safety requirements, fair labour practices, and environmental needs will have the opportunity to capture more lucrative export markets by pursuing better quality management at lower cost. But, if the poor are to benefit from this potentially profitable activity, policy makers will need to find ways of including smaller-scale producers, processors and fish workers in these arrangements. On the other hand, developing countries need to reduce tariffs and remove import restrictions to facilitate trade among developing countries. The continued high demand situation will cause increase in the overall fish prices in real terms whereas the price of substitutes such as meats, egg and milk will continue to decline. Although the rise in price for high-value finfish and crustaceans, often directed for export, and fish meal and fish oil, used for high-value aquaculture and livestock industry, will be in the higher order, the poor consumers may also feel the pinch of higher prices.

John Kilpatrick: “How do importing companies react to the changing status of resources”

8. Aquacultured fishery products have or should have the advantage of consistent supply and quality. Wild capture fisheries are vulnerable on both counts. Aquaculture in developed countries focused on high quality, high value products for markets in those countries. Aquaculture in developing countries can supply high value products for export to developed countries, or can supply low cost products. For exports from developing countries and for domestic consumption, FAO, through the FISH INFONetwork, can provide invaluable support through education programmes, support for product development, and regulatory compliance guidance.

9. Regrettably, many capture fishery interests see aquaculture as a threat, and with other activist groups, have attacked aquaculture, often with vitriolic and incorrect propaganda. The tide of aquaculture cannot be stemmed through such tactics. More progressive capture fisheries interests have adopted some aquaculture practices and have focused on improving quality and finding seasonal (or frozen) niche markets for their products.

Roland Wiefels: “Consumer requirements for supply from sustainable resources”

10. It was recalled that the world average yearly per capita consumption has been increasing continuously for the last half-century as well as the world production (on a yearly average rate of 3.8 percent) up to the current 16 kg. Ten main reasons were presented to explain this evolution. An important part of this increase was due to China, and the speaker expressed his view that China should not be considered as an exception but rather as a development which will continue in other countries. The world average consumption however hides much differentiated consumption standards, which are still much differentiated according to countries. Many populous countries like India or Brazil, for instance, still have low average seafood consumption levels and present good opportunities for developing their domestic markets for these products. The constraints of domestic seafood marketing represent a bottleneck for domestic consumption and hence also for seafood imports in those countries. Increased seafood consumption and seafood trade among developing countries will benefit from improvements of domestic marketing systems.

11. A hypothetical target of attaining on a global basis a yearly per capita seafood consumption of 30 kg until 2020 would require doubling the 2000 seafood production. This could only be attained by keeping the average world aquaculture growth rate (10 percent per year during the decade 1990-2000) for 17 more years. Anticipating such demand, new countries should therefore be in a position to follow the Chinese path and strongly develop their aquaculture. This possibility however needs political will and economical means to do so in countries with high aquaculture potential (particularly in Latin America).
There are only two fundamental sources for increasing seafood supply: 1) better management and utilization of wild fish stocks and 2) aquaculture. However, nearly all growth in global fish harvest will come from aquaculture in the future, as much of the growth in international seafood trade during past decades has come from aquaculture production and this should continue in the future. For example, in the US per capita consumption of seafood is rapidly increasing for salmon, tilapia, shrimp and mussels that come from farmed imports. Domestically farm-raised catfish is also increasing. In contrast, per capita consumption of many wild fish such as cod and flatfish is declining.

The potential for growth and improved efficiency in the aquaculture sector has a long way to go. Aquaculture will benefit from: biotechnology, better disease management, improved nutrition and feed development, consolidation and better organization, and improved farm management. There is relatively little opportunity for growth in most wild fisheries. Aquaculture will have an increasing role in the global fisheries economy. Technological change will continue to make aquaculture more competitive; this improved risk/return ratio will attract new investment and growth. As aquaculture becomes more dominant in international trade the following is likely to occur: international trade will increase, marketing/distribution systems will improve, resources will be used more efficiently, there will be more value-added seafood and there will be increased promotion of consumption.

Recommendations of the First Session for FAO action:

a) Strengthen support to FISH INFOnetwork for the benefit of the fish industry, especially with regard to market information collection and dissemination and with regard to quality and safety of fish products. The network should intensify exchange of experience regarding entrepreneurial achievements and innovations in the sustainable use of fishery resources and consumption promotion.

b) Develop science based criteria for issues affecting international fish trade such as eco-labelling, safety and quality and traceability to satisfy the need for enhancing transparency. FAO objective advice to all operators concerned (consumers, producers, governments, traders and civil society representatives) was considered very valuable in this regard.

c) Study the impact of aquaculture on international fish trade and develop technical guidelines for responsible aquaculture and Good Aquaculture Practices (GAP) and provide assistance for their implementation.

d) Make available information on all relevant elements of import regulations for fish and fishery products and undertake a detailed analysis of the impact of global fish trade liberalization and barriers to trade in fishery products (among developing countries and also focussing on domestic markets).

e) Evaluate and facilitate improving infrastructure, especially post-harvest distribution, quality control, price development and international marketing systems.

f) Monitor international developments related to Genetically Modified Organism (GMO) aspects of fish products, including fish feed.

SECOND SESSION: GLOBALIZATION, INDUSTRY STRUCTURE, MARKET POWER AND IMPACT ON FISH TRADE

Carl-Christian Schmidt, Head of the Fisheries Division of Organisation for Economic Co-operation and Development (OECD), chaired this session which considered the following presentations:
Itamar Rocha of Brazilian Shrimp Farmers Association: “Advantages and constraints of the fish industry in developing countries, the case of shrimp aquaculture in Brazil”;

José Cyriac of MPEDA: “Advantages and constraints of the fish industry in developing countries, the case of India”;

Carl-Christian Schmidt of OECD: “Opportunities and challenges for developed (OECD) countries”;

John Wilkinson of Rio de Janeiro Rural University: “Vertical concentration (diminishing role for wholesalers and brokers) in the distribution channels and increasing market power of retailers and supermarket companies”;

Aldo Ausiello of Unilever, Italy: “Buying strategies for brand development”;

Nelson Sendas of Sendas Supermarket Group: “The role of supermarket in fish retailing in Brazil; the case of Casas Sendas systems”;

Helga Josupeit of FAO Fish Utilization and Marketing Service: “National, regional and international trade, competition and complementation, including the role of small-scale fisheries”.

Itamar Rocha: “Advantages and constraints of the fish industry in developing countries, the case of shrimp aquaculture in Brazil”

16. The Brazilian fishing industry displays development perspectives that vary significantly between its two main components: ocean and freshwater catch show signs of stagnation while aquaculture is vigorously expanding. At the same time, within each of these components, there are considerable variations in performance, which, in general terms, makes it difficult to establish a clear global vision of the mid and long term perspectives.

17. There is a national consensus that Brazil offers ample and varied alternatives for the vigorous development of its marine and freshwater aquaculture potential. Presently, farmed marine shrimp represents the main segment of Brazilian aquaculture in commercial terms with a 2002 production of 60 128 tonnes mainly destined to the export market. Shrimp is now the main source of seafood export earnings in Brazil, with a 45 percent share of the total value of fish exported by Brazil in 2002.

18. Major restrictions for the further development of marine shrimp farming in Brazil are:

- Restrictions for raw material exports;
- Lack of scientific and technological investments in the areas of nutrition and disease prevention;
- Lack of investments and production financing;
- Deficiencies in the public licensing mechanisms;
- Antidumping threats.

19. With a view to add value to production, several actions and projects are underway, including:

- Improve credit lines for investment and production financing;
- Develop a Quality Seal for Brazilian farmed shrimp;
- Emphasize environmental sustainability.
José Cyriac: “Advantages and constraints of the fish industry in developing countries, the case of India”

20. The main advantages identified for the harvesting sector concerns the fact that there is scope for further increases in fish production. There is an important amount of labour available and the fishing practices usually have low environmental impact. The main challenges concern limited knowledge about the resources, information and data availability. Artisanal fishers rely on traditional fishing methods and pay little attention to proper handling of the catch. Insofar as public authorities are concerned, a major challenge is inadequate resources for monitoring and surveillance purposes. There is a need to ensure proper management regimes and concurrently limit the otherwise free access to the resources.

21. The Indian post harvesting sector is characterized by a large number of small processing units with fairly low labour costs. There is a major opportunity if capital and investments can be attracted into the sector. The sector is also characterized by inadequate infrastructure for transportation, storage and domestic marketing. There is little scope for developing a domestic market for value added products and insofar as exports are concerned, tariff escalation in developed countries makes exports difficult.

22. The Indian aquaculture sector presents vast development opportunities as production sites, cheap labour and know how is readily available. The main constraints faced for further aquaculture development relates to a lack of investment in infrastructure, a complicated domestic regulatory framework and a lack of a comprehensive government policy for aquaculture sector that still has not been developed.

Carl-Christian Schmidt: “Opportunities and challenges for developed (OECD) countries”

23. Globalization, that is to say the growing interdependence between markets, in fisheries happens principally through three channels i.e. trade in fish and fish products, foreign direct investments in harvesting and processing (localization) and through fisheries services. As for the latter these include both harvesting, processing and fisheries management services.

24. While fisheries markets have become more open and traditional trade barriers have been reduced significantly, there are still obstacles along the globalization avenue. Among the developed countries, tariff escalation has been singled out as a particular concern. As for foreign direct investments in harvesting sectors, there are major difficulties for foreigners to participate and take part in fishing operations. Most countries do not allow the presence of foreign harvesting through company establishment, or only allow minority participation; the same applies to the use of foreign fish harvesting services which is mostly banned. Hence, globalization carries with it a major potential for additional wealth creation through further liberalizing trade in fish and fish products and investments and services in fish harvesting and processing.

25. Although the fisheries sector has gone through a long process of globalization, one integrated market for fish, fish products, harvesting rights and possibilities and management services does not exist. Obstacles on the road to globalization are vested in hard felt traditional views about ownership of fish resources, rights of access to exploitation and the role of public sector and private entrepreneurs. However, the earlier the opportunities and challenges are addressed and positive adjustment paths identified, the more successful the fish harvesting and processing industry will be in adjusting to and reaping the benefits from globalization, which, in any case, is going on unabated. These issues should be addressed further and could be a subject for investigation by the FAO as well as the OECD.

John Wilkinson: “Vertical concentration (diminishing role for wholesalers and brokers) in the distribution channels and increasing market power of retailers and supermarket companies”

26. Research on the restructuring of the food systems has demonstrated the extraordinary speed of supermarket expansion in the developing world and the way its influence is extending beyond the limits of large countries and metropolitan cities to promote a global transformation of food distribution and production systems. The effects of globalization, therefore, should not be limited to an investigation of developing country food exports but should focus also on this reorganization of domestic food supply
systems, subject now to radically new access conditions, based on exacting quality and logistics criteria. These developments have been particularly pronounced in the fresh produce sector. Supermarkets have been less directly involved in the organization of the primary, capture fishing sector but the initiatives by the British supermarkets, (TESCO and ASDA), including direct obligational contract relations with trawlers, on the basis of detailed quality and delivery specifications, mark a significant new departure in the integration of fresh capture fish supplies.

27. For supermarkets, salmon from aquaculture, with its attractive colour, pleasant odour and boneless fillets has been seen as an ideal fresh-fish solution, and supermarkets have become directly involved in the promotion of fish-farming. In both aquaculture and capture fishing, therefore, the modern distribution system is becoming more involved in the direct organization of its supply chains.

28. It is to be expected, that supply structures will be radically modified, as the demand for quality, regularity, punctuality and scale are imposed backwards along the fish-food chain. Currently, taking Latin America as an example, the supermarkets are engaged in a competition with traditional retail outlets, while depending largely on established wholesale networks for fresh-fish supplies. In itself, this is likely to have an important market creation effect. Already, global sourcing is in place for the supply of high quality chilled products, particularly salmon, while frozen packaged shrimp are also in evidence, although here the supermarkets must compete, as in the USA, with a dynamic catering sector. The appearance of own-brand fish products also indicates a more aggressive promotion of “ready to eat” fish options. As in developed countries, it is likely that supermarkets will become directly involved in fish-farming, and the reorganization of fresh-fish supplies in line with new quality, scale and logistical criteria will undoubtedly have a major impact on artisanal fishing practices and their communities.

Aldo Ausiello: “Buying strategies for brand development”

29. The key message is that it is possible to reduce the supply chain costs. This can be done through closer cooperation between the various players in the chain. In particular the better planning of the mix size at the harvesting level may be feasible. By the same token there is scope for developing new value-added products. This comes through better use of raw material, as, for example, use of small fish for block production and reserve larger specimen for portion production with higher profits.

30. Branding is a mean to secure steady or increasing prices to the benefit of the primary producer. Supermarket buyers have less market power to put pressure on the price development of branded products which are a constant factor in their product mix. It is important to understand the “new emotional consumer” and his/her needs. In this regard proper branding becomes a key to success for major fish processors but while ensuring that consumers get quality, safety and reliability.

Nelson Sendas: “The role of supermarket in fish retailing in Brazil; the case of Casas Sendas systems”

31. Fish consumption in Brazil is rather low. A trial in the Sendas supermarket chain had been very positive and showed that even in a country with little tradition for seafood consumption; it is possible to introduce fresh fish counters and to get a positive consumer response.

Helga Josupeit: “National, regional and international trade, competition and complementation, including the role of small-scale fisheries”

32. According to FAO forecasts, total supply might reach almost 160 million tonnes by the year 2030. While fish captured for food use will stay stable at 70 million tonnes, aquaculture will reach almost 90 million tonnes in 2030, overtaking food fish in 2020.

33. International trade patterns show a net-flow from South to North; trade among developing countries is still relatively low. With higher income, developing countries, especially those where fish is much appreciated, are likely to purchase more fish products. Part of the supply may come from diverting supply from the domestic export industry or from other developing countries.
34. Artisanal fisheries production is an important element in international trade and has the potential to expand its contribution. However, there are several impediments such as lack of infrastructure (landing sites, roads, etc.), competition with industrial fisheries, overexploitation of coastal zones, international standards for quality and safety, which create difficult obstacles for small scale operation.

SUMMARY

35. The chairperson of the session summarized the main concerns raised in the presentations and discussions:

a) Limitations on capture fisheries in both developed and developing countries are caused by numerous factors, but, in particular by:
   i. Overfishing;
   ii. Poor social conditions;
   iii. Poor management institutions/frameworks;
   iv. Lack of development opportunities with respect to markets.

b) Many developing countries face market access difficulties caused, among other things, by:
   i. Tariff escalation;
   ii. Standards;
   iii. Technical barriers;

b) Whether artisanal fisheries represented a particular case, the Consultation concluded that artisanal fisheries presented the same type of issues as “industrial” type fisheries, i.e. overexploited resources, but in addition, artisanal fisheries presented the following additional characteristics:
   i. Lack of infrastructure;
   ii. Distances to markets (in particular export markets) are in many cases more important;
   iii. Fishers may be replaced in due course due to industrial development;
   iv. Difficulties to respond to international standards set either by governments or private operators.

d) Aquaculture was found to be a key sector for the future supplies of fish but also in this sector constraints were identified, including:
   i. Lack of suitable production sites;
   ii. Environmental and other regulations;
   iii. Technical constraints (feed);
   iv. Not readily available risk willing capital;
   v. Market access problems including antidumping threat.

36. The Consultation noted that as markets develop so does the role that can be played by the industry and the public. In summary:

   i. There are few but concentrated fish markets in Europe, Japan and the US. Partnerships are developing along the distribution chain and it was noted that consumers in developed countries are willing to pay more for fish which may mean less fish for consumption in developing markets.
   ii. Globalization in fisheries is dominated by specialized fishing fleets, food and feed manufacturers and distributors.
   iii. Increased consolidation and concentration takes place (in particular among food manufacturers and distributors) due to squeezed food processing margins. One consequence is that processors develop own distribution systems and in this process: New “market entry” specification/barriers
for primary sector (e.g. quality, punctuality, regular supplies, closeness to quota holder) are being created.

iv. Private initiatives (like MSC) may have a sustainable impact on fisheries. This is an action of enlightened self interest and ensures paybacks on long term investments for operators in the business.

One role of the industry is to improve the marketability of fish. This is possible through:

i. Production techniques and better use of raw material;
ii. Improved handling;
iii. The development of value added products;
iv. Better marketing, including labelling;
v. By “educating” artisanal fishers so that they can meet industry standards, and better coordination through the distribution chain.

Similarly the role of the public sector can be to:

i. Ensure sustainable and responsible management of capture fisheries;
ii. Ensure a positive regulatory environment in support of further aquaculture development;
iii. Remove trade, market and investment and service barriers;
iv. Explore novel fisheries management tools and frameworks;
v. Ensure capacity building.

37. **Recommendations of the Second Session for FAO action:**

a) Get the plethora of stakeholders to recognize the drivers that cause globalization;

b) Strengthen the implementation of the Code of Conduct, in particular as it relates to international fish trade and marketing, and aquaculture;

c) Building capacity to ensure sustainable aquaculture development in particular in the developing world;

d) Building capacity on fisheries management systems and tools;

e) Work on more transparency and analysis on trade and market and investment and services impediments, for example by assessing the impact of their liberalization;

f) Help Member Countries ensure policy coherence among the range of policies that are in play in the fisheries sector (e.g. trade, management etc.);

g) Study the impact of vertical concentration in marketing channels with specific attention to supermarkets and its impact on the levels of production, processing and wholesaling;

h) Develop assistance programmes for developing countries aiming at improved marketing performance;

i) Create a consultation mechanism between FAO and the private industry with the purpose of increasing the benefits which developing countries can derive from international fish trade.
THIRD SESSION: COST AND EARNINGS, VALUE ADDITION AND DISTRIBUTION OF BENEFITS

38. Eyjólfur Gudmundsson, University of Akureyri, Iceland, chaired this session which considered the following presentations:

a) Dr Eyjólfur Gudmundsson gave a presentation titled “Revenue distribution through the seafood value chain”.

b) Aurora Zugarramurdi, Instituto Nacional de Tecnologia Industrial – Centro Regional Sur (INTI-CEMSUR), Mar del Plata, Argentina: “Competitiveness of value adding in developing countries”. (Based on Latin America)

c) John Kilpatrick of NUTRECO: “Distribution of cost and benefits in the food chain, methodology and case studies”.

d) Nguyen Huu Dzung of Viet Nam Association of Seafood Exporters and Producers (VASEP): “Value addition by utilizing comparative advantages of developing countries”. (Case of Viet Nam)

e) Aurora Zugarramurdi, INTI-CEMSUR, Mar del Plata, Argentina: “Import requirements and quality costs”.

Dr Eyjólfur Gudmundsson: “Revenue distribution through the seafood value chain”

39. The question on how retail value is distributed through the food value chain has been of interest to policy makers for many decades. In the current study, four products were examined; salted anchovy’s from Morocco exported to the US, pickled herring marketed on the European seafood market, exports of Nile perch from Tanzania to the EU and exports of frozen cod fillets from Iceland to the US. These cases are chosen with a view to represent a variety of product forms, processing methods and market segments.

40. Results for the four seafood products varied greatly and profits within each segment varied greatly as well. Profit/margin data was available from the Danish, Icelandic and Moroccan industries. The Icelandic harvesting sector was the only sector where profits were earned both at the harvesting and processing segments. The Danish processing sector had low margins, and the harvesting sector was operating at a loss. The Moroccan processing sector seemed to have quite substantial operating margins, but information on after tax profits were not available. An interesting observation is that more processing in order to have higher value-added products do not necessarily result in higher profits for seafood processors. Given the fact that seafood products are increasingly exported as fresh products directly to the US or EU market it might give fishers and primary processors better income if they focused on efficient marketing channels, high quality and improved handling, and shorter marketing channels in order to obtain higher share of the retail value in the future.

Aurora Zugarramurdi: “Competitiveness of value adding in developing countries”

41. According to modern theory of competition, countries that create value through labour productivity, product differentiation and by adding local value will be able to create wealth and compete more successfully. To successfully compete with other sectors for labour and capital, the fishery sector must be profitable.

42. The price of a fish comprises cost and profits that can be analysed to estimate value added for the purpose of comparing economic contributions and productivities between sectors of each fishery and among fisheries. Each level from fishing through retailing adds value to the product. Due to declines in stocks, fish processors are reshaping their production, moving to value-added products. Value is added by
reducing costs and careful selection and handling of raw materials, assurance of reliable supply, meticulous packaging and presentation, careful transportation, and prompt delivery. These usually require investments in market research and in building relationships throughout the marketing chain. There is also a need of financing for working capital and investment in human and physical capital.

43. The fishery sector profitability, and consequently country’s wealth, can be increased if an effective evaluation of which type of value added products is more convenient for each country is conducted. Variables such as available technology, labour productivity, availability of resources, quality assurance level, financing, level of development of clusters and association through the value chain, should be analysed, since these combined define the advantages and weaknesses of each case. Developing these skills will require those living in existing cultures of commodity production and marketing to change their thinking and to associate among themselves or with other firms that already are in the market of value-added products. Results for different products are presented to analyze differences in value addition. Some examples clearly show that further processing does not always give a higher value added. The test is whether the added value is sufficient to cover the added costs and if there is a willingness to pay for it.

John Kilpatrick: “Distribution of cost and benefits in the food chain, methodology and case studies”

44. John Kilpatrick spoke on the subject of concentration of market power in the value chain from producers (big aquaculture companies – BigAqua) to supermarkets and brand marketing. Mr Kilpatrick emphasized that current marketing channels through the large marketing companies could be used to help smaller producers market their products, i.e. big companies were not a threat to the smaller operator in developing countries. He recommended that FAO should play a role in facilitating communications and cooperation between small producers and BigAqua.

Nguyen Huu Dzung: “Value addition by utilizing comparative advantages of developing countries”

45. Developing countries have a comparative disadvantage when it comes to technical and financing possibilities, customer relations and marketing but they have comparative advantage with regard to natural resources, cost of production and more flexibility within companies. To be competitive in the future, developing countries need to take an active role in meeting stricter requirements on hygiene, quality and safety. They also need to improve their value adding production and marketing. The focus of the value adding should be on the entire value chain, with emphasis on vertical integration through cooperation with other developing countries.

Aurora Zugarramurdi: “Import requirements and quality costs”

46. The cost of applying Hazard Analysis Critical Control Point (HACCP) based system in the seafood processing plants depend on a number of variables such as: type of product, market requirements, current and future legislation, existing facilities, plant size, initial operating conditions, present and future level of qualities. It is difficult to estimate these costs due to the diversity of the systems; there is no unique HACCP plan for processors.

47. As an example, freezing plant with a capacity of 20 tonnes/day was analysed in order to calculate quality costs. When improving quality from standard to very good, profitability increased from 3.3 percent to 9.9 percent, due to a better utilization of plant capacity, higher yields and productivity, a decrease in quality costs and production costs as well as higher prices that can be obtained for a better quality product. Relating the net benefit for both quality levels to the additional investment required, a profitability of 24.3 percent is achieved.

48. Industries that apply a HACCP program should consider adopting an integrated approach with a quality management system. Both systems are required to bring the benefits of ensuring food safety and improving the business itself. Integrating these systems can strengthen the focus on customer and food safety requirements, while at the same time reduce administration and increase overall profitability.
49. There is a need in designing appropriate administrative procedures, standards and rules, which increase transparency. More coordination and cooperation including monitoring at the national level would help to find internal solutions to institutional problems and new challenges on the international seafood market. It may also facilitate participation, thus contributing to increased ownership and more responsibility taken over by individuals. As a result, representatives can better express their views and describe their situation in international organizations thus leading to effective participation.

50. Improving quality standards especially in fish products should represent a high priority for developing countries, not only to protect the health of their own population but also to enable them to export products to countries with increasingly higher hygiene and quality requirements. Since Microbial Risk Assessment is a developing science, implementation of these guidelines may require a period of time and may also require specialized training in the countries that consider it necessary. This may be the case of developing countries, which also will need to be aware of the cost involved in this process.

51. **Recommendations of the Third Session for FAO action:**

   a) FAO should work with the private sector and developed countries to transfer know how on production, management and marketing and facilitate joint ventures between companies in developed and developing countries.

   b) The feasibility of value addition for seafood products in developing countries should be analysed. FAO objective advice to all operators concerned (consumers, producers, governments, traders and civil society representatives) was considered very valuable in this regard. Options should be explored to become more involved with distribution and marketing issues, promoting quality and on direct cooperation with the private sector.

   c) Study the impact of aquaculture on international fish trade and develop technical guidelines for responsible aquaculture and Good Aquaculture Practices (GAP) and provide assistance for their implementation.

   d) FAO technical assistance facilities should be used to help countries prepare for the next multilateral trade negotiations and developing countries should develop an advisory group of experts, scientific capability and capacities of human resources required to monitor and argue the SPS procedures.

**ADOPTION OF THE REPORT**

52. This report was adopted on 5 December 2003.
SUMMARY OF RECOMMENDATIONS FOR FAO ACTION

FIRST SESSION: RESOURCE SITUATION, SUSTAINABILITY AND IMPACT ON FISH TRADE

1) Strengthen support to FISH INFOnetwork for the benefit of the fish industry, specially with regard to market information collection and dissemination and with regard to quality and safety of fish products. The network should intensify exchange of experience regarding entrepreneurial achievements and innovations in the sustainable use of fishery resources and consumption promotion.

2) Develop science based criteria for issues affecting international fish trade such as ecolabelling, safety and quality and traceability to satisfy the need for enhancing transparency. FAO objective advice to all operators concerned (consumers, producers, governments, traders and civil society representatives) was considered very valuable in this regard.

3) Study the impact of aquaculture on international fish trade and develop technical guidelines for responsible aquaculture and Good Aquaculture Practices (GAP) and provide assistance for their implementation.

4) Make available information on all relevant elements of import regulations for fish and fishery products and undertake a detailed analysis of the impact of global fish trade liberalization and barriers to trade in fishery products (between developing countries and also focusing on domestic markets).

5) Evaluate and facilitate improving infrastructure, especially post-harvest distribution, quality control, price development and international marketing systems.

6) Monitor international developments related to genetically modified organism (GMO) aspects of fish products, including fish feed.

SECOND SESSION: GLOBALIZATION, INDUSTRY STRUCTURE, MARKET POWER AND IMPACT ON FISH TRADE

1) Get the plethora of stakeholders to recognize the drivers that cause globalization.

2) Strengthen the implementation of the Code of Conduct, in particular as it relates to international fish trade and marketing, and aquaculture.

3) Building capacity to ensure sustainable aquaculture development in particular in the developing world.

4) Building capacity on fisheries management systems and tools.

5) Work on more transparency and analysis on trade and market and investment and services impediments, for example by assessing the impact of their liberalization.

6) Help Member Countries ensure policy coherence among the range of policies that are in play in the fisheries sector (e.g. trade, management, etc.).

7) Study the impact of vertical concentration in marketing channels with specific attention to supermarkets and its impact on the levels of production, processing and wholesaling.
8) Develop assistance programmes for developing countries aiming at improved marketing performance.

9) Create a consultation mechanism between FAO and the private industry with the purpose of increasing the benefits which developing countries can derive from international fish trade.

THIRD SESSION: COST AND EARNINGS, VALUE ADDITION AND DISTRIBUTION OF BENEFITS

1) FAO should work with the private sector and developed countries to transfer know how on production, management and marketing and facilitate joint ventures between companies in developed and developing countries.

2) The feasibility of value addition for seafood products in developing countries should be analysed. Case studies by specie, product and country should be used to advise on attractive possibilities. Options for FAO to assist with marketing and distribution with emphasis on promoting quality products, should be explored.

3) FAO should assist developing countries in meeting new TBT and SPS standards in order to avoid that high quality and safety standards will become technical barriers to trade between developing and developed countries, with special emphasizes on a concrete programme of assistance to the least developed countries.

4) FAO technical assistance facilities should be used to help countries prepare for the next negotiations and developing countries should develop an advisory group of experts, scientific capability and capacities of human resource required to monitor and argue the SPS procedures.
AGENDA

INFOPECSA Expert Consultation on International Fish Trade
In collaboration with the Fish Utilization and Marketing Service, FAO Rome

Rio de Janeiro, Brazil, from 3–5 December 2003

**Wednesday, 3 December 2003**

9.00 Registration

10.00 to 10.20 Opening
Lahsen Ababouch, Service Chief FIIU, Secretary of the Expert Consultation

10.20 to 10.30 Presentations of the participants
Each participant will present himself briefly

10.30 to 10.45 Summary of the background paper: world fish trade, demand forecasts and regulatory framework
Erhard Ruckes, Lead Consultant, FAO

11.20 to 16.30 First Session: Resource situation, sustainability and impact on fish trade
Chair: Jim Anderson, University of Rhode Island, USA

11.20 to 12.20 Outlook for fish to 2020 – Supply and demand in changing global markets
Ahmed Mahfuzuddin, World Fish Center, Penang, Malaysia

12.20 to 12.30 Questions for Clarification

13.30 to 14.00 How do importing companies react to changing status of resources?
John Kilpatrick, NUTRECO, Vancouver, Canada

14.00 to 14.30 Consumer requirements for supply from sustainable resources
Roland Wiefels INFOPECSA, Uruguay

14.30 to 15.00 Impact of aquaculture on resource sustainability and trade
Jim Anderson, University of Rhode Island, USA

15.15 to 16.30 Discussion First Session

16.30 Summary prepared by Chairman, Rapporteur and Speakers
Thursday, 4 December 2003

9.00 to 13.00  Second Session: Globalization, industry structure, market power and impact on fish trade
Chair: Carl-Christian Schmidt, OECD, Paris France

9.10 to 9.45  Advantages and constraints of the fish industry in developing countries
Jose Cyriac, Chairman MPEDA, Cochin, India
Itamar Rocha, Aquaculture Association for Shrimp (ABCC), Brazil

9.45 to 10.30  Opportunities and challenges for developed (OECD) countries.
Carl-Christian Schmidt, OECD, Paris, France

11.00 to 12.00  Vertical concentration (diminishing role for wholesalers and brokers) in the distribution channels and increasing market power of retailers and supermarket companies
John Wilkinson, University of Rio de Janeiro, Brazil
Aldo Ausiello, Unilever, Italy
Nelson Sendas, ABRAS, (Brazilian Association of Supermarkets)

12.00 to 12.20  National, regional and international trade, competition and complementation, including the role of small-scale fisheries
Helga Josupeit, FIIU, FAO Italy

12.20 to 13.00  Discussion and summary prepared by the Chairman

14.00 to 17.00  Third Session: Cost and Earnings, Value Addition and Distribution of Benefits
Chair: Eyjólfur Gudmundsson, University of Akureyri, Iceland

14.00 to 14.45  Distribution of cost and benefits in the food chain, methodology and case studies
Eyjólfur Gudmundsson, University of Akureyri, Iceland
John Kilpatrick, Vancouver, Canada

15.15 to 16.00  What kind of value addition fits the comparative advantages of developing countries and their species
Aurora Zugarramurdi, CEMSUR, Mar del Plata, Argentina
Nguyen Huu Dung, Secretary-General, VASEP, Hanoi, Vietnam

16.15 to 16.35  Import requirements and quality costs for developing countries
Aurora Zugarramurdi, CEMSUR CITEP, Mar del Plata, Argentina

16.35 to 17.15  Discussion Third Session

17.15  Summary prepared by Chairman, Rapporteur and Speakers of the Third Session
Friday, 5 December 2003

9.30 to 12.00  Preparation of the report based on the three summaries prepared by the session chairpersons
              (Secretariat, Session Chairpersons, Resource Persons. Voluntary for interested participants)

13.30 to 14.00 Conclusion and Recommendation

Chair: FAO

Work programme of FAO Fisheries Department till 2009
Assistance needs of developing countries in the area of international fish trade

14.00 to 15.00  Discussion and adoption of the report
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## APPENDIX C

### LIST OF DOCUMENTS

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<thead>
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<tr>
<td>“World fish trade, demand forecasts and regulatory framework”</td>
<td>Erhard Ruckes</td>
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<td>“Outlook for fish to 2020 - Supply and demand in changing global markets”</td>
<td>Ahmed Mahfuzuddin</td>
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<td>“Consumer requirements for supply from sustainable resources”</td>
<td>Roland Wiefels</td>
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<td>“Aquaculture and the future: why fisheries economists should care”</td>
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<td>“Fisheries, aquaculture and trade: the future”</td>
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<td>“Presentation on behalf of MPEDA – Advantages and constraints of the fish industry in developing countries, the case of India”</td>
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<td>“Opportunities and challenges for developed (OECD) countries”</td>
<td>Carl-Christian Schmidt</td>
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<td>“Global agrofood chains, retail and catering: the case of the fish sector”</td>
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<td>“Global food chains – and retail dominance: implications for the fish sector”</td>
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<td>“National, regional and international trade, competition and complementation, including the role of small-scale fisheries”</td>
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<td>“Revenue distribution through the seafood value-chain”</td>
<td>Eyjólfor Gudmundsson</td>
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<td>“Competitiveness of value adding in developing countries”</td>
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<td>“Value addition by utilizing comparative advantages of developing countries”</td>
<td>Nguyen Huu Dzung</td>
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<td>“Import requirements and quality costs”</td>
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