ICSF Occasional Paper

Untangling Subsidies, Supporting Fisheries:

The WTO Fisheries Subsidies Debate and Developing-country Priorities

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Abstract

This paper examines, from the fishery perspective of a developing country, the current debate on the role of fisheries subsidies in the context of the negotiations relating to the General Agreement on Tariffs and Trade (GATT) and the World Trade Organization (WTO). While providing a background on fish production and trade in developing countries, it sketches the history of the role of the State and subsidies in the fisheries of the now-developed fish economies of the world.

It goes on to analyze the manner in which fishery issues and the fisheries subsidies debate have been carried out in the GATT and WTO negotiations, leading up to the Doha Ministerial Declaration, which is the basis for a more structured negotiations on subsidies.

Drawing on the analysis, the paper envisions some of the development priorities that developing countries must pursue, and the nature of support they need to achieve them. Finally, it suggests what ought to be done by developing countries in the current negotiations on fisheries subsidies.

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Abbreviations

ACP	African-Caribbean-Pacific
AIDS	Aquired Immunodeficiency Syndrome
ANG	Agriculture Negotiating Group (of WTO)
ASCM	Agreement on Subsidies and Countervailing Measures (of WTO)
CMC	crustaceans, molluscs and cephalopods
DSM	Dispute Settlement Mechanism (of WTO)
EC	European Commission
EEZ	exclusive economic zone
EPR	export performance ratio
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
HIPC	heavily indebted poor country
HIV	Human Immunodeficiency Virus
ICSF	International Collective in Support of Fishworkers
ICTSD	International Centre for Trade and Sustainable Development
ILO	International Labour Organization
ITQ	individual transferable quota
IUU	illegal, unregulated and unreported
LDC	least developed country
LIFDC	low-income food-deficit country
MDG	Millennium Development Goal
MEA	multilateral environment agreement
NGO	non-governmental organization
OECD	Organization for Economic Co-operation and Development
RCA	revealed comparative advantage
RFMO	regional fisheries management organization
RSCA	revealed symmetric comparative advantage
SCM	Subsidies and Countervailing Measures
SIDS	small-island developing States
SOFA	State of Fisheries and Agriculture (of FAO)
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Programme
UNFSA	United Nations Fish Stocks Agreement
WTO	World Trade Organization
WWF	World Wildlife Fund for Nature

"It is a very common clever device that when anyone has attained the summit of greatness, he kicks away the ladder by which he had climbed up, in order to deprive others of the means of climbing up after him."

– Frederick List, Nineteenth Century German Economist

1. INTRODUCTION

The expansion of global trade and its role as an engine of growth to achieve economic and human development has been an outcome that developing countries hoped would emerge in time. Their expectations were greatly reinforced after the formation of the World Trade Organization (WTO). In fact, recognition of these interrelationships and a commitment to foster them without adverse consequences for the environment has been enshrined in the opening preamble of the Marrakesh Agreement establishing the WTO, which states:

> *Recognizing that their relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, and expanding the production of, and trade in, goods and services, while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development.* (emphasis added)

This is a clear long-term commitment to create a world free of poverty through enhanced production and trade, without depleting resources or harming the sanctity of the environment — and doing so keeping in mind the needs and concerns of countries at different levels of economic development. Surely, this is not a call for harmonization or standardization. It is a call that gives explicit room for diversity of expression to attain common long-term goals.

Further, the preamble also mentions the need for proactive steps to encourage developing countries to engage actively in international trade by:

> *Recognizing further that there is need for positive efforts designed to ensure that developing countries, and especially the least developed among them, secure a share in the growth in international trade commensurate with the needs of their economic development* (emphasis added)

This is not a new concern fashioned with the creation of the WTO. Over four decades ago in 1964, Raul Prebisch, Secretary General of the United Nations Conference on Trade and Development (UNCTAD) called on the industrialized countries to be aware of the challenges facing the developing countries:

> "We believe that developing countries must not be forced to develop inwardly – which will happen if they are not helped to develop outwardly through an appropriate international policy. We also deem it undesirable to accept recommendations which tend to lower mass consumption in order to increase capitalization, either because of the lack of adequate foreign resources or because such resources are lost owing to adverse terms of trade."

It is important that this challenge and the spirit contained in the WTO preamble are fully incorporated in our attempts to analyze and strategize any issue that pertains to the manner in which international trade and related rules are interpreted and implemented. But in the process of getting through the maze of legalities, we should not lose sight of the fact that the rules were made to serve human aspirations, and not the other way around.

In the context of international commerce in natural resources, achieving economic development and poverty alleviation for developing countries while protecting the environment is a combined function of domestic production, the factors facilitating international trade, and the nature of consumption in the importing countries. Given this, trade has no autonomous existence. It is a connector. Therefore, achieving *sustainable* trade in natural resources is not possible in isolation. It is achieved only by connecting sustainable production to sustainable consumption. Trade is more innate to marine capture fisheries than it is to agriculture products. Therefore, untangling fisheries development and trade needs to take greater cognizance of the structure of this relationship. We must also keep in mind the history of global fisheries development and the visions for its sustainable future. The current global commitments to poverty alleviation, natural resource management and environmental protection, when translated to the specific requirements of the fisheries sector, particularly in the developing countries, cannot ignore a central fact: *there can be very limited development of fisheries or fisherfolk without trade and without stewardship of the resource.*

This highlights the relevance of WTO trade rules and their possible impact on fisheries worldwide. It augurs well for the discussions on fisheries subsidies negotiations to be situated as one important factor in this triad of sustainable production, sustainable trade and sustainable consumption.

This is a multi-faceted and holistic agenda. It falls into the mandate of many multilateral organizations and not just the WTO. It will be in the interests of all to keep it so.

All these elements are contained in the Doha Ministerial Declaration: that international trade plays a major role in the promotion of economic development and the alleviation of poverty; that the interests of the developing countries are at the heart of the Work Programme; that the commitment to sustainable development of the preamble of Marrakesh is reaffirmed; that co-operation between WTO and other environmental and developmental organizations will be encouraged; that core labour standards and the social dimensions of globalization are to be recognized.[1] Taking these international commitments forward should be the collective resolve of both the developing and the developed countries. The negotiations on fisheries subsidies provide an important test case on whether this will be possible.

Structure of the Paper

In this paper, we attempt to give a developing-country fishery perspective to the current debate on the role of fisheries subsidies in the context of the General Agreement on Tariffs and Trade (GATT)/WTO trade negotiations. The paper is divided into eight sections. Following this introduction, in Section 2, we provide a background on the fish production and trade in developing countries so that we have a meaningful picture about the importance of this sector within the economy for developing nations. This is followed by Section 3, which provides a historical sketch of the role of the State and subsidies in the fisheries of the now-developed fish economies of the world. The purpose of this section is to highlight the important role played by subsidies in the development of their fisheries. This will also point to the bias in the current discussions on fisheries subsidies. In Sections 4 and 5, we follow the manner in which fishery issues and the fisheries subsidies debate have been carried out in the GATT and WTO negotiations. In Section 4, we stop at the Doha Ministerial Declaration, which is the basis for the more structured negotiations on subsidies. We reflect there on what one should interpret from the Doha Declaration about the fisheries subsidies negotiations. In Section 5, we examine the 'objective fishery and economic' facts, which explain the rationale for the stands taken by the various countries and the groupings of what seem to be 'strange bedfellows'. In Section 6, we examine some of the

[1] These elements can be found in the Doha Ministerial Declaration Para 2, 6 and 8.

key concepts used in the negotiations to see if they are as simple, non-controversial and universal as it is made out to be in much of the debate and the prolific documentation produced on fishery subsidies in the last decade. Section 7 attempts to 'stand back' and envision some development priorities for developing countries and the nature of support needed to achieve them. In the final Section 8, we pose the issue of what is to be done by developing countries in the current negotiations.

2. FISH PRODUCTION AND TRADE IN DEVELOPING COUNTRIES: PAST, PRESENT AND FUTURE

One economic realm where developing countries have overtaken the developed world and are likely to remain on top is in fish production and trade. The bounty of nature – the seas, rivers, lakes and lagoons — a long tradition of fishing with the concomitant skilled workers and an enterprising class of entrepreneurs make for a great comparative advantage. This has been the foundation for the growth of the fishing sector in the developing countries. This foundation has been topped by a variety of structures that include a range of State and private initiatives in the activities of fish harvesting, processing and marketing. Much of the State orientation in the fisheries sector of the developing countries has been fashioned along the lines of the 'modernization' paradigm of economic development. The thrust has been towards introduction of new technology, setting up of a modern bureaucracy for governance, and encouraging the sector towards an export market orientation. The results of this approach have resulted in the growth of fish production and export trade, as we shall see below.

Fish Production

The world has seen very significant changes in the realm of fisheries over the last half century (see Table 1). Total production that was around 40 mn tonnes in the early 1960s, increased to over 130 mn tonnes by 2001. Increases have been witnessed in all the three realms of production – marine capture, inland capture and aquaculture. The main motivating forces for the expansion have been the rapidly growing worldwide demand for fish both as food and feed, as well as the commensurate increases in the technology of harvesting, processing and transportation.[2]

[2] The role of the 'nationalization' of marine resources in this expansion of production and trade, through the establishment of exclusive economic zones (EEZs), is a matter of debate.

Table 1: Realms of Fish Production

(live weight in mn tonnes)

Region	1961				1984			
	Marine	Inland	Aqua	**Total**	Marine	Inland	Aqua	**Total**
World	**35.2**	**3.4**	**1.9**	**40.5**	**71.3**	**5.2**	**6.9**	**83.4**
Developed	21.7	1.1	0.8	**23.6**	40.4	0.6	2.2	**43.2**
Developing	13.5	2.3	1.1	**16.9**	30.9	4.5	4.7	**40.2**
LIFDC*	5.1	1.9	1.0	**8.0**	12.3	3.6	3.7	**19.6**
Region	1995				2001			
	Marine	Inland	Aqua	**Total**	Marine	Inland	Aqua	**Total**
World	**85.1**	**6.8**	**24.3**	**116.2**	**84.0**	**8.2**	**37.7**	**130.0**
Developed	30.5	0.4	3.0	**33.9**	28.1	0.4	3.7	**32.2**
Developing	54.6	6.4	21.3	**82.3**	55.9	7.9	34.0	**97.8**
LIFDC	23.1	5.3	18.9	**47.3**	28.5	6.8	30.0	**65.3**

*LIFDC = low-income food-deficit countries

Source: FAO FishStat Data Base

While the developed capitalist and socialist countries held sway in the realms of production until the 1984, the phenomenal growth of fisheries in the developing countries has attracted considerable attention thereafter. By 1995, the developing countries produced 82 mn tones, compared to 34 mn tones by the developed countries — their production dropping by 10 mn tonnes.[3] In 1961, the developed countries accounted for around 60 per cent of global fish production. By the turn of the millennium, the tables were turned. The production of the developed countries had dropped from 34 mn in 1995 to 32 mn in 2001. It was the developing countries which harvested over three-quarters of the global harvest in 2001, with the low-income food-deficit countries (LIFDCs) among them accounting for 50 per cent of the global harvest (see Table 1).

Fishery Trade

Many fishers in developing countries engage in fishing for subsistence. But the moment one has caught more than three or four fish there is a 'surplus', which, due to its high perishability, must be bartered or traded. Trade is very innate to fisheries. In fact, over a third of the global fish production (live wet equivalent) is regularly traded in the international market, making fish the most globally traded primary food commodity. Globally, this share

[3] This drop in production is primarily due to the loss of access to fishing grounds and the decision to cut back on industrial vessels due to rising fuel costs.

has fluctuated in a narrow band of 33–37 per cent since 1976. According to UNCTAD, fishery products were among the most dynamic food commodities traded globally (United Nations, 2004). Some specific fishery products have attained high annual export growth rates of 9–10 per cent over the period 1980-1998 and developing countries dominate these markets (see Table 2).

Table 2: Shares of Main Exporters and of Developing Economies in World Exports of the Most Market-dynamic Fishery Products (ranked by growth in exports value, 1980-1998)

Rank among agricultural products	SITC Code	Product Group	Share of Developing Countries	Main Exporting Countries (Share)
8	036	Fresh Crustaceans	70	Thailand (12) Indonesia (7) India (6) Ecuador (6) Canada (6)
10	034	Fresh Fish	37	Norway (13) US (7) Denmark (5) China (5) Taiwan (5) Chile (5)
12	037	Fish Preparations	58	Thailand (20) China (10) Denmark (5)Spain (4) Germany (4)

In fact, in 2001 the net receipt from fish trade by developing countries was US$17.4 bn. This was greater than the net exports of other agricultural commodities such as coffee, bananas, rice and tea taken together (Food and Agriculture Organization of the United Nations (FAO), 2002). An oft-expressed anxiety is that fish exports are often at the expense of domestic food security. However, recent analysis of the global production and trade data reveals that this may not be a source of worry at the moment. Even among the LIFDCs only between 6 to 9 per cent of their production was traded internationally (Kurien, 2005).

Analyzing the FAO data for 2002, we are able to further assess the importance of trade in fishery products for both the developed and developing countries. Fishery exports were valued at US$58.2 bn in 2002. As many as 190 countries engaged in fishery product exports that year. Out of this, 152 were developing countries. For as many as 36 of these developing countries, fishery products were among their top ten export items in 2001-2002 (United Nations, 2004) and among these, 11 were least developed countries (LDCs), namely, Bangladesh, Equatorial Guinea, Madagascar, Maldives, Mauritania, Myanmar,

Niger, Samoa, Senegal, Togo and Uganda. For as many as 25 developing countries, fish exports accounted for more than 10 per cent of their total merchandise exports (see Table 3).

Table 3: Developing Countries with Share (Value) of Fish Exports in Total Merchandise Exports Greater than 10 Per Cent (in 2002)

10-20	20-30	30-40	40-50	50-60	60-70
Cook Is Sierra Leone Peru Morocco Vietnam Mozambique Chile Ecuador Tanzania Guyana Uganda Tonga Gambia Guinea-Bissau	Korea DR Mauritania Senegal Solomon Islands	Namibia Kiribati Panama	Seychelles	Micronesia	Maldives Greenland

Source: FAO Year Book of Fishery Statistics (Commodities) 2003, Volume 95

The top 10 fishery product exporters accounted for 50 per cent of global exports in 2002 and the top 50 fishery product exporters accounted for 94 per cent of the trade in 2002. Among the 50, there were 26 developing countries, and they included four LDCs (Bangladesh, Madagascar, Myanmar and Senegal). For 17 of these developing countries, the share of fish exports was over 10 per cent of their total merchandise exports, with eight having exports valued more than US$1 bn (see Table 4).

Table 4: Percentage Share (Value) of Fish Exports in Total Merchandise Exports of Developing Countries from Among the World's Top 50 Fish-exporting Countries (2002)

Upto 10	10-20	20-30	30-40
Myanmar (8.3) Thailand (5.5) Bangladesh (5.1) India (2.9) Indonesia (2.6) Colombia (1.4) China (1.4) Philippines (1.1) Mexico (0.7) Brazil (0.6)	Peru (13.9) Vietnam (12.2) Morocco (12.1) Chile (10.6)	Korea DR (23.9) Senegal (20.6)	Namibia (36.9)

Source: FAO Year Book of Fishery Statistics (Commodities) 2003, Volume 95

Assessed in these numerous ways, it is abundantly clear that fishery exports make an important contribution to the economic development process of a wide range of developing countries – big and small – across the globe.

Assessing Trade Trends

The value of global fishery products trade has expanded phenomenally from US$8 bn in 1976 to US$52 bn in 1995 and to US$63 bn in 2003. In 1976, the developed countries accounted for nearly two-thirds of the export trade. In 2003, both the developed and developing countries accounted for nearly equal shares (see Table 5).

Three features of interest in the context of our discussion on subsidies are that during this period, (i) the share of trade between the developed countries (North-North trade) has only declined from 43 to 37 per cent; (ii) the share of the LIFDCs in global fish trade has increased from 12 to 20 per cent; and (iii) the rates of growth of global fish trade in the period 1995-2003 – after the formation of the WTO—show a rather sharp decline (see Table 6).

Table 5: Trends in Global Fish Trade and Share of Country Groupings (US$ bn)

Fish Trade and Shares	1976	1984	1995	2003
Global fish trade	7.98	16.2	52.0	63.5
Developed countries (%)	5.03 (63)	9.07 (56)	26.0 (50)	33.02 (52)
Developing countries (%)	2.95 (37)	7.13 (44)	26.0 (50)	30.48 (48)
LIFDCs (%)	0.96 (12)	2.11 (13)	9.88 (19)	12.70 (20)
Trade between developed countries in total trade (%)	3.43 (43)	6.48 (40)	19.24 (37)	23.50 (37)
Trade between developing countries in total trade (%)	0.72 (9)	2.43 (15)	4.16 (8)	8.25 (13)

Source: personal communications, Helga Josupeit, FAO, Rome

Table 6: Trends in Simple Growth Rates of Global Fish Trade and Country Groupings (rates rounded off)

Period	Global	Developed	Developing	LIFDCs
1976-1984	13	10	18	15
1984-1995	22	19	27	37
1995-2003	3	3	2	4

Source: Calculated from FAO Fishery Statistics Yearbooks (several issues)

Between 1986 and 1994, global fish exports as a share of global merchandise exports was consistently about 1 per cent. After 1995, this has steadily declined and reached 0.83 per cent in 2003. The slower rate of growth of exports after 1995 was in part due to the overall sluggishness in world trade. For many developing countries, the market access for their most competitive manufactured export – apparel — remained heavily restricted. So also was the case of their agriculture products, which were their main source of employment and comparative advantage. It is in such a context that fishery exports attain prominence. The demand for luxury seafood is relatively income-inelastic in the developed countries, and the capacity of developing countries to increase both the quantum and share in the value of global fish trade in future is therefore extremely bright.

Many developing countries, particularly the poorer among them, are blessed with a sizeable stock of fish in their marine and inland waters. Also, in many of these countries – particularly, for example, in Central and South America, and African countries such as Namibia and Mauritania — fish is not a major component of the diet of the general population. This combination of resource abundance and low domestic consumption makes fish an attractive natural resource from which precious foreign exchange can be earned on a sustainable basis if the resource is managed well. It is not only in capture fisheries that this comparative advantage exists. The production of aquaculture products in developing countries has shown remarkable increases (see Table 1). While the major share of this production is sometimes consumed in the domestic markets (as in Asia), they are in great demand in developed-country markets. The revealed symmetric comparative advantage (RSCA)[4] of some important fish-exporting countries is shown in Table 7 below. These values range from –1 to +1. The closer they are to +1, the greater the revealed

[4] See Appendix A for note on calculation of RSCA

symmetric comparative advantage. When values are negative, they reveal comparative disadvantage.

Table 7: Revealed Symmetric Comparative Advantage of the Fisheries Sector in Selected Countries

Country	1985	1990	1995	2000	2003
Iceland *	0.97	0.97	0.97	0.97	0.97
Norway *	0.64	0.72	0.76	0.71	0.69
New Zealand *	0.65	0.65	0.71	0.67	0.62
Spain	0.19	0.14	0.10	0.16	0.18
Australia	0.16	0.14	0.23	0.22	0.11
Japan	-0.37	-0.56	-0.72	-0.71	-0.67
Canada	0.19	0.27	0.09	0.01	0.10
US	-0.31	-0.13	-0.27	-0.44	-0.36
Russian Fed.	n.a.	n.a.	0.34	0.18	0.04
China	0.01	0.35	0.31	0.18	0.09
Thailand	0.81	0.82	0.77	0.73	0.66
Vietnam*	0.83	0.76	0.81	0.82	0.83
Chile *	0.84	0.82	0.83	0.81	0.82
Indonesia	0.12	0.58	0.57	0.44	0.44
India	0.53	0.44	0.55	0.54	0.39
Taiwan	0.51	0.31	0.23	0.07	-0.07
Peru *	0.76	0.85	0.88	0.88	0.84
Korea Rep.	0.45	0.35	0.11	-0.11	-0.32
Morocco *	0.82	0.85	0.84	0.85	0.84
Argentina	0.28	0.44	0.63	0.48	0.50
Ecuador *	0.79	0.89	0.91	0.85	0.86
Mexico	0.17	-0.06	-0.06	-0.40	-0.45
Philippines	0.53	0.66	0.48	0.00	0.07
Panama *	0.93	0.90	0.90	0.94	0.96
Namibia *	Na	na	0.92	0.91	0.93
Senegal *	0.93	0.93	0.93	0.93	0.91
Korea, Dem. Rep. *	0.36	0.56	0.76	0.85	0.92
Seychelles *	0.69	0.92	0.96	0.97	0.97
Brazil	-0.19	-0.38	-0.49	-0.39	-0.27
Bangladesh *	0.80	0.82	0.80	0.67	0.64

Source: Calculations based on data from UNCTAD and FAO
(* indicate countries with high RSCA)

Despite this comparative advantage, there are three major barriers to developing countries increasing their shares in global fish trade. These include (1) the continued presence of numerous non-tariff barriers applied by developed countries; (2) the high rates of tariff escalation; and (3) the high rates of subsidies being offered in many developed countries to their fishing industries, which make many of their products obtain a competitive edge in global markets.

The Shape of the Future

Predicting any future is hazardous. This is all the more so in fisheries. Some recent reviews only confirm this (Garcia and Grainger, 2005). However, based on current trends and future expectations, we will propose some broad plausible directions and their implications for developing countries. Trends in fish production are likely to increase into the future. While there is likely to be stagnation in the marine fish catch, the output from the inland and aquaculture sources is set to increase. A significant part of this is export-oriented. Good examples are salmon, shrimp, perch and catfish, to name a few. There is likely to be a greater focus on Africa, with many of the eastern coast countries moving into intensive fish production in lakes, rivers and coastal areas. Along with increases in fish production, there will be an increase in fish consumption in the developing countries as a result of mere population increase and enhanced incomes of middle- and upper-income groups.

Increases in the fish consumption in countries like China and other southeast Asian economies can have a bearing on the 'surplus' available for international trade. The growth of fish exports in quantity terms from developing countries may decrease in the future as a result. This becomes a compelling reason for developing countries to increase the value added to current exports.

The industrial fishing fleet, which was the creation of an earlier access regime, coupled with pricing of oil and other inputs below their true resource costs, will gradually diminish. What remains will come under greater corporate control. The small-scale and 'modern' artisanal fishery, if provided with proper support, will flourish in the developing countries and, to a limited extent, in the temperate waters as well.

The rising costs of fish processing in the developed countries, as a result of the non-availability of labour for such jobs, will create new employment opportunities in the outsourced processing of fish in developing countries. The same can be said, but to a lesser extent, about labour at sea. The drastic

fall in the number of fishers in the developed countries will create some windows of opportunity for skilled and educated fishermen in the developing countries to work on the declining number of industrial vessels. Such changes in the demand profile and the international division of labour can change the comparative advantage configuration and the direction of trade in products and services.

If developed countries do not reduce their non-tariff barriers and modulate their tariff escalation rates, this can become an incentive for greater South-South trade. Retail fish prices may rise sharply in the developed countries. This may result in consumer pressure on the firms that have an increasingly concentrated control over the retail trade in fish in these countries, to adopt different strategies for obtaining supplies. This could see the beginning of new trends and practices in international fish trade.

3. FISHERIES DEVELOPMENT IN DEVELOPED COUNTRIES: STATE AND SUBSIDIES IN THE FORE

The current hype about liberalization and free trade, and the discussions about the manner in which government action distorts the market need to be contextualized against a background of the history of economic development in the industrialized countries. It is now evident from recent writings that most of the developed countries of today achieved their industrial and trade pre-eminence behind ladders of high tariff barriers and plenty of State patronage (read 'subsidies') for infant industries (see Chang 2002, 2003).

Expansion of Fisheries

The history of fisheries development in the developed countries also indicates the important role played by the Sate in encouraging moderniztion of the fishery, development of supportive physical infrastructure, promoting scientific research and taking measures to ensure the livelihood security of the fishing communities. Active Sate involvement in fisheries goes back to the mid-1700s, if not earlier, in countries like the US, Canada, Iceland, Britain and Norway (Schrank, 2003). This interest was also extended to the 'underdeveloped' colonies. Britain's interest in Indian fisheries development for modernization of fish-harvesting technologies, processing, scientific research and administrative governance was very evident in the early 1900s (Pope et al, 1996).

The 'freedom of the seas' policy gave States access to many rich fishery resources at great distances from their own shores. Nation States had control over only narrow portions of 'territorial sea' extending up to 3 or 6 nautical miles. This fact, coupled with the increasing demand for fish in Europe, gave impetus to well established fish traders to finance the construction of fishing vessels worthy of making long voyages (Innis, 1954).

In the early 19th century, the invention of iron containers plated with tin to protect against corrosion, gave a fillip to canned seafood, further expanding the market for fish among the large and increasing section of industrial workers, as it did not require further expense to preserve or prepare the seafood for final consumption.

State Support to Fisheries

The erstwhile Union of Soviet Socialist Republic's decision to source protein from the sea rather than the land (quoted in FAO, 1992) was a major decision when viewed from the role of the State in fisheries development. This was a resource allocation decision based on methodology that was very different from an allocation system based on market prices. The phenomenal expansion of distant-water fishing vessels after 1960 can be attributed to this decision of the erstwhile Soviet Union.

Other countries with extensive involvement in distant-water fishing were Japan, Spain, Poland, Portugal and the Federal Republic of Germany. (They were joined by developing States like the Republic of Korea, Cuba, Ghana and the Taiwan Province of China.) The support of the State to promote this activity was readily forthcoming, both directly in the form of capital concessions and tax breaks, and indirectly in the form of investment in shore-based infrastructure and resource assessment research. Such liberal State support led to the adoption of new technologies and rapid diffusion of the same across the industry. Rapid industrial development was the purpose of subsidies. One important consequence of this was expansion of fishing fleet capacity, both nationally and globally. A multinational fleet of 'floating factories' began sweeping the global oceans searching for new resources to cater to the ever-increasing demand for fish-food and fish-feed.

Two significant global processes in the 1970s brought changes to this structure of fishing beyond the 'territorial seas' of the developed nation States. They were (i) the oil price hikes; and (ii) the increasing number of extensions of marine jurisdictions by developing countries to the 200-nautical mile limit. The result was sharp increases in operational costs and loss of free access to

large stocks of fish. For the distant-water fishing vessels to continue viable fishing, operating costs (particularly fuel costs) had to be subsidized, and financial arrangements had to be negotiated with coastal States for access to their resources. Japan adopted what was characterized as the 'development-import' strategy. Japan provided development aid initially to Asian and Pacific nations to develop their fisheries and processing facilities, and imported fish from these countries, giving some preferential treatment (Okada, 1978 and 1980).

Subsidies in Fisheries

During this entire period – roughly, 1930-1980 – marked by growth and changing dynamics in global fisheries, most developed countries also provided significant subsidy support – financial and physical – to their fishing communities and fish-processing plant workers for the improvement of the socioeconomic conditions and provision of social security arrangements (Schrank, 2003). These dimensions of State support have had a significant impact in greatly enhancing the livelihood security of communities dependent on fisheries in the developed countries.

A few examples (all from Schrank, 2003) to illustrate this may be in order. In Canada, when fishermen incurred losses due to bad weather, the government introduced a subsidized vessel insurance plan. Unemployment insurance was also introduced to tide over times when the sea was too dangerous to venture into. When the cod collapsed in 1992, a massive adjustment programme to help individuals and communities to adjust out of the fishery, largely through training, retirement and licence buyback programmes was introduced. In Norway, the natural fluctuations of the northern fishery led to hard times for fishermen. As early as 1933, the government established a fisheries bank, and provided loans at beneficial rates and even sometimes interest-free in emergency situations. A health insurance was introduced in 1936. Between 1959 and 1964, based on a Master Agreement for the Fishing Industry, several livelihood security measures were adopted. These included wage equalization measures, vacation support, unemployment insurance, and damage compensation, to mention a few. These subsidies were eliminated only in the mid-1990s after the coastal communities had achieved a standard of living, which could be compared to that of the average Norwegian industrial worker.

In Iceland, too, there have been major subsidies for fishing communities. However, the context in Iceland is different, given the very small size of the country and the dominance of the fishing industry in the economy. There is

no parallel to this situation elsewhere in the world (Kurien, 2000). After receiving major governmental support through the 19th century, the industry was able to stand on its own feet. Moreover, subsidies did not affect government finances because they were paid out of the financial surpluses made by the industry.

Evidence of such meaningful livelihood support given to fishing communities to enhance their capabilities in the now developed fishing nations is largely restricted to national documents and in local languages. The international silence surrounding the role played by State support in expanding the capabilities of the fishing communities needs to be juxtaposed against the cacophony over State support given to expanding the capacity of the fishing fleet.

Bias in the Subsidies Debate

In our understanding, this bias in revealing only one side of the effect of subsidies has created a lopsided perspective in the global debate on fisheries subsidies. What is highlighted by most country submissions to the WTO and by most international NGOs have been the 'negative resource-oriented effects' of subsidies. These pertain to the detrimental consequences of subsidies on marine fish stocks creating 'production distortions' and adverse resource and ecosystem consequences. The role subsidies have played in poverty alleviation and food security as well as regional and rural development in the coastal areas of many developed countries – what we may term the 'positive people-oriented effects' of subsidies — have remained very much at the sidelines of discussions during the WTO negotiations and other global forums where the future of fisheries subsidies have been debated.[5]

This is, indeed, unfortunate. It is an aberration which needs correction, considering that Article 27.1 of the Agreement on Subsidies and Countervailing Measures (ASCM) lends support to this by stating that "subsidies may play an important role in economic development." Despite the element of tentativeness in the statement, this is a good starting point. Taking the developing countries as a whole, the scope and the necessity for special support to fishing communities for a variety of social and economic needs, remains a political priority, irrespective of the form of government in these States. Inadequate emphasis on the 'positive people-oriented effects' of subsidies

[5] It is true that there is mention of this in several submissions. However, they are not adequately highlighted as the 'other side' of the subsidy coin.

can lead to depriving millions of people dependent on fisheries from obtaining legitimate State support to achieve sustainable livelihoods. Restive coastal communities are a liability in democracies and dictatorships.[6]

One explanation for this bias is the inherent inability of trade agreements to view sustainable development as simultaneously having a resource and a people angle to it. As an authoritative and keen observer of the WTO stated:

> "Nowhere in the WTO agreements, however, is it made clear what is meant by 'sustainable development.' Indeed, depending on whether the speaker represents an industrial or a developing country, the emphasis is likely to be placed on 'sustainable' with a distinct environmentalist touch, or on 'development'…Potentially positive linkages between trade and sustainable development are being passed by, and opportunities for proactive consideration of the connection between 'trade and development' and 'trade and environment' are being missed." (Peter Tulloch, Former Director of the Development Division, WTO)[7]

A more uncharitable explanation for the bias would be to surmise that developed countries, having ensured that their fishing communities climbed the ladder of socioeconomic security with liberal doses of subsidies, now wish to kick it down.

4. GATT, WTO AND THE FISHERIES SUBSIDIES DEBATE

Before the entry into force of the WTO agreements, the basic rules on subsidies were contained in the Article XVI of GATT 1947 and in the 1979 Tokyo Round Agreement, more formalized in the form of the 'Subsidies Code'. Under Article XVI, the contracting parties were to avoid using subsidies on the export of primary products (which included fishery products), but they were not actually forbidden to do so. The Subsidies Code of the Tokyo Round was meant to tighten the Article XVI disciplines. However, developing countries were not bound by this new initiative (WT/CTE/W/80).[8]

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[6] See Kurien, 1988, for the examples of the quick responses of political leaderships from democratic, autocratic and martial-rule regimes in Asia to unrest among fishing communities as an indicator of the 'strategic importance' that they wield. It is disproportionate to their share in the population of these countries.

[7] Quoted from http:// www.inwent.org/ef-texte/web02/pap.htm

[8] These notations in brackets in the Sections 4 and 5 refer to document numbers of submissions and reports made at the WTO. They can be accessed at www.wto.org

GATT Phase

In the GATT phase, substantial interest in fisheries trade commenced only in the early 1980s. At a ministerial level meeting in November 1982, the GATT contracting parties agreed to examine problems relating to three groups of natural resources – non-ferrous metals and minerals, forestry products, and fish and fisheries products (BISD 29S/20). The Council then decided at its meeting in April 1983 that in order to facilitate this work, the secretariat would undertake a background study on problems of trade in fish and fisheries products relating to tariffs, non-tariff measures, and other factors affecting trade (BISD 30S/15).

GATT Fisheries Study

The said study, titled *Problems of Trade in Fish and Fisheries Products* (MDF/W/55), examined long-term and recent developments in production, marketing and trade in fish, shellfish, and other fisheries products, and reviewed the then existing barriers to trade in these products in major trading countries. The study made several important observations, which point to the perceptions about the problems confronting world fisheries in the mid-1980s. These included:

- the rising costs of operation following the rise in fuel prices from the early 1970s and the consequent falling profitability;
- the depletion of many fish stocks because of excessive rapid development of fishing effort fostered by, *inter alia,* increased catch storage capacity resulting from improved preservation techniques;
- the ad hoc national legislations for exclusive fishing zones in response to the need to conserve sea resources, leading to far-reaching changes in the actual conditions of fishing activities at the international level;
- the benefits and losses in terms of catch possibilities that have accrued to fishing nations following the above re-allocation of marine resources;
- the mere fact that maintaining consumption at current levels is bound to increase trade and that elements of fair competition must be present to the greatest possible degree in trade;

- the scope for countries not traditionally engaged in fishing being encouraged to participate, leading to increases in consumption and exports; and
- the fact that improvements in quality could lead to the reduction of the non-tariff measures applied in many markets.

The study concluded that all the above factors led to an adjustment of trade regimes for fishery products causing two important consequences. Firstly, it led to a proliferation of bilateral agreements (300 between 1977 and 1984) of various natures and degrees of complexity, with commercial clauses. Secondly, it increased State intervention in fishery activities, whether in the form of direct aid to producers and exporters or of national and sectoral policies in regard to development, marketing and market regulation for the principal fishery products.

The study cautioned that "it would seem particularly appropriate to examine the compatibility of trade practices emerging from these developments with the existing multilateral disciplines governing international trade" (GATT Document MDF/W/55, pg 37). This is perhaps the first formal reference to the manner in which national policies of support could have a bearing in creating an un-level playing field in international trade.

GATT Working Party Assessment

The study was then examined by a Working Party[9] (GATT Document L/5895), which met between May 1984 and October 1985. It took notice of three developments: (1) the overfishing of many fish stocks; (2) the reallocation of fish stocks following the introduction of EEZs; and (3) the increasing costs of operation following the oil price hikes. Some members felt that these developments should provide new opportunities for the most efficient producers, in particular those who had gained access to new resources. However, they felt that these opportunities were stifled by an array of trade barriers in the key importing countries. If these barriers were removed and trade fully liberalized, "not only would trade shifts likely occur between the primary and other levels of processing, but overall levels of trade would increase as demand reacted positively to more efficient production" (para 8).

[9] The country composition of this Working Party would be a matter of interest to see how many of those present, if any at all, have sustained their interest into the current WTO debates on subsidies.

While the issues of tariffs and non-tariff barriers came in for substantial adverse comment (paras 12-24), the first substantial discussion on the need to include production and export subsidies as a major factor distorting fish trade was mentioned by several members (para 25). Some members "expressed the view that massive programmes based on governmental financial assistance, were carried out in some major exporting countries with the aim of helping the restructuring of their domestic fishery industry, thereby unfairly upsetting the competitive conditions in this product area. These members stated that this situation, often combined with the granting of production and export subsidies, constitute, in their view, the most significant *single factor* fostering a situation of uncertainty and difficulty in fish trade. In their view, whatever the legitimacy of such measures in terms of economic and social policy, their effect was derogation from trade based on comparative advantages" (para 26, emphasis ours) In the context of the current study, it is significant to note that the Working Party members did not posit any association between subsidies and overcapacity or overfishing.

Uruguay Round

The fisheries story in the Uruguay Round of the GATT started with fish and fish products first being included in the Negotiation Group of Natural Resources-based Products (together with wood, coal, etc). They then became part of the Agriculture Negotiating Group (ANG). However, in the ANG it was not possible to achieve agreement on the core issue of tariffication, non-tariff barriers and access to resources/trade in fishing services. Therefore, in order to avoid the failure of the Agreement on Agriculture, which was of greater interest to the industrialized countries, the words "less fish and fish products" were added in paragraph 1 (i) of Annex 1 of the Agreement on Agriculture. The economics and politics behind this decision were, therefore, simply saving the Agreement on Agriculture and admitting that the different positions in fisheries could not be reconciled despite years of discussions in the Organization for Economic Co-operation and Development (OECD) and equally long negotiations in Geneva.[10]

The issue of government financial transfers to the fishery sector was a subject of study in the OECD even in the 1960s (OECD, 1965). In the European Economic Community, it was estimated that, between 1983 and 1990, the support for member country fishers rose from US$80 mn to US$580 mn

[10] Personal communications with E.Ruckes, formerly with the FAO Fisheries Department.

(see SOFA 1992, pg 149). However, it was the FAO Report of 1992 that made a rough global estimate of the huge deficit between the gross revenues and gross costs of global fisheries. These estimates suggested a huge US$54 bn deficit when all operating and investment costs were included, and a US$22 bn deficit if only the operating costs were considered. It was presumed that subsidies covered most of the deficit. This report indicated that the excess fleet capacity was a threat to the fishery resources. Its publication triggered a major global discussion on the effects of fishery subsidies. However, it must be noted that any global statistical analysis that considers only aggregates, without adequate appreciation of the wide variations in the distribution of the parameters being studied, will tend to overemphasize the role of the more dominant and larger values. This is also the case with the FAO study and, more so, the manner in which it has been utilized in public debate[11] (see Section 6 below for our attempt at a more disaggregated analysis).

After Marrakesh

Many international environmental groups campaigned vigorously to highlight these subsidies to be the major cause for overcapacity leading to overfishing. In 1995 the issue of fisheries subsidies had been vigorously discussed within and outside the WTO where it was located in the Committee on Trade and Environment.

The FAO study was followed by more detailed analysis of subsidies by APEC, OECD and the World Bank, all providing different estimates of the magnitude of subsidies ranging between US$10 bn and US$20 bn.[12] An OECD study titled *Transition to Responsible Fisheries* (OECD, 2000) put the subsidies of the US at 24 per cent of the value of its fish catch. In the European Union (EU), it was 14 per cent of the value of the catch; in Iceland, about 5 per cent; and in New Zealand, only 1.6 per cent.

Seattle

In 1999 a group of countries (including Australia, New Zealand, Iceland and US) favouring subsidy reform presented several substantial papers at a WTO

[11] Personal communications with Francis Christy, the main author of the FAO report revealed that it was coincidence that available data and the interest in the FAO to work out these global aggregates of costs and earning came together in the late 1980s. The idea of the authors was only to give a first approximation. The details of the mode of calculation were also provided in appendices in the report so that others could make their own calculations and more nuanced conclusions.

[12] A good summary of the work on subsidies in the fishing sector was made by the FAO for the Technical Consultation on the Use of Subsidies in the Fisheries Sector (TC/SUB/2004/Inf 3).

High Level Symposium on Trade and Environment held in March that year. These papers pointed to the "loss-loss-loss" relationship between fisheries subsidies, on the one hand, and trade, environment and development, on the other. Based on this, a request was made in the draft ministerial declaration to the Seattle Ministerial Conference (1999) that a WTO working group be set up to study the issues of overcapacity and overfishing caused by subsidies and then draw up WTO commitments on them. This was explicitly opposed by Japan and the Republic of Korea. Also, the EU, with support from Japan and others, argued for fisheries to be dealt with by the FAO. However, given the dynamics in the Seattle Ministerial Conference, agreement was reached on a draft paragraph on subsidies, which read as follows:

> "Ministers recognize the potential effects on sustainability arising from certain subsidies that may contribute to overexploitation of living marine resources and that the SCM Agreement may not adequately address such subsidies. In this regard, Ministers agreed to establish a programme of work in the area of fisheries subsidies. This work shall be carried out within the framework of the Committee on Subsidies and Countervailing Measures in co-operation with the FAO and other intergovernmental bodies. In this context, Members shall take due account of the objectives of regional fisheries management organizations (RFMOs).
>
> The work programme shall consist of (1) the identification and examination of subsidies which contribute to overfishing of fisheries resources of common interest, and related trade distorting effects, and (2) the clarification and strengthening, as appropriate, of disciplines under the SCM Agreement with respect to such subsidies. The work shall take into account the socioeconomic importance of the fisheries sector to many Members and, in particular, to the developing and least developed countries. The work shall also take into account artisanal fisheries."[13]

With the breakdown of the Seattle talks, finally nothing came of the matter. But the near agreement that had been reached on fisheries subsidies was an advantage for those who favoured retention of this topic in the preparations for the Doha Ministerial.

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[13] Quoted from www.thunderlake.com/ministerials/Chair_fish.doc

Doha

Coming to the Doha Ministerial, the manner in which fisheries subsidies finally came under WTO Rules rather than under Trade and Environment concerns can again be situated in the context of other cross-sectoral linkages and larger power play in the WTO. There had been major tension between Japan and US regarding anti-dumping duties, with Japan accusing US of lack of transparency. Japan had been, for years, requesting for fresh negotiations on the WTO clauses on anti-dumping duties to make them more transparent and prevent them from being used as an instrument of protection. In the last stage of preparations for Doha, the US found that the tide in the WTO was in favour of new negotiations on anti-dumping duties. Aware of Japan's interests on a less stringent position on fisheries subsidies and its unwillingness to associate subsidies with overcapacity and overfishing, the US pushed for the specific mention of fishing subsidies in the draft agenda section on WTO Rules. This was clearly a move by the US to checkmate Japanese demands on anti-dumping with its own demands on fisheries subsidies. Japan initially voiced opposition, but later agreed to the proposal. One may presume that Japan had a stronger interest in anti-dumping duties and was willing to consider negotiating rules on fisheries subsidies (Reddy, 2002).

The US had the support of Iceland, New Zealand, Australia and a coalition of other countries with relatively small domestic subsidies programmes. The US also had the keen and strong support of large international environmental NGOs who were committed to providing the lobby work to mobilize civil society opinion against fisheries subsidies. The EU position during the Doha talks also evolved from seeking to integrate fisheries subsidies into the environmental agenda, to agreeing that negotiations should take place under the SCM Agreement.[14]

The final outcome of the Doha Ministerial witnessed a rather special manner in which references were made to fisheries subsidies in two points in the text (Para 28 and Para 31) under two sub-heads, WTO Rules, and Trade and Environment, respectively.

A careful reading of Paras 28 and 31 prompts us to make the following comment *(Text in italics are parts of the Ministerial Declaration)*:

[14] Even as late as 10 November 2001 in Doha, Pascal Lamy, EU negotiator (currently Director General of the WTO) stated to the Ministerial that the EU was "looking at how to integrate fish subsidies into the environment negotiating mandate".

In Para 28, it is *"in the light of experience and increasing application of these instruments*" that the Ministers agree to undertake "*negotiations aimed at clarifying and improving disciplines, while preserving the basic concepts, principles and effectiveness of these Agreements and their instruments and objectives, and taking into account the needs of developing and least-developed participants".*

The Ministers then agree in the same Para that "*in the initial phase of the negotiations, participants will indicate the provisions, including disciplines on trade-distorting practices, that they seek to clarify and improve in the subsequent phase.*" The special mention of the fisheries subsidies follows this by merely repeating the commitments made in the above sentences of the text thus: "*participants shall also aim to clarify and improve WTO disciplines on fisheries subsidies, taking into account the importance of this sector to developing countries."* Thereafter, comes the cross-reference, which states: "*We note that fisheries subsidies are also referred to in Paragraph 31."*

In the chapeau of Para 31, we see that there is a desire expressed to enhance "*the mutual supportiveness of trade and environment"* and a call for dealing with *"the relationship between existing WTO rules and specific trade obligations set out in multilateral environmental agreements."* Thereafter the abovementioned cross-reference in Para 28 is merely thrown back in a separate sentence: "*We note that fisheries subsidies form part of the negotiations provided for in Paragraph 28."*

This is probably the manner in which the major players in the field of world trade – US, Japan and EU — reconciled their conflicting and ambiguous positions on fisheries subsidies, with other nations observing from the galleries.

From the above, we surmise that it is a rather tall claim to infer that there is any special *environmental* objective imposed on WTO members while "*clarifying and improving"* the disciplines on fisheries subsidies as part of the Doha Round. The rather excessive emphasis in the post-Doha discussions on subsidies, overcapacity and overfishing, and the consequent production distortions, are, therefore, matters that need to be viewed with some circumspection by developing countries.

Perhaps the emphasis should be on how subsidies should be viewed primarily in the light of the interests of the developing countries. This concern is mentioned *twice* in Para 28 — first generally in relation to the existing disciplines of the SCM Agreement and the needs of developing and least-developed countries, and then, secondly, with specific reference to the importance of the fishery sector to developing countries.

Our brief review of the manner in which trade in fish and fishery products were treated in the GATT and WTO context illustrates the 'residual' treatment afforded to it. Fish and fishery products have been convenient bargaining chips in the bigger games that powerful nations play in their pursuit of 'free trade'. There is no reason to think that this will not continue during the negotiations before the Hong Kong Ministerial and beyond.

5. POST-DOHA NEGOTIATING POSITIONS: ECONOMICS AND POLITICS

Several organizations and individuals[15] have undertaken excellent descriptive, schematic and analytical accounts of the various submissions made by countries in the post-Doha negotiations. There is hardly any need to go over this ground again. Negotiations at the WTO are based on commercial and/or political interests. In the fisheries subsidies negotiations, we see a judicious combination of both.

Overall, international trade dynamics are decided by the three major players in the global market – US, Japan and EU. Although major developing nations such as China, South Korea, Brazil, India and South Africa are emerging players, their influence is still small. The positions taken by these big three normally decide the trajectory of trade negotiations at the WTO. Rarely do they play trade parleys sitting together on the same side. They have different rules of engagement and gather their supporters – both explicit and implicit – around them. Another important feature of these discussions is the control that corporate lobbies and multinational companies have on the 'country' delegations. Business interests shape the 'national' positions. On issues where the environment is involved, the role played by large international environmental organizations in influencing country positions – particularly of the US and EC— is also well known.[16] The interests least represented at the WTO negotiations, in any organised form, are those of the millions of small producers of goods and services in developing countries and the consumers of the world as a whole.

The nearly decade-long discussions on fisheries subsidies are no different. What is puzzling is the current hugely disproportionate concerns for the fishery

[15] (UNEP, ICTSD, WWF, ICSF, Gareth Porter, David Schorr, Seung Wha Chang, Christopher Stone, Roman Grynberg and Natallie Rochester, Olav Stokke, Clare Coffey, Marc Benitah, Sebastian Mathew and others.)

[16] The role played by Greenpeace, World Wide Fund for Nature, and other organizations such as the Earth Island Institute in influencing the US position on marine fisheries-related issues are examples.

Table 8: Some Objective Trade Facts about the Countries Actively Engaged at the WTO Fisheries Subsidies Negotiations

Country	Top 50 Fish Exporters (2002)	Top 50 fish Importers (2002)	Share of fish in total export (%) (2002)	Share of fish in total imports (%)	RSCA* (Trend 1984 to 2003) US $ mill (% of Landed Value)(1997)#	Government Financial Transfers (kg/per/yr) (2001-02)	Per Capita Domestic Fish Supply
Iceland	Yes [13]	No	64	neg	H & S	36 (4)	92
New Zealand	Yes [25]	No	5	neg	H & S	17 (4)	26
Norway	Yes [3]	Yes[18]	6	neg	H &S	163 (12)	50
US	Yes [4]	Yes [2]	2	neg	Negative	877 (24)	21
Australia	Yes [22]	Yes [19]	Neg	neg	L&S	24 (9)	22
Chile	Yes [9]	No	11	neg	H &S	n.a	15
Peru	Yes [19]	No	14	neg	H &I	n.a	20
Ecuador	Yes [26]	No	14	neg	H & S	n.a	6
Argentina	Yes[24]	No	3	neg	M & I	n.a	9.4
Philippines	Yes [33]	Yes[44]	1	neg	M &D	n.a	30
Japan	Yes [23]	Yes [1]	neg	4	Negative	2946 (21)	66
Korea Rep	Yes [20]	Yes [9]	neg	1	Negative	342 (7)	52
Taiwan P C	Yes[11]	Yes 21]	1	neg	L & D	n.a	33
Brazil	Yes [37]	Yes [27]	6.5	neg	L & I	n.a	7
ChinaYes [1]	Yes [8]	1.4	Neg	L&D	n.a	25	
SIDS	No	No	Between 4 & 62	n.a	n.a	n.a	50-90

[ ] = indicate rank within the top 50
(* RSCA Trends : H=High M=Medium L=Low I=Increasing S=Steady D=Decreasing)
Neg = negligible n.a = Not available
(# OECD, 2000. *Transition to Responsible Fisheries – Economic and Policy Implications*, Paris, OECD Publications.)

sector, which accounts for less that one per cent of global trade. It makes one wonder if this is a reflection of genuine concern for life on earth and sea, or yet another of the games nations play. There are interests at play that wish to make the WTO the arbiter of conservation and environmental issues, although far more competent international bodies and instruments already exist to achieve this task. Taking the fisheries subsidies debate to WTO may be seen as their test case.

The effects of fisheries subsidies and what needs to be — or does not need to be — done to discipline them, is essentially a polarized debate at the WTO. It is between the 10-country developed-developing coalition called the 'Friends of Fish', on the one hand, and a three-country Asian grouping, on the other. The Friends of Fish has the US playing a central role, Iceland and New Zealand ably supporting the cause, and Norway and Australia being silent supporters. The developing countries in the coalition include Chile, Peru, Ecuador, Argentina and the Philippines. The Asian grouping consists of Japan, the Republic of Korea and Taiwan Province of China.

The EU remains on the sidelines, pitching into the debate on different occasions. Among the developing countries outside these groups, only China, Brazil and a grouping of eight small vulnerable island States have made their positions explicit. Several other large developing countries and ones with major interests in fishing have chosen to remain as silent audience.

What we wish to do in this section is to examine some objective fish trade facts (see Table 8 above) of these major players in the negotiations, and attempt to assess their motives. We are keen to examine if there are premises in their arguments and positions that can help to formulate a strategy for developing countries, which incorporates the resource and the people dimensions of sustainable development considerations into their final positions on disciplines for fisheries subsidies.

Friends of Fish and Traffic Lights Approach

As mentioned above, the initial *demandeurs* for the negotiations was the group of countries called the 'Friends of Fish.' They include five developed and five developing countries. What the 10 countries have in common is that they are all among the world's top 50 fish exporters. The developed countries are also among the top 50 importers of fishery products, with the exception of Iceland and New Zealand. The developing countries do not have fish-importing interests. With the exception of the US and Australia, all the other countries also have a comparative advantage in fisheries as apparent

from the trends of their RSCA scores. All the developed countries in the group have been major subsidizers of their fishery industries and their fishing communities. The Friends of Fish, in their initial submission at Seattle, admit that the industrialized countries are responsible for the bulk of the subsidies granted to the global fisheries sector and also state that the negative trade-distorting effects of these subsidies affect, first and foremost, the fish-exporting developing countries[17] (WT/GC/W/XXX). As of 1997, the subsidies in Norway have reduced considerably. The current level of subsidies in Iceland and New Zealand is very low. The level of subsidies in the US, compared to that of the other developed countries in the group, is exceptionally high. This, in a sense, questions its rationale for being part of this group. The subsidies in the developing countries of the group are also likely to be negligible. Given the above facts, the removal of subsidies will greatly facilitate trade from these developed countries. They will be able to corner a greater share of the North-North fish trade.

The position of the US and Australia in the Friends of Fish may be seen as more political than commercial. We had earlier explained that the manner in which fisheries subsidies was brought under the WTO Rules negotiations from its earlier position in the Trade and Environment negotiations was part of the game plan of the US against the anti-dumping positions of Japan. It is hard to see how the US will stop its current level of domestic subsidies, considering that the fishery interests in the country, though localized, are very powerful lobbies. Will the US devise ways of keeping these financial transfers and yet show the world that it has given up subsidies? Australia's general position in the debates on agriculture has been largely in favour of lowering subsidies. Australia likes to take the high moral ground concerning "a level playing field" for trade and has been debating with the US and EU on their agriculture subsidies for years. Being party to the Friends of Fish is to be seen as a continuation of the same agenda. Australia believes in non-protectionism, and claims to have very low subsidies, and thinks that everyone else should follow suit.

Given the business interests of private Norwegian companies in Chilean salmon aquaculture, the combined business opportunities are large. It is within realms

[17] The intent of the latter part of their statement is unclear. The 'paths' by which developing countries were affected by subsidies given in the industrial world are not clear. Was it due to overfishing of subsidized fleet operating in developing-country waters? Was it due to unfair price competition of products from industrial-country markets? Or was this statement intended merely to get developing-country support for the group's position?

of this nature that the implications of the WTO definition of 'subsidies' being restricted to government actions become evident. Consider private salmon aquaculture companies of Norway that have interests in aquaculture in Chile. If these companies also have stakes in fishmeal manufacturing firms in Chile, their fishmeal pricing strategies can be tailored to give salmon producers (in both Chile and Norway) an unfair advantage in the global market. As no government funds are involved, there are no 'subsidies' by the WTO definition. But direct benefits that have market-distorting effects are certainly conferred (see Section 6 below for an elaboration of this point).

The Friends of Fish put forward four main reasons for wanting to adopt special disciplines on fisheries subsidies at the WTO, and they wish to restrict these disciplines exclusively to the fisheries sector. First, they claim that subsidies cause overcapacity, overfishing and hence harm to fish stocks. Secondly, they claim that fisheries have some unique features that cannot be disciplined under the current SCM Agreement. Thirdly, they affirm that the Doha Declaration gives members a clear mandate to do so. Finally, they consider that WTO should engage in environmental issues as part of its larger mandate, and fisheries are a good starting point for this (TN/RL/W/3; 58, 77 115; 116, 154, 166; TN/RL/GEN/ 41 & 54 and WT/CTE/W/154).

The most important premise of the Friends of Fish group is that fisheries subsidies may not only affect markets but certainly affect access to shared resources and hence cause production distortions. Because of these latter production distortions, it is difficult to demonstrate damaging trade effects such as price effects and loss of market share in a particular market. Moreover, the great heterogeneity of fishery products will make it difficult to quantify price effects in a serious prejudice case since unsubsidized reference prices may not be available. They also argue that countervailing measures may not be relevant as the main fisheries subsidizers are not major exporters. They, therefore, take a position called the "top-down approach", which generally says "no to subsidies" and then defines a number of exceptions. They subscribe to the "traffic lights approach" in their individual submissions. Basically, this is a list of subsidies that fall under a 'red list', an 'amber category' and a 'dark amber category'. The red list contains the prohibited subsidies. The other two require prior notification. In the case of the dark amber category, the burden of demonstrating that the subsidy does not create trade injury wrests on the subsidizing member.

That subsidies lead to overcapacity and thereafter to overfishing is a basic premise of the Friends of Fish and their supporters[18]. There are no studies available that can unambiguously show this chain of causation without the consideration of other factors. There are several other necessary conditions such as high market demand, ill-defined access conditions and poor management of the resource, which are much more important causative factors leading to overcapacity and, in turn, to overfishing. Given the presence of these, subsidies can hasten the process leading to overfishing.

There has also been no acknowledgement by the developed country members of the Friends of Fish of the positive role that subsidies played to enhance the human capabilities of their fishing communities. Even if it can be shown that subsidies in these countries did *eventually* lead to overcapacity and overfishing, the fact remains that this was *only* significantly after their fishing communities achieved high levels of human capacity development.

The Friends of Fish, as a group, has recognized the value of the categorization work done by other international organizations. They do not see any explicit role for any of these organizations in the negotiations or after. Only the US calls for collaboration with FAO and other RFMOs and NGOs for obtaining information.

The Friends of Fish position is hugely supported by large US-based environmental NGOs such as the World Wide Fund for Nature (WWF). The WWF has commissioned several systematic studies from 1997. These were undertaken by competent lawyers and premised on the understanding (faith?) that subsidies lead inevitably to overcapacity and overfishing. These studies and the publicity they receive in civil society, generate all-round support to the 'legitimacy' of the Friends of Fish position.

European Commission

The EC treads middle ground in its submissions (TN/RL/W/82 and 178). Its empathy with the Friends of Fish comes from its subscription to the traffic lights approach to classification of subsidies. It, however, does not subscribe to the 'no to subsidies' approach adopted by some of the Friends of Fish members. EC member States also have a long history of subsidies that have been the base of both the capacity enhancement of the fishing fleet and the

[18] New Zealand's individual submission is not so forthcoming on this. They state that "overfishing is driven by overall fishing effort in which overcapacity is a critical but not a sole factor" (TN/RL/W/154).

development of the fishing communities. When subsidies did lead to excessive capacity, strategies were evolved, as part of the Common Fisheries Policy, to reduce fishing effort in EU waters. They included decommissioning of vessels, and fishing agreements with third countries – both again with further subsidies. The agreements that the EU signed with the African-Caribbean-Pacific (ACP) States helped the fleet owners to get some respite by obtaining licences to fish in the waters of these developing countries.

There are currently some 500 EU vessels fishing under 16 bilateral EU-ACP fisheries agreements costing the EU taxpayer about Euro145 mn per annum. This sum was given as compensation payments for access to fishery resources in the developing ACP countries. The fleet operators paid an additional Euro30 mn in access fees. About 9 million tones of fish are caught outside EU waters in this manner, which was destined for the fish-processing industry in Europe (Gorez, 2003).

The EC has very strong views on the subsidies-overcapacity-overfishing relationship. They are clear that the Doha mandate is to devise new disciplines, particularly for those subsidies that have negative consequences. They strongly feel that this relationship is universally applicable.

The difficulty of prohibiting all subsidies, given the 'addiction to subsidy' syndrome, has prompted the EC to propose a 'permitted fisheries subsidies' category in their submissions. This is necessary in order to mitigate the negative social and economic consequences of their ongoing effort at restructuring of the fisheries sector.

The EC is aware that subsidies are not the only cause for all the problems in the fisheries sector. Good resource management is the key. The EC is mindful of the needs of developing countries, and feels that more needs to be done to allow developing-country members to achieve legitimate development goals. They are willing to constructively engage in drawing up rules in the context of Article 27 of the ASCM, which relates to special and differential treatment (S&DT).

The EC is for increased transparency, which is an absolutely necessary condition to deal effectively with fisheries subsidies. On this issue, the EC has made a full submission (TN/RL/W/178) detailing the approach adopted by them on this matter, and suggesting ways by which even developing countries can be assisted to set up a comprehensive system for transparency and enforcement, which can be either a domestic or a WTO-controlled system.

The EC is forthcoming about questioning the competence of the Negotiation Group on Rules at the WTO for dealing with questions about the interaction between subsidies and management. They consider this best left to other forums such as FAO, UNEP, OECD, etc. While the WTO negotiations do have an impact on the EC's 'administrative' proposals, it is not so clear how the WTO negotiations have a bearing on the other political institutions such as the EU Council and EU Parliament. Here the voice that counts is still that of the EU fishing industry lobby.

Opponents of the Friends of Fish

The main opponents of the Friends of Fish are three Asian countries – Japan, which is a developed country, the Republic of Korea, and Taiwan Province of China, which are classified as developing countries. These three countries were major distant-water fishing nations. Taiwan continues to be so. Both Japan and Korea have retracted from that status. All three countries have provided major subsidies to their fisheries and their fishing communities. They continue to do so. The level of subsidies of Japan in 1997 was more than twice that of the developed countries of the Friends of Fish (see Table 8). The major share of subsidies in Japan and Korea has gone towards major infrastructure development related both to the industry – harvesting and processing – and also for enhancing the livelihood of the coastal communities (WT/CTE/W/175 and (TN/RL/W/159).

Japan and Korea have taken the position that it is not subsidies but the lack of good management arrangements that are the bane of fisheries (WT/CTE/W/175 and WT/CTE/W/173). Japan has demonstrated that in spite of the large subsidies given to its fishery, there is no evidence of increased output. Japan claims that the major investments in fishery infrastructure largely contribute to the qualitative improvement of the sector (TN/RL/W/159). However, Japan has been consistently against illegal, unreported and unregulated (IUU) fishing, and has been strongly opposed to any subsidies that foster this (TN/RL/GEN/47). Japan is concerned about the large number of distant-water fishing vessels that fish illegally for tuna and thus gain unfair advantage over a fishery in which it has considerable national interest. Japan is, therefore, in favour of prohibition of all subsidies for overseas transfer of fishing vessels. It does not provide subsidies for the construction of vessels that have capacities to operate on the high seas if they do not possess a proper authorization for fishing.

Japan, Korea and Taiwan are not for adopting special disciplines for fisheries subsidies. They are of the opinion that the existing SCM Agreement can handle all the features of subsidies to fisheries (TN/RL/W/11). They do not agree that subsidies inevitably contribute to resource depletion, nor that they are inherently good or bad. The effect of subsidies depends on their purpose and the circumstance in which they are provided (TN/RL/W/160). They have adopted the 'bottom-up approach', which, in essence, says 'yes to subsidies' and then involves identification of particular programmes to be prohibited and particular programmes to be permitted.

This group of countries is also strongly in favour of the involvement of other international and intergovernmental organizations like the FAO, UNEP, OECD and others in drawing on their expertise with regard to issues that are beyond the competence of the WTO. They prefer that the WTO negotiations are restricted to matters that pertain to trade distortions caused by fisheries subsidies (TN/RL/W/97). It is true that these countries were initially opposed to any discussions on the subsidies issue. However, they now consider it politically expedient to engage on the subject.

States Highlighting Special and Differential Treatment

The developing countries that have participated in the negotiations with submissions include China, a group of eight small island developing States (SIDS) and Brazil. The common factor among them is the emphasis that they place on S&DT issues. Basically, the thrust of their submissions can be characterized as highlighting the beneficial fishery and people dimensions of subsidies for sustainable development.

China

China is the world's largest fish producer and exporter. It also imports fish for domestic consumption. China argues for a sub-sectoral approach to subsidies within fisheries. Subsidies for fishing on the high seas are not to be viewed like subsidies for fishing in the EEZ. China is for according S & DT for all developing countries as pointed out in the Doha Declaration. It has suggested a green-light category of non-actionable subsidies that promote sustainable development with a people and resource focus. These include subsidies for infrastructure construction, prevention and control of disease, fishermen switching to other businesses, and scientific research and training (TN/RL/W/9). China is for greater transparency of the notifications procedure. As an important and rapidly growing global trading power with major plans for fish

production and trade, all eyes are on China. A drop in global fishery subsidies will be a major boost for Chinese fishery exports. The increasing outsourcing of fish processing by US companies to Chinese fish processing establishments is an indicator of the direction in which the fish commodity chains will be linked in the future.

Brazil

Brazil is no major player in fish production and has no comparative advantage in fish trade. It is also unlikely to become a major player in fish exports in the near future. Brazil's role is more as an opinion maker for developing countries. Brazil is very clear that the developing countries, who are latecomers into fisheries development, should not be penalized by prohibitions now being requested by developed countries that enjoyed the benefits of subsidies earlier. Brazil argues that equal application of the prohibition "would have the effect of freezing the status quo between the haves and have-nots in fisheries, while maintaining the hegemony of several traditional fishing nations who — one should repeat — have built their fishing fleets with generous subsidies." Brazil's submissions (TN/RL/176 and TN/RL/GEN/56) are strongly in favour of highlighting the developmental dimension of fishery subsidies as well as the need to stress the Doha commitment to place the interests of developing countries "at the heart of the Work Programme". Subsidies can be viewed as one of the 'special measures' for developing countries to promote their trade and development in accordance with GATT Article XXXVI. Brazil is also for asserting the rights granted to developing countries under other international agreements such as the United Nations Convention on the Law of the Sea (UNCLOS), the United Nations Fish Stocks Agreement (UNFSA) and other FAO-developed instruments such as the Code of Conduct for Responsible Fisheries and the International Plan of Action for the Management of Fishing Capacity.

Brazil subscribes to the view that subsidies lead to production distortions, overcapacity and overfishing. Improved disciplines are needed to tackle this. However, this should not replace the need for fisheries management, which should be dealt with in the appropriate international forums. Brazil takes a strong stance for justice between countries with regard to access to resources. However, conservation of resources cannot be compromised, regardless of the scale of the fishery or the level of development of a country. Following this line of argument, even subsidies to small-scale and artisanal fisheries are proposed only if the resources they fish are not "patently at risk."

Brazil has also attempted to define 'small-scale fisheries' and 'artisanal fishing'. However, in an effort to be specific, they have grossly overspecified the characteristics of both. This would make it difficult for any country to categorize small-scale and artisanal fisheries, which are both diverse and always evolving. It has adopted the traffic lights approach, with green for non-actionable subsidies, and red for prohibited. The issue of greater transparency and the need for notification procedures have been highlighted.

Brazil is for treating government-to-government transfers in the form of access fees as a subsidy. However, when the transfer is made to a developing country, it is to be permitted. It is for strict action against IUU fishing. It is for more relaxed norms on subsidies when members are part of RFMOs. It also wants a five-year grace period for developing countries to phase out subsidies that will be considered prohibited under new disciplines.

Brazil's submissions reveal an attempt to mix and merge the major approaches forwarded by the main negotiating parties. This has reduced the coherence of their proposals. Being neither a major fishing nation, a fish-consuming population or having a comparative advantage in fish trade, such a broad set of proposals makes it difficult for other developing countries with interests in fisheries to identify closely with their submissions in their totality.

SIDS

A group of eight small island developing States submitted two proposals to the negotiations (TN/RL/W/136 and TN/RL/GEN/57). These States are not major players in global fisheries production or trade. However, in their own national contexts, fish trade can form a very major share of their total exports. The main resource they have at their command is not on the land but in the large expanse of ocean that they have control over by virtue of UNCLOS. They have small populations, heavy dependence on fish as the main/sole source of protein, and fisheries as a major source of employment and livelihood. Given this state of affairs, any global changes in the realm of fisheries trade or access rights to resources can have a major bearing on their economic, social and cultural development.

They are concerned that the information used to examine the relationship between subsidies and depletion has been based mainly on data from more advanced countries with large-scale industrial fleets. They claim to be in a situation where judicious management is responsible for stocks in excess of the capacity of their domestic fleets. They are, therefore, concerned that

categorizing access fees paid to them for their resources as subsidies would be a grave injustice. They are also concerned that the incentives given to both local and foreign fishers to enhance utilization of their EEZ resources – a commitment under UNCLOS — would be considered untenable by the WTO under the proposed subsidies disciplines. They are also of the opinion that fisheries management issues are not an appropriate subject matter for the WTO and would be best left to agencies such as the FAO.

The SIDS of the Pacific have access agreements with the US, EU and also with Japan, the Republic of Korea and Taiwan. For several years, no data was available on the magnitude and the economic importance of access fees to these Pacific nations, three of whom – Fiji, Solomon Islands and Papua and New Guinea — are WTO members. The initial estimates (1999) made public show that for these WTO members, the access fees received as a share of gross domestic product (GDP) or as a share of the value of the catch, is not very significant – less than 1 per cent. However, for the poorest, smallest and most vulnerable of the countries, such as Kiribati and Tuvalu (who were de facto GATT members), the access fees accounts for a substantial 40 per cent of their GDP. In the case of the Federated States of Micronesia, Nauru and Marshall Islands, access fees account for a modest 5-6 per cent of GDP (Gillet and Lightfoot, 2001). The dependence on access fees is a function of the state of development of the fisheries industry of the concerned islands: the more developed or 'domesticated/localized' the fishery, the less dependent is the country on access fees.

The eight SIDS, therefore, wish that the following measures are not subject to any subsidies disciplines: development assistance to developing coastal States; assistance to artisanal or small-scale fisheries; access fees in fisheries access agreements; and fiscal incentives to facilitate the fishery development capabilities of small vulnerable coastal States.

Round-up

Post-Doha negotiations are clearly polarized. The only consensus is that some subsidies, in certain contexts, can contribute to adverse production distortions and unequal access to resources. This dimension is not captured in the current WTO subsidies disciplines. The strong affirmation regarding a subsidy-overcapacity-overfishing causation is not widely endorsed. The wisdom of enhancing WTO disciplines into realms where its competence is limited and where conflicts may arise between international agreements

(for example, UNCLOS vs WTO) merits serious introspection. The evolving nature of the structure, ownership and control over the global fish economy will also play a crucial role in the way we perceive, locate and define subsidies in the different activities of harvesting, processing and trade. Developed countries obtained an initial headstart — in some cases, as much as two centuries — in fisheries development through massive subsidies. Their current move is to discipline subsidies for all, without adequate objective facts for doing so. It is without a historical understanding of the role subsidies have played in building the human capabilities of fishing communities. This is blatantly unfair to developing countries.

While there is consensus that the concerns of the developing countries should be taken into consideration, this largely relates to provision of greater time or the provision of certain exemptions with respect to the withdrawal of subsidies. These are concessions that divert attention from the legitimate needs of the developing countries to continue providing support to their fisheries for both the people-oriented and resource-use-oriented aspects of fisheries development and management.

Developing countries can legitimately take the approach where no subsidy is considered adverse for trade until it is proved so by those who wish to prohibit it. This, however, does not absolve the developing countries from examining the impact that their subsidies programmes have on creating trade or production distortions or harming their resources. Current WTO subsidies disciplines are adequate to address these matters. As we shall attempt to highlight in the next section, the premises of the current debate on production distortions are exaggerated when we examine the evidence at a more disaggregated level.

This is the real challenge before the developing countries. The opportunity to establish this fact should not be negotiated away by agreeing to crumbs of concessions, which, though offered at the same WTO harbour, are dropped from the bridge of large industrial fishing vessels to little sailing boats.

6. EXAMINING KEY CONCEPTS AND RELATIONSHIPS

A meaningful agenda for holistic sustainable development of fisheries in developing countries calls for greater clarity of some of the concepts, and a more discerning look at some of the assumptions and the relationships proposed in the country submissions and by other influential environmental organizations. This is an important step towards moving away from the hype about subsidies to making more reasoned judgements on the measures to be

taken by developing countries to make fisheries a vibrant sector of their economies.

On Subsidies

A discerning observer remarked that the word 'development' is very amoeba-like, given that is has no definite form despite its prolific use. The word 'subsidy' also encompasses a host of ideas, making it excessively fluid. There is no standard meaning of the word 'subsidy'.

However, there are some basic elements involved. A subsidy requires at least two parties – the donor and the beneficiary. There is an action, or a lack of it, between them. The donor has a purpose in taking the action. The (in)action confers a benefit. The effect of the (in)action may spill over beyond the realm of the targeted beneficiary and confer a larger (un)intended benefit/disbenefit to others.

The donor of a subsidy has been increasingly identified to be only a government or public organization. In the context of the WTO rules, it is fully restricted to this meaning. Subsidies include all financial contributions or income or price support by a government. In general, subsidies are considered to be the making of the 'law of the land', which is basically distortionary. The strict validity of this proposition is worthy of examination.

It can be shown that subsidizing is a very common practice in commercial marketing too. Firms subsidize one product that they wish to sell by giving another product free or below its market price. It is clear from this case that subsidies are not just the law of the land, but the 'law of the market' also. The moot point is that subsidies are essentially transfers from a limited kitty – robbing Peter to pay Paul. Business concerns know 'what their bottom line is' when they subsidize a product in this manner. They always keep their larger and legitimate commercial interests in mind — such as expansion of market shares or disposal of stocks. It may be argued that every government is also aware of its bottom line, keeping larger and legitimate social interests in mind, such as protecting a vulnerable group, or supporting one type of activity, which they consider vital, over another.

The difference between 'commercial' subsidies and 'State' subsidies is that while the former are easily withdrawn, such action with regard to the latter is a major political task. In the case of commercial subsidies, the decision is taken within the firm, without much difficulty. The shareholders have limited say in these issues. They can be treated as intra-firm accounting practices of which transfer pricing strategies are good examples. In the case of a State

subsidy, a combination of domestic laws and international agreements may be required. Withdrawing State subsidies is difficult because it involves withdrawing benefits conferred to a special interest group in the economy at some earlier point in time. It is not a decision that bureaucrats can make. State subsidies are 'non-neutral' and, therefore, those who will lose are capable of creating strong lobbies against the reform. If subsidies are to be removed, they will have to be part of a larger process of macroeconomic and political reform. This may be more difficult to achieve in democracies than in autocracies.

The structure of control over international trade in the developed countries is moving increasingly towards greater corporate control. Consequently, subsidies can now be given by firms without attracting any WTO disciplines because such transfers are deemed to take place in the market and hence not distortionary. The trend in the developed countries is currently towards greater corporatization of the fishing industry in the realms of harvesting, processing and marketing. With greater globalization of capital, this will also lead to a greater multinationalization of the big firms. This current trend will tend to reduce the role of the State, and enhance the role of the market in the fishery sector. The apparent level of subsidies will tend to decrease. This is only because they change from public subsidies to private transfers. The granting of individual transferable quotas (ITQs) in fish resources to individual firms and the subsequent concentration in their ownership in the hands of a few companies can lead to less financial transfers from government funds. This has happened in Iceland and New Zealand.

Consider a scenario where Country A does not subsidize its fishery, whereas Country B provides some significant State support to the variable and capital costs of its fishing units. Both countries export fish to Country C, D and E. In Country A, the industry gets privatized and largely in the control of large corporate multinational firms that have interests in the fishing and processing activities as well as trade. Through intra-firm financial mechanisms, much of the variable costs of the fishing units are covered by the transfer pricing policies of the processing units. This makes Country A's fishing units run on less-than-full costs, and gives it a competitive advantage over Country B's fishing units. However, while the subsidy programme of Country B will be subject to WTO disciplines if challenged, the transfer pricing effected in Country A (also a subsidy) will not.

In the context of developing countries, there are strong, economic and social reasons for continuing State support in the form of subsidies. Subsidies

continue to be one of the tools needed to implement certain development policies in the framework of the multilateral trading system, under which a country can promote transformation of its economic fabric. The limit is only the financial resource constraints that developing countries face in making these financial transfers. Given this, it may be necessary to examine the possibility of reallocation of subsidies in such a manner that the unintended disbenefits that they create are reduced, without lowering the overall level of subsidies.

In the case of fisheries subsidies in the developing world, given that the level of subsidies is rather small compared to what the developed countries have given in the past or continue to do in the present, the above may be the right approach to adopt. This will require a proper audit of current subsidies and their reorientation to building the capability of the people in the sector, and measures for the protection/revival of the fishery resources (see Sections 7 and 8 for details).

Classifying Fishing Units

A major key to assessing the fishing capacity and fishing effort hinges on the proper analysis of the structure of the fishing units in a fishery. There are numerous ways of going about this task. The units can be structured according to their area of operation: inshore and deep sea. They can be structured according to the vintage of their technology: traditional and modern. The motivation of the operators can be a useful criterion for structure: livelihood-oriented and profit-oriented. The skill and level of capital can be another criterion: artisanal and industrial. One of the most common methods is to structure the fishing units operating in the fishery by size: small and large. There is undoubtedly significant meaning in linking these various criteria: the inshore fishing units may adopt traditional technology, livelihood-oriented, artisanal and small in size. While such overlaps may be relevant, there is no reason to create rigid linkages. Dynamism and change are important hallmarks of a vibrant fishery.

From the very early days of the WTO discussions on fishery subsidies, the question of the structure of the fishery was debated with the primary aim of 'positively discriminating' against the small fishing units in regard to the question of receiving subsidies.

Classification of fishing units into homogenous sub-categories is a relatively easy task where the total number of units is in the hundreds or thousands; where the operations are port-based; and where formal registration and licence

records of the units are available. These are the conditions that prevail in the developed countries.

In most developing countries, the fishing units number in the hundred thousands; operations are widely dispersed and beach-based; the practice of registration, though legally required, may be largely ignored or fraught with loopholes. There is also the presence of a large subsistence sector as well as fishing units that are in various stages of transition in terms of their sources of propulsion and use of fishing gear. Categorizing units in such a context of dynamic transition can be an intractable problem and a daunting proposition.

In the WTO negotiations, several classificatory terms have been used. These include: industrial units, distant-water fleets, large-scale commercial units, small-scale subsistence fishery and artisanal fisheries. The concern to protect government programmes that benefit vast numbers of fishing units in developing countries that do not constitute any trade or production distortions has resulted in efforts to attempt careful classifications. However, even very systematic and legally astute researchers have acknowledged the difficulty of arriving at universally applicable categories and/or definitions (Schorr, 2005).

In the light of the above, we propose an alternative approach for classification. It is based on the firm belief that the pursuit of the 'globally' acceptable common definition is unattainable. It is also unwarranted.

Our proposal is to split the fishing units in a country into three categories, two of which can be fairly unambiguously defined, and the one in the middle left amorphous.

> At the bottom, we define:
> *Artisanal fishing units*: those fishing units that use non-automatic gear deployment or hauling devices.
>
> At the top end, we define:
> *Large-scale fishing units*: those fishing units that should be listed in the Lloyds Register.
>
> At the middle, we define:
> *Small-scale fishing units*: the remaining fishing units in the respective country.

The advantage of this approach is that the criteria are simple and without ambiguity, and they can be uniformly applied. The administrative costs of assessment are greatly minimized and subject to very minimal adverse

selection. However, the approach does not negate the dissimilarities and diversity within a fishery or between countries.

All over the world, the artisanal fishing units, as defined above, can be exempt from any subsidy disciplines.

In the developed countries, the subsidies given to both the large-scale fishing units and the small-scale fishing units should be subject to current ASCM disciplines of the WTO.

In the developing countries, taken as a whole, only subsidies given to the large-scale fishing units should be subject to current ASCM disciplines of the WTO, if at all.

Subsidies, Overcapacity and Overfishing

Fishing capacity and fishing effort are easily identifiable and measurable factors. The total capacity of a fishing fleet can be assessed once we know the measure to be used (tonnage, engine horsepower, etc.) and have a count of the number and the type of boats. Similarly, total fishing effort, though a bit more complicated, can also be assessed. It is the product of the number of boats and the effort expended over a given period of time. Both these measures can be compared across fisheries in different countries and ecosystems.

However, the moment we talk about 'overcapacity' and 'overfishing', we move into a normative and relational realm. The term 'overcapacity has been defined by Stone as "a state in which the value of inputs to fishing is greater than required for most efficiently achieving the desired level of fishing activity" (Stone, 1997: 513). Stone then continues: "However, there is little consensus on what would constitute the 'right' capacity, or the 'right' level of inputs, against which excess should be measured. For instance, the safe catch level for any stock is always controversial and fluctuates from year to year. In the light of the uncertainties, it is not clear what level of fishing activity will net the 'right' catch" (Stone, 1997: 513).

There is also the problem that in a capture fishery, there are innate factors of seasonality, natural fluctuations, species heterogeneity and species interactions, which make it difficult to decide at what level the capacity (however it is measured) can be considered 'efficient.' These nature-induced attributes are far more prevalent in tropical marine ecosystems in which most developing countries are situated. Given the innate factors mentioned, it may indeed be more rational in a fishery to have 'excess/idle capacity' viewed purely from the physical sense. The more important deciding factor about the 'right' capacity

would be the long-run costs of utilizing and maintaining this 'excess' capacity in relation to the expected flow of long-run benefits that it will yield.

The term 'overfishing' refers to a biological context, which can be simply defined as rates of fishing mortality that exceed sustainable levels[19]. Much of this deceptive simplicity arises from the use of theoretical 'single-specie' models developed from the context of the temperate water marine ecosystems. The applicability of these models in tropical marine ecosystems is severely restricted, given the highly interactive multi-specie nature of these waters. The practical implication is that, in tropical waters, assessing specie-wise fishing mortality and sustainability levels is intractable and costly, when possible. Also, the phenomenon of 'fishing down the food chain'[20] creates a situation where the total quantity of fish production can continue to rise, although there may exist evidence of overall 'adverse' changes in the marine ecosystem. Such ambiguities make it difficult to assess when a specie, or a fishery as a whole, is biologically 'overfished' or 'patently at risk'. The link between 'overcapacity' and 'overfishing' thus becomes even more tenuous, and a realm where considerable subjectivity will prevail. When subjectivity is the norm, politics tends to prevail.

Another issue of concern in the overcapacity debate is that subsidies have been singled out as an important initial triggering factor. The analyses made in this regard are of a very aggregate nature and these also tend to hide the huge variations that exist between countries and fleet types. The capital investment and the running costs differ so widely. Assessing the economics of the global fishing fleet by adding factory trawlers with sailing vessels is like assessing the food intake of fish by adding up the diets of whales and anchovies. We have made a more discerning and disaggregated analysis of the famous FAO 1992 study to illustrate this point.

The burden of that study was to make an approximation of the costs and revenues of the global fishing fleet, and show that the operating costs were in excess of the revenues.[21] The study made a global estimate of total cost over gross earnings to be of the order of US$20 bn and suggested that this gap

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[19] We must note that overfishing can be biological or economic. Biological overfishing can be further classified as recruitment overfishing, growth overfishing or ecosystem overfishing. In economic overfishing, costs are greater than revenues.

[20] The tendency of moving from harvesting of fish at the higher trophic levels on the food chain to harvesting fish at lower levels. If there is a predator-prey relationship between these levels, excessive fishing of the predator can lead to an explosion in the population of the prey. When the prey is then fished, total fish production in quantity terms need not decrease though the total value of the output can fall.

[21] See Footnote 11 in Section 4.

must have been largely filled by subsidies. The study also stated that the total annual operating costs (excluding labour) were equal to the total annual gross revenues of US$70 bn. However, a more disaggregated analysis of the data (from the appendix tables provided in the original study) shows how deceptive and misleading global aggregates can be when dealing with a realm of such wide diversity (see Table 9 below).

Of the world's over 3 mn fishing vessels, a mere 1 per cent are industrial vessels, and they account for about 72 per cent of the global capital replacement costs and 55 per cent of the global annual operating costs. On the other hand, the 2 mn plus undecked[22] fishing boats, which are in the developing countries and comprise 65 per cent of the world's fishing fleet, account for a mere 0.65 per cent of the capital replacement value and only 9 per cent of the annual global operating costs. As we are not able to provide a similar disaggregated analysis of the revenues (due to lack of data), it will be hard to make any affirmative statements about the gap between costs and revenues in the industrial fishing fleet and the undecked fishing fleet.

Table 9: Break-up of the Replacement Costs and Operating Costs of the Global Fishing Fleet (1989) Based on the FAO 1992 Calculations

	Global fleet	Industrial fleet	Undecked boats	Decked
Number	3,235,710 (100)	35,710 (1.1)	2,100,000 (65)	1,100,000 (33.9)
Replacement Cost (US$bn)	319.0	229.0 (71.8)	2.1 (0.65)	87.9 (27.55)
Annual Maintenance* (US$bn)	30.2	20.18	0.12	9.90
Insurance* (US$bn)	7.19	4.43	0.12	2.64
Supplies and Gear*(US$bn)	18.50	7.98	0.84	9.68
Fuel*(US$bn)	14.06	6.12	2.17	5.77
Labour(US$bn)	22.71	11.31	3.15	8.25
Total Operating Costs (US$bn)	**69.95 (100 %)**	**38.71 (55.3 %)**	**6.4 (9.2 %)**	**24.84 (35.5 %)**

(Note: Total Operating Costs are the summation of the costs marked with *)

Source: Calculated from Appendix Table 2,3,4 and 5 of the FAO- SOFA 1992 Report

[22] Fishing boats other than industrial-class vessels can be broadly classified into two groups: decked and undecked. All the latter may be safely classified as artisanal fishing units as gear retrieval devices are technically difficult to use on them.

However, a simple calculation shows that for the undecked fishing vessels, the annual operating costs per vessel are about US$3,000 per year. The FAO study further assumes that the undecked boats fished for 180 days in a year. This would imply a daily gross operating cost of US$17 only. It is hard to believe that the gross revenues per vessel would not be as much. This highlights that there is unlikely to be a deficit in their aggregate operations. Even if we assume that the world has an 'overcapacity' of undecked fishing boats, the argument that subsidies are the cause is hard to accept.

From our above analysis, it is abundantly clear that we have to look beyond the single factor of subsidies to understand the dynamics of fishing capacity. Moreover, it should be very clear that if subsidies are a causative factor in overcapacity, it will be almost exclusively in the industrial fishing fleet that account for only 1 per cent of the fishing units in the world.

A Holistic Understanding of the Causes for Expansion of Fishing and Capacity

What makes fleet capacity 'excessive' in relation to the maximum sustainable yield of the fish resources and/or the carrying capacity of the ecosystem, is a function of both the *amount* of physical capacity (nets, boats, etc.) and the actual *level* of fishing activity. There are several causative factors that can promote the expansion of fish activity and, in turn, the harvesting capacity in a country's fishery. Subsidies are just one of them. In the developing countries, they are just the latest addition to a list of earlier factors that we sketch out below:

a. Expansion of the (global) market for fish and fishery products. This is a prime cause for expansion of fishing activity (given any level of technology) and, subsequently, for physical expansion of harvesting capacity.

b. Changes in the technology. This can be an autonomous development, which may create sector-specific technological innovations and result in their widespread diffusion. However, diffusion and technological change are greatly spurred in the presence of factor (a) above. The configuration (nature) of the technology will greatly condition the fishing activity and the harvesting capacity.

c. Greater access rights to the resource. Closed and limited access is a barrier to entry into the realm of the fishery resource. Changes in the rules/norms governing access, particularly a movement towards more

open access, will create incentives for more fishing activity and fishing capacity. This is exacerbated if factors (a) and/or (b) are present.

d. Expansion of fish processing capacity in response to (a), (b) and/or (c). The requirement for raw material for processing will create the demand for expansion of the backward linkages into the fishing activity and harvesting capacity.

e. Support or subsidies in the system. The encouragement provided directly or indirectly by government or private sources (for example, by multinational fishing companies) play a role in enhancing fishing activity and harvesting capacity. The extent to which this support is sustained will depend on the individual or joint presence of the above mentioned factors (a), (b), (c) and (d).

Every one of these factors, acting alone or in combination, will have a corresponding bearing on the level of fishing activity and harvesting capacity created and sustained. It is also clear that subsidies alone are not a necessary condition for this. However, when subsidies — particularly those intended to enhance the vessel or gear capacity — are added to the other factors, they can hasten the process, and, when taken to an extreme, this can lead to rapid overcapacity and overcapitalization in the fishery, and create unhappy economic, social and ecological consequences. Even so, the adverse impact on the fish stocks (both its quality and quantity) will vary depending on the ecosystem (tropical or temperate) in which the fishing activity takes place.

The current global attention on subsidies in relation to the role that they play in enhancing fishing activity and expanding harvesting capacity — particularly from the perspective of the developing countries and, more particularly, from the standpoint of the least developed among them – is, therefore, excessive and overrated. Placing a check on excessive fishing activity and capacity, if they do exist, will first require taking a much closer look at the factors mentioned in (a) to (c) above – markets, technology and institutions. Attempting to discipline subsidies will attain meaning and effectiveness only in that context.

Round-up

Greater clarity on the key concepts and relationships is a *sine qua non* for moving towards creating greater policy space for appropriate support to fisheries development in the developing countries. The current debate is excessively

loaded with terms that are difficult to measure even with the best of data and information. Moreover, relationships are sought to be established using static 'proximate' factors, rather than searching for interrelated and dynamic 'ultimate' factors. This is an erroneous approach. Using such means to 'discipline subsidies' will discriminate against developing countries, and, if accepted, can become effective non-tariff barriers in the long run.

In the context of the WTO negotiations, the special and differential treatment provisions promised to the developing countries can be realized only if they have the potential to develop their own capabilities in a manner most suited to their economic, social and cultural conditions. To achieve this, as we have attempted to do here, there must be plurality of advice about concepts and their relationships.

As Joseph Stiglitz has pointed out, "some of the assistance provided to developing countries by the international community should be devoted to establishing independent and competing sources of advice. Competition in the marketplace of ideas is every bit as important as competition in the marketplace for goods and services" (Stiglitz, 2002: 246).

7. FOCUSING FUTURE DEVELOPMENT PRIORITIES AND POLICIES

The debate on fisheries subsidies goes beyond the discussions of the WTO SCM agreements and into the realms of S&DT and the issues of the development choices that will have to be faced by the developing countries in the future. The case for advancing subsidy reforms is very strong. The case for prohibiting them is both unfair and unwarranted. We accept the premise that international trade is one means of achieving economic and social advancement. We have also affirmed that it is in the fisheries sector that this relationship is most valid since sustainable development – both the resource and human dimensions of it – cannot be envisioned without international trade. Trade is innate to the development of the fishery and the prosperity of fisher people. However, fostering unbridled trade can have detrimental consequences for the fishery resources, the fisherfolk and domestic fish consumers – with or without subsidies. Striking a balance is the key both for trade and subsidies.

We further reiterate that the most important limiting factor in the development process is the resource. Though it is renewable, the rate of extraction can exceed the rate of rejuvenation, with or without subsidies. Recognizing this

calls for a good understanding of the nature of the resource, its composition and its distribution. This compulsion is most important for the tropical-water developing countries. Here the resource configuration is complex and the state of knowledge is limited.

Keeping these caveats in mind, in this section, we attempt to focus on three broad domains — national development, fisheries development and human development. To produce optimal economic and social benefits, developing countries can support fisheries and fisherfolk by fostering development priorities and creating space for new policies in these domains.

National Development

Understanding Resource Potentials

The proclamation of EEZs by most developing countries brought vast ocean areas under their exclusive economic control. This gave them considerable access to both renewable living resources and non-renewable resources within this realm. EEZs extend seaward from the coastline out to 200 nautical miles (320 km). Claims to EEZs were quickly made by developing countries, though many of them did not (and still do not) have the technology, human power or institutions to harvest these resources.

UNCLOS makes it mandatory for coastal States to take responsibility for the conservation and the optimal utilization of the living resources of the EEZs (Arts 61 and 62). These Articles indicate that if a State cannot achieve optimal utilization of the resources, then arrangements should be made to allow others to do so. However, there is an important caveat. This sharing of resources is to be undertaken keeping in mind the conservation needs and the socioeconomic requirements of the fishing communities of the coastal States. This part of the Articles is rarely given its due emphasis.

There are no reliable estimates of the fishery potentials of the EEZs of each of the coastal States taken separately. Globally, we have information on the area of the ocean that is covered by EEZs, and the share of the globally estimated fishery resources within them. The world's ocean area is usually divided into three: (1) waters over the continental shelf; (2) the waters between the end of the shelf and the limit of EEZs; and (3) the high seas beyond the EEZs. There is a strong inverse relationship between the area of each of these segments and the share of the fishery resources inhabiting it. This is evident from Table 10 given below:

Table 10: The Distribution of the Fishery Resources in the World's Oceans

Zone of Ocean	Zone 1: Upto End of Continental Shelf (approx. till 200m depth)	Zone 2: End of Continental Shelf to Limit of EEZ (320 km from shore)	Zone 3: High Seas (Beyond the EEZs)
Percentage of Ocean Area	6	26	68
Share of Fishery Resource Potential in Each Zone	65	20	15

While these global estimates are generally valid for the resource distribution of any coastal State, it must be noted that in the tropical zones, where most of the developing fishing nations are located, estimation of this potential is also more complex than in the temperate zones off most developed fishing nations. This is due to the greater species diversity, the higher inter-specie interactions, the more complex prey-predator relationships and the smaller size of the individual fish stocks. Added to this, the level of scientific requirements and the investments necessary to undertake such resource assessments is either not a matter of priority for a developing coastal State or is out of its financial reach. Our knowledge of these ecosystem specifics is highly inadequate, and the need for research to understand them better should be given priority. This will require more national investment and international exchange of knowledge. It is highly unlikely that such investments can be borne by the fishing industry in these countries. It will have to legitimately come from the national exchequer or through development assistance. Support provided for this should not be considered a subsidy. It must be seen as an investment for understanding and assessing nature's gift to the nation.

Sustainable Finances from Trade for Development

Understanding the special features of fishery resources, as well as their quantitative and economic potential, is important. It permits developing countries to creatively plan for the judicious utilization of these resources as a source of funds for national development. The fugitive and sedentary living resources available in the EEZs are a considerable source of food, livelihood and wealth for developing countries. The 'perpetual harvest' nature of marine capture fisheries makes it an attractive source of quick earnings. Once the initial investments in fishing vessels and gear are made, a flow of revenues is immediately assured. With the establishment of the EEZs, the share of world

fish exports of the developing countries has increased at rates faster than that of the developed countries and global fish exports as a whole (see Table 6 above). This was the situation between 1976-1984 and 1984-1995. However, during the period when the discussions on fisheries and subsidies were taken up in the WTO, there was a slowing down of fishery trade. This fact is evident from the pattern of growth of positive trade balances in fisheries for select developing countries shown in Table 11 below:

Table 11: Trade Balances in Fisheries for Select Developing Countries (US$ mn)

Country	1970/72	1974/76	1980/82	1994/96	2000/02
Thailand	23	103	382	3432	3079
Indonesia	17	94	182	1531	1448
India	53	76	312	1083	1328
Senegal	9	39	97	255	244
Argentina	1	27	152	753	752
Ecuador	12	40	197	770	641
Chile	33	64	361	1530	1817

Such valuable foreign exchange earnings are crucial for development. In many of the Heavily Indebted Poor Countries (HIPCs), such as Nicaragua, Senegal, Ghana and Kenya, to name a few, foreign exchange from fish exports covers a significant share, if not all, of the annual debt service payments (Kurien, 2005). In poor countries such as Nicaragua, blessed with large fishery resources and where the population does not eat much fish, what better option could there be for judicious utilization of the resource, through international trade, to achieve development. If the fishery resources are managed sustainably, they can form the foundation of sustainable financial resources for national development.

Fisheries Development

The conventional 'technical' aspects of fisheries development need greater attention in the future. The most important aspect, as we have stressed above, is conservation and management of the resource. This is followed by the issue of fishery products, technology, organizational forms and information channels — concerns that have expanded over the past few decades. New niche markets for tropical fishery products have opened in the world's richest markets. The science-intensification of technology and the information revolution permit miniaturization of artifacts and speed of communication

in a manner that could not be imagined even two decades ago. The fisheries sector is well known for the rapid diffusion of ideas and technologies. These facets of globalization need to be exploited fully by developing countries for fisheries development.

Coastal Resource Management

The part of the sea of greatest significance to most developing countries is Zone 1 (see Table 10), which contains the fishery resources with greatest potential for international trade.[23] As mentioned above, the rights to the fishery resources in the EEZ vis-à-vis other nations are well established in UNCLOS. However, the rights of the coastal waters *within* the EEZ (particularly in Zone 1) are fuzzy. This ambiguity, coupled with the presence of highly valuable fishery resources in these zones, results in conflict, irrational investment and overfishing. Consequently, redefining the rights to the sea and its living resources, as well as crafting institutional arrangements that will serve the interests of resource management and governance in this zone, should become a matter of key interest in developing countries (Kurien, 1998).

Putting in place the right mix of arrangements in which there can be appropriate participation of the fishers is what most developing countries require. It may be fitting to plan for 'aquarian reforms'. Such reforms envisage that those who labour on the aquatic terrain are given the priority of access to it. This can be the norm for the small-scale community-oriented coastal marine and inland water fisheries.

The widespread efforts to institute community-based fisheries management of these coastal waters (in Asia) and establish artisanal fishing zones (in Latin America) are indicative of the efforts of the fishers – with and without State support – to exercise rights over resources and thus provide greater security for their livelihoods. In some regions of Asia, these efforts have prompted numerous initiatives at reviving old, unwritten community norms that serve these ends (Kurien, 2004b). State support to such actions, in the form of constitutional and governance changes or financial support, may be viewed as contributing to more participatory and just, sustainable fish production and trade.

It is important to note that conservation and management of the marine fishery resources and efforts to enhance their productivity cannot be achieved without

[23] In the case of SIDS, Zone 2 attains greater significance due to the presence of tuna in these waters.

provision of 'public goods'. Public goods, in this context, would include the arrangements for zoning of the seas, activities to monitor and police conservation and pollution norms, as well as to provide harvest-enhancing services, such as stock replenishment, construction of artificial reefs and so forth.

Product Development

Value-added trade in fishery products could help developing countries to exert less pressure on their fishery resources and yet earn more from trade. Fish exports from developing countries have shown very little change in their product or process composition over the period 1976-2001 (see Table 12 below). It is particularly so in the LIFDCs. This has been attributed to three factors: the natural resource configuration in the tropical waters matching certain widespread demand patterns in the major markets; the comparative advantage for labour-intensive processing; and, importantly, the high tariff escalation in developed countries (Kurien, 2005).

There is an emerging 'diaspora market' in Europe and the US, consisting of well-off Asian and African consumers who wish to flavour the fishery products to which they have been culturally conditioned. This provides a significant opportunity for product development of 'traditional' fish food products. For example, more hygienic and fuel-efficient smoking stoves in west Africa can ensure decentralized value-addition and pass down a greater share of the export value realization to the women who traditionally make these products. However, such initiatives will require proper technology extension services and a public-private partnership to finance these initial investments.

Table 12: Value of LIFDC Trade and Share of Fishery Products (Exports)

Year	*Value (US$ mn)*	*Top Three Products and Their Share of Export Value (%)*
1976	945	Crustacean, Mollusc & Cephalopods (CMC) Frozen (52) CMC Fresh and Chilled (20) and Fish Frozen (10)
1984	2,101	Crustacean, Mollusc & Cephalopods Frozen (59) CMC Fresh and Chilled (8) and Fish Frozen (8)
1995	9,437	Crustacean, Mollusc & Cephalopods Frozen (48) Fish Fresh and Chilled (12) and CMC Fresh and Chilled (10)
2001	10,233	Crustacean, Mollusc & Cephalopods Frozen (40) Fish Fresh and Chilled (20) and Fish Preserved (11)

The tariffs for processed fishery products in the major importing countries need to be reduced. Technical assistance for new processing technologies will be required to break the techno-economic 'lock-in' that has developed in the forward and backward linkages surrounding exporting of 'fresh, chilled and frozen' fishery products from developing countries.

Technology Blending

There is a strong case for 'technology blending' in the fish-harvesting sector. The harvesting artifacts (particularly fishing gear) of artisanal, small-scale fishing communities are well worth closer examination for their ecological appropriateness to multi-specie fisheries. The harvests made using such gear are notable for their freshness, seasonality and size. The development of niche markets for such products has great potential.[24] However, minor modifications of the material used for fabrication of such gear can contribute substantially to its longevity. This must be coupled with more 'science-intensive' artifacts such as hand-held global positioning system (GPS) sets and mobile phones. These add significantly to enhancing the fishing capability, ensuring occupational safety and better information on product prices. They will assist in raising the productivity of small-scale fishers without increasing fishing capacity in the conventional sense. The rising consumer movement in developed countries for encouraging more sustainable consumption patterns can be usefully linked to such efforts at technology blending in the developing countries. There is synergy in such actions because of the mutuality of interests between developing-country producers and developed-country consumers. Development of trade-related instruments such as ecolabels in such participatory contexts are worthy of investigation (Kurien, 2000a).

Producer Organizations

Producer organizations are an integral part of the institutional architecture to ensure just, participatory and sustainable fisheries development. A recent study (Kurien, 2005) opines: "The major share of the benefits from international fish trade accrues somewhere between the rich-country consumer and the poor-country producer. By improving our understanding of the price

[24] A good example of this, which led to significant enhancement of international trade and higher income for fishermen, pertains to the special jigging and netting device made by artisanal fishermen of Trivandrum District in Kerala State, India, in the 1970s for the environmentally benign harvesting of small quantities of live, adult cuttlefish that commanded premium prices among Japanese buyers. In 2004, the combined use of the GPS and this gear has greatly reduced their search time and fuel costs in locating columns of cuttlefish. The sustainable harvesting continues.

spreads along this marketing chain, greater will be the scope for making appropriate policy interventions towards a fairer international trade regime. Unless there is a radical altering of the structure of the trade channels, particularly at the end closest to the fishers, there is no possibility for a greater share of the 'export dollar' reaching those in greatest need of improved food security."[25]

The commitment to producer organizations, such as co-operatives, was a much-touted objective of the earlier 'development decades'. This has been swept aside by the wave of new evangelisation for unfettered free trade. A revival of producer organizations would bring no loss of commitment to freer trade. As a matter of fact, it is only by this dual commitment that trade can be made genuinely 'free'. Trade then becomes an arrangement for exchange of entitlements among groups who are 'more equal' and who are able to exercise considered and judicious choices, keeping their individual and collective interests at heart. In such circumstances, trade can create gains for all the parties involved and also generate positive externalities for society as a whole. International trade will have differential income impacts, depending on the structure of the sector. Be that as it may, maintaining the status quo of low returns to producers, in the ultimate analysis, perpetuates a hidden subsidy to rich consumers in the developed world.

Garnering Information

Developing countries are very data-poor with regard to fisheries. This is a gap that must be bridged to ensure development and management of the resource. There is also a need to examine the concepts currently used in the subsidies negotiations. The prime example is the term 'overcapacity'. Even when it is clearly defined, the 'one-measure-fits-all' approach is not valid.

A proper audit of the fishing craft-and-gear combinations of a country and their economics of operation are a paramount requirement for any objective analysis of the impact of government subsidies on fishing capacity and its effect on the fishery and human resources. The continuance of fishing operations, despite their being shown to be unprofitable by social cost-benefit calculations, could be due to a variety of reasons. These may include

[25] In this context, an interesting comment made in 1946 by J. M. Keynes on the international control of raw material prices is worth quoting: "*Proper economic prices should be fixed not at the lowest possible level, but at the level sufficient to provide producers with proper nutritional and other standards in the conditions in which they live … and it is in the interests of all producers alike that the price of a commodity should not be depressed below this level, and consumer are not entitled to expect that it should*" (Keynes, 1980).

inter alia the hope of bumper catches; the open-access nature of the resource; the returns being adequate on the private capital invested; the lack of other skills for the operators; and the non-convertibility of the capital for other uses. Innovative measures to address these issues will be far more productive than excessively tagging the subsidy question.

Credible studies, fresh interpretations of old concepts in new contexts, and wider dissemination form the foundation for both transparent information and greater preparedness for bargaining in trade negotiations. Developing countries have little to lose by adopting a negotiating stance that supports far greater transparency and simple procedures for pre-notification of subsidies. Hiding behind smoke screens of fuzzy concepts and unreliable data are bad strategy. The knowledge gaps that exist must be bridged with State support and sector participation.

Capability Building

To take advantage of the opportunities of integrating sustainable development considerations into fish trade, there are a whole range of capability sets that need to be generated within developing countries, and the LDCs among them. Exporters and government officials will need to obtain information on diversification possibilities and the scope for new product development. There is need to initiate greater 'trade-related capacity building' among developing-country policymakers and fishery officials. The commitments made by the developed countries in the context of S & DT concerns at WTO to promote such capacity-building initiatives should be fully honored. The endeavour in these capacity-building initiatives should be to provide the appreciation that trade is not an end in itself. It must be viewed as a means toward achieving national economic and social development. The emphasis on the commercial aspects of trade should not mask the contribution of trade to human development, if managed well. This is also within the Millennium Development Goals (MDG) framework, namely, global partnership for development (see Appendix B, Goal 8).

Examples of 'best practices' of fishery trade arrangements, which consciously factor into them resource and human sustainability dimensions, should be subjected to detailed national-level case studies. A consolidation of the key elements of such practices can be a major input into training programmes undertaken among national-level decision-makers and food trade entrepreneurs and worker organizations.

Human Development

The fisheries subsidies debate at the WTO, led by a few developed countries, with its bias in highlighting the presumed link between State subsidies leading to overcapacity, resource depletion and environmental harm, has come at a most inopportune moment. As we have argued above, the loud noises about these presumed ill effects of subsidies have drowned the historic role played by subsidies in human development of fishing communities in the developed world. A variety of means of State support continues to be essential for fishing communities in the developing countries, if they have to enhance their human capabilities. Wherever they exist, they should be strengthened, and where they are non-existent, they should be introduced.

Poverty Alleviation

In a very large number of developing countries, communities that depend on fish for their livelihoods are generally poor. Why fishing communities are poor and largely remain so has been a subject of scholarly debate for long (Gordon, 1954, Bene 2003). This has been a universal phenomenon. From a livelihood perspective, fishing communities in the developing countries are today in the condition where their counterparts in the developed world were in the early and middle years of the last century. The post-Second World War 'modernization' model of fisheries development in developing countries, assisted with liberal development assistance from the North, encouraged substantial technology transfer into the fish-harvesting and processing sectors (Platteau, 1989). This created a technological and socioeconomic dualism in their fish economies. A significant proportion of these developments were oriented towards promotion of fish exports to the developed world – particularly the three main markets of the US, Japan and Europe. In many Asian and Pacific countries, the fish production and fish exports increased considerably, making significant contributions to national development. However, fisheries development did not necessarily result in fisher people's development. They often remained social, economic and political 'outliers' in their countries.

Take a poor fisherman and a farmer in a developing country – India, Philippines, Sri Lanka, Indonesia, Kenya, Nicaragua or Brazil — with equal levels of income. You will see that the fisherman's level of technology and the extent of engagement with the international market are far higher than that of the farmer. In general, the per capita foreign exchange contribution of a fisherman in a developing country is much higher than that of his counterpart

in agriculture. Yet, in all these countries, when taking the two occupational groups *as a whole*, fishing communities have a poorer quality of life, (housing standards, education levels, health conditions, life expectancy, infant mortality); face greater risks to life in their occupation; are more prone to natural disasters and are generally more socially and politically weaker and isolated than the farmers. This paradox is apparent even in regions such as Kerala State, India, which has been portrayed by economists such as Amartya Sen as prime examples of regions with an egalitarian development experience (Kurien, 2000).

In the developing countries, it is estimated that of the nearly 30 mn fishers, around 6 mn are income-poor fishers. There are also as many as 17 mn income-poor fishworkers – those involved in processing and marketing activities. Women form a significant share of fishworkers (FAO, 2002). In many coastal developing countries, achieving all the eight MDGs should be taken to be most applicable to the population in the fishing communities (see Appendix B on Millennium Development Goals and Fishing Communities).

The developed countries, on their part, were able to get their fishing communities out of absolute poverty (relative poverty may continue) as a result of a combination of overall economic growth, which provided employment opportunities outside the fishery sector, supplemented by specific subsidies from public funds for income support, protective and promotional social security and retraining possibilities. These measures were also accompanied by legislative measures that ensured that fish producers were able to create organizations (co-operatives, producer associations, fishery banks, etc.) that would permit them to have greater control over the product of their hard labour. In combination, these financial and institutional measures, which were undertaken largely in the last century, laid the foundation for sustainable livelihoods. In most developed coastal States, the numbers of fishery-related workers who had to be provided in this manner were in hundreds or thousands. They formed a relatively small fraction of the country's population (see Section 3 above for some details).

For developing countries today, it is amply clear that in their fish economies, permitting private initiatives in introducing modern technology, enhancing production and fostering export trade will not *automatically* lead to 'people development'. Moreover, the numbers of people involved are in millions. The need of the hour in developing coastal States is for large and widespread

developmental support from the State for measures at poverty alleviation and enhancement of livelihood conditions of fishing communities. Major target-oriented poverty alleviation programmes and social security initiatives are required. Investment in livelihood-infrastructure – housing, water supply and sanitation systems, coastal protection facilities against storms, waves and tsunamis – need to be addressed as priority. These investments should to be viewed as 'merit goods', the supply of which is in the interest of society as a whole. A healthy fishing population is as important as a healthy fishery. Their well-being is a social asset for the whole of society.

Food and Social Security

Fisheries in developing countries are essential for achieving food security — both directly (as food) and indirectly (as employment and income). Even in countries where fish is not the culturally preferred source of protein, there is growing awareness about the need to change people's diet preferences in order to maximize the utilization of the fishery resources that abound in the EEZs of these countries. The efforts being made in Namibia in this direction, and the potential of doing so in some of the world's poorest countries like Nicaragua are worthy of mention (Kurien, 2005).

In the most populous developing countries in Asia and in several of the African countries, fish is a major direct source of food. In Asia and, to a lesser extent, in Africa, fish is a source of inexpensive protein. Fish is also high in lysine, essential amino acids, micro-nutrients and trace elements that are generally not found in staple foods. This makes it particularly suitable for complementing the high carbohydrate diets prevailing among the poorer sections of the population. The contribution that fish can make to the nutritional status of young children and lactating women is particularly significant. Their protein requirements are much higher because protein is required for growth. For children, whose stomachs cannot digest the bulk of starchy staples (maize and cassava, in particular), incorporation of a small quantity of fish can substantially improve the biological value of the diet and contribute to significant improvements in nutritional security.

Fish also contributes indirectly to food security as a source of income and employment even in countries where the protein preference is weighed in favour of meat, as in the Latin American region. Fish-related activities on shore – handling, processing and marketing – create gainful employment for millions. It is estimated that in small-scale fisheries in Asia, for every fisher –

and they number over 27 mn — there are three jobs created on-shore. Such labour-absorbing forward linkages are not uncommon.

Stressing the multiple roles of coastal areas and fisheries will serve to create a context of wholesome livelihood and a sustainable fishery (Kurien, 2003). The options for alternative coastal livelihoods such as in tourism and non-extractive uses of fishery resources can be greatly enhanced. Government actions that help to foster such an approach should be encouraged.

As an occupation, fishing is also known for its seasonality, income variability and high risk. This highlights the need for greater protective social security arrangements, which cannot be organized without government support. There are a growing number of initiatives by governments to set up welfare funds and promotional and protective social security systems for fishworkers. The examples of Kerala State, India, and Sri Lanka were recently extensively documented (Kurien and Paul, 2000, Amarasinghe, 2005). They illustrate what is possible in this regard even in poor countries, provided there is creative involvement of the State, complemented by the market and the community.

Safety and Decent Work

The issues of working conditions and safety at sea are becoming far more important than they were in the past. This is particularly in the context where even small-scale fishing units in developing countries are making transitions from fishing in near-shore coastal areas to the deeper waters of their EEZs. Owners of newly constructed fishing vessels provide space for fuel, ice and fish but relegate considerations of crew comfort and their safety because these are costs that do not bring 'returns'. These facilities need to be made mandatory, and financial incentives and/or material support to achieve these specific ends should be provided. The fishermen of developing countries are a greater asset than the fish (ICSF, 2005).

Enhancing Human Capabilities

Given the rapidly falling numbers of fishermen in the developed countries, the demand for skilled personnel, who can take on naturally to the sea, will be on the increase. This is one dimension of the WTO discussions in services (Mode 4 – movement of natural persons), where developing countries will have a strong comparative advantage in the future. There will be growing opportunities for employment of developing-country fishermen in the fishing fleet of developed countries. However, in order for them to be able to obtain secure and well-paid jobs, it is important that they are appropriately trained in

aspects of navigation and seamanship, which is not part of the learning-by-doing in the small-scale fisheries in which they currently operate. Investing in developing these human capabilities will provide fruitful returns for the concerned individuals and the nation. Training people for the trades in which they have a competitive advantage is far more appropriate than seeking and creating alternative employment in other sectors of the economy. Providing support and subsidies for such training and skills development will be a good investment.

Round-up

For the purposes of analysis, we divided our discussion on development priorities and policy into the three domains of national development, fisheries development and human development. In reality, such divisions are hard to make because of the overlap between the three. The policy choices before developing countries are many and evolving. There can be no 'standard' package on this. The subsidies debate in the WTO should not be a deterrent to focusing attention on these important concerns, which we have highlighted. Achievements here are a prerequisite for enhancing the bargaining and negotiating power of developing countries. Despite the different situations in which each country finds itself in relation to national development, fisheries development and human development, staying together as one block is in the overall collective interest of developing countries.

8. WHAT DEVELOPING COUNTRIES NEED TO DO

Fisheries and fisher people have attained a high profile in world public opinion in the recent past. The widespread concerns about large-scale depletion of ocean resources and the conflicts that this engenders have been systematically covered by the global media. Charismatic marine life — whales, seals, turtles — have been the focus of numerous campaigns. The role of State support in fuelling a 'race for fish' has been singled out for criticism. This has prompted much discussion around the need to foster responsible fisheries. This led States to develop the FAO Code of Conduct for Responsible Fisheries. The flagging of many of these issues at the Johannesburg World Summit on Sustainable Development have given them a higher profile. The small-scale fishery, the hidden backbone of the fish economy of most developing countries, is back in focus after a long sojourn on the periphery. The issue of conditions of work at sea has been taken up for debate at the International Labour Organization (ILO).

The lobbying by Northern environmental NGOs on a variety of fishery and ocean environment issues have mobilized civil society into taking a closer look at the status of the watery global commons. Also, led by some developed countries, the relationship between unbridled fishing activity and harm to the fishery resource is sought to be corrected using trade-related measures. This is a major change from the global campaigns against certain types of harvest technologies, which was supported by developed countries.

In the wake of the devastation wrought by the December 2004 tsunami in the Indian Ocean region, another less publicized dimension of fisheries became evident globally. The visuals of the tsunami and its aftermath have dramatized the great vulnerability and risks faced by fishing communities in the developing countries. The people-issues were brought center stage. It also highlighted the continuing neglect of aspects pertaining to the life and livelihood of coastal fishing communities. These include their priority rights to coastal space, safe housing and good infrastructure facilities. The poor quality of their life and the inadequate condition of their fishery equipment and other facilities were also evident.

The role of the community and voluntary agencies in responding to the crisis was exemplary. The initial inadequacy of appropriate State response to the crisis was very evident. But this was largely due to the lack of creative engagement of the State with coastal communities in normal times. One important lesson of the tsunami has also been that wishing away the State and its support for fishing communities is ***not*** yet an option for developing countries.

Undoubtedly, for developing countries, the issue of excess capacity, unbridled fishing and harm to the resource are important concerns. But paying attention to these technical and resource issues at the expense of matters pertaining to human development will be futile. The sustainable future of fisheries and fishing communities depends importantly on decisions about what, where and how State support will be provided.

As we have pointed out at the outset of our discussion, it is important to understand that the issue before developing countries is not trade vs environment. The greatest need for the fisheries sector in developing countries will be the ability to combine vibrant trade with deep concern for the aquatic environment. Understanding that this is not a contradiction in terms but the *sine qua non* for holistic and sustainable development is the challenge. The nature of State interventions in fisheries — be it in the form of legislations or financial transfers — must address this matter directly. .

What we intend in this section is to discuss some of the actions and approaches that should be taken by the developing countries if they wish to move out of the current negotiation 'lock-in' at the WTO.

Need for a More Holistic View on Fisheries

As we have mentioned in the introduction, trade is very innate to any fishery. We reiterate that there can be very limited development of fisheries or fisher people without trade. But to the extent that trade is only a connector, it mediates between production and consumption. The patterns of production and consumption condition the character and pace of trade. The structure of trade, in turn, can influence production and consumption. The current structure of control on international fish trade is much more diffused, compared with that of international trade in other primary products (Kurien, 2005). However, this situation may change rapidly. The proposition of attempting to achieve 'sustainable trade' in isolation is, therefore, untenable. Any manner of support – financial, technological or institutional — which has a bearing on the sector must be situated in the triad of production, trade and consumption. In developing countries, where fisheries are important from social, cultural and economic perspectives, there is need to have a more holistic view of fisheries. Striving for sustainable production must be a primary goal. Searching for markets that foster sustainable consumption should be a priority. Linking these two pursuits will give rise to greater possibilities for creating more sustainable trade structures. Support or subsidies given in a fishery that strives for this balance are unlikely to be distorting. Such support will also not be required indefinitely.

Where to Provide Subsidies

Rough estimates of total world subsidies place them between US$800 bn and US$1000 bn. They are spread largely across the sectors of water, energy, agriculture, fisheries and transport. Over three-quarters of the subsidies accrue in the developed OECD countries, including in the agricultural and fisheries sector. Subsidies in the fisheries sector are estimated to be between US$15 bn and US$20 bn. The substantial part of this continues to be in the developed industrialized countries. World subsidies are also several times higher than official global development aid (Pearce et al, 1999). This is true in the fisheries sector also.

Given this global context, no subsidy reform proposal, which targets the developing countries first, can, by any stretch of imagination, be considered

fair. Reform must commence with the developed world. By demonstrating the means of dismantling subsidies with minimal social and economic upheaval, developed countries can set an example. Subsidies are always associated with rent-seeking behaviour. Vested interests develop around them, and the original purpose and intent may get distorted. This can be a major barrier to dismantling of subsidies in developed and developing societies, irrespective of the democratic or autocratic systems of governance in place within them.

In the case of fishery subsidies in developing countries, we do not have many credible sources that reveal their true extent and nature. The budgetary and financial accounting practices, as well as the structure of governance (for example, the federal structure, where fisheries may be under the constitutional jurisdiction of provinces or States of a federation), can make the accounting for subsidies an intractable and costly exercise. There are few agencies that can undertake such assessments with competence and credibility.[26] However, from our knowledge, it would be reasonable to state that the absolute and the relative levels of fisheries subsidies in the developing countries are nowhere close to the levels prevailing in the developed countries. Developing countries simply do not have the financial resources to offer such largesse. Moreover, the fishery sector is rarely the one that attracts a large share of the total subsidies provided in these countries.

Be that as it may, however small the current level of subsidies, there are compelling reasons why State withdrawal from the fisheries sector is ***not*** a desirable option in developing countries at the present moment:

- Firstly, the sector is at different levels of development in the different countries but since the resource is largely in the public domain, its utilization should be governed by policy objectives set by the State.
- Secondly, the importance and contribution of the fishery sector to the economy varies widely across the countries, as does the role of fish in the diet of the population.
- Thirdly, the fishery resources provide the best means for many countries to engage in the international market with a minimum of lead-time, and assurance of substantial benefits.

[26] To our knowledge, one of the best and most thorough exercises made in the recent past was in India. Here fishery is a State (province) subject and there are also centrally (federal) sponsored programmes. The assessment made for the Government of India has not been placed in the public domain. Perhaps it is not in the strategic interests of developing countries to make such information public at this stage of the WTO negotiations.

- Fourthly, where fishing communities are significant in number, they represent those in the lowest economic rungs of society. Their lives are largely in the hands of trade and merchant interests, who control the processing and marketing of their fish. Only State legislative and financial support will ensure that they get out of this vicious grip and obtain a fairer economic and social deal.

For all these reasons, while the market plays a significant role in determining the future of the fishery sector, leaving the entire development and management of the sector to the market is not a wise policy choice.

In several developing countries, subsidies have been provided for technological upgrading of fishing craft and gear with the objective of raising fish production and fishing in deeper waters. Often, a large share (in value) of this production may have been oriented to the export markets. Many developing countries had also set up fishery development corporations that owned fishing vessels and processing facilities, and controlled the sale of fishery products. This experience has largely been very negative, and most of these organizations have been wound up in many countries. The assets created by these organizations have been generally left without takers. Such investments are best left to the private sector or undertaken as a public-private partnership with a structured 'pull out' by the State in reasonable time.

In many developing countries, particularly those situated in the tropics, ecosystem overfishing is a common problem. Effort controls and choice of the right harvesting technologies can remedy this. In many cases, 'going back to the future' is a credible option with respect to gear design. Changes may have to be made in the material used for fabrication of gear. Support for such measures should be viewed as the developing-country version of 'decommissioning' with support. Conditions may have to be put on the quantum of gear used per fishing craft, and the overall gear capacity may need to be monitored.

Top priority needs to be given to resource conservation. Many governments have begun to engage in a variety of resource management programmes – both centralized and participatory. These include measures for zoning and patrolling of the coastal waters; setting up marine extractive reserves; constructing artificial reefs; and so forth. One possibility that is worthy of consideration is to earmark a small share of the resource access fees charged and/or foreign exchange earned from fish exports, for this purpose.

Industrial fisheries, where they currently exist in the developing countries, can be left to private interests – joint ventures, multinational companies or local capital interests. Direct and indirect support to the small-scale and the artisanal fisheries should continue with emphasis on the 'positive people-oriented' subsidies. This can include a whole range of support measures that cover protective and preventive social security arrangements targeted at human development improvements of the people and communities involved.

Another major focus of current subsidies in developing countries has been subsidization of fuel for fishing vessels. It may be noted that in many countries, the taxes imposed on motor vehicle fuels are accounted under several heads. An important one pertains to a road-use tax. The extent to which the fuel subsidy given to fishing vessels is only equivalent to a road-use tax (which is not applicable to fishing vessels, in any case), such support could legitimately continue for the small-scale and artisanal sector. However, incentives for adoption of multiple sources of energy for propulsion (for example, use of sails along with engines) should be provided.

State support – most often through the aegis of international development assistance — has been oriented to providing fishery infrastructure such as fishing harbours, landing centres, auction halls and related marketing infrastructure. It may also include support for building research institutions and so forth. Provisioning of such fishery infrastructure – viewed as a public good — should continue to be State responsibility until adequate geographic coverage is assured. Adequacy may be measured by the infrastructure necessary to support the number of fishing units required to achieve a sustainable fish harvest.

Support should be enhanced for numerous promotional and protective welfare measures for fishing communities. This has generally been very small, compared to the other support measures. This is an area where far more imaginative financial and fiscal instruments should be conceived to provide support. Schemes for protective social security with tripartite participation of the State, the beneficiaries, and the trade and export firms can be one option. Measures for guaranteeing the safety of the fishers need greater emphasis. Enhancing the social and economic entitlements and capabilities of these communities should be given top priority, with livelihood-enhancing infrastructure – housing, water supply and sanitation – receiving focused attention.

In short, all the livelihood and social security-enhancing subsidies, all the support provided for fishery and livelihood-related infrastructure, all the

measures aimed at resource conservation and management and all the subsidies directed specifically to the production in the small-scale and artisanal fisheries should continue. None of this support leads directly to enhancement of fishing capacity and overfishing. On the contrary, they help to create the necessary conditions for fishing communities in developing countries to substantially improve their fishery and human capabilities.

Collaboration with Other International Organizations to Examine Subsidies

To make the WTO the central stage for discussions on fishery subsidies is not in the interests of either the developing countries or the WTO. As Chang has effectively argued (Chang SW, 2003), attempting to broaden the scope of the ASCM in order to take the so-called 'special and unique' features of fishery subsidies into consideration is wholly inappropriate at this juncture. Except the issue of access to resources, none of the other features mentioned in the current fisheries subsidies debate is unique to fisheries. Consequently, only subsidies given to fishing fleets that have the capability of fishing outside the EEZ need to be treated with some caution and circumspection. For fishing within the EEZ, the onus of conservation and management of the resources is the duty of the coastal State, under UNCLOS. In the case of the stocks that straddle EEZs, the UN Fish Stocks Agreement is the relevant instrument. It is in this realm that major production distortions, presumably created by subsidized fishing fleets, can arise.[27]

Moreover, within the EEZs of developing countries, as the resources are concentrated closer to the shores, the issue of subsidies leading to overcapacity and overfishing is of greater consequence in that realm. Here, the size of the individual fishing units is small, and the cumulative effect of overcapacity is not intractable. Good national institutions for resource management that are participatory in nature, combined with the requisite dose of political will, are the panacea — not WTO disciplines.

The scope for testing the effectiveness of the current ASCM in disciplining fishery subsidies has not been given adequate time or opportunity. As a matter of fact, there has been no case yet of fishery subsidies being brought to the dispute settlement mechanism (DSM) of the WTO. Opening up the ASCM to re-negotiation is, therefore, an ill-timed and unnecessary measure. Many

[27] The Agreement came into force in December 2001. Of the 52 parties to the agreement, 40 are WTO members

countries – particularly those making up the 'Friends of Fish' — wish to introduce a sector-specific agreement for fisheries that would differ from the current ASCM regime so as to take into consideration the 'unique nature of the fisheries sector'. The burden of most of their proposals rests on the relationship that they make between subsidies, overcapacity and overfishing. If such a result is achieved at the end of the Doha Round, it will be a major historic step towards imposing specific obligations on WTO members to protect the environment. This will move the WTO beyond its traditional focus on trade distortions. The institutional implications of such a possibility will need very careful assessment, particularly by developing countries.

It will be more appropriate to involve international agencies such as the FAO, UNEP and ILO to give greater focus on the significantly multi-dimensional issues pertaining to subsidies in fisheries. These include studying the paths by which overcapacity is created, its impact on the fishery resource, and the role that subsidies play in this relationship. The impact of subsidies must be seen from the perspective of the developing nation State, fisher people, the fishing industry, fishery resources and fish consumers. For this very reason, the role of all international organizations as well as the role of international instruments negotiated by the comity of nations must be structured organically into the future WTO negotiations. The initiative for such inter-agency collaboration can come through the joint auspices of the WTO, FAO, UNEP and the ILO, giving equal and integrated emphasis to trade, the fishery, the environment and people's issues.

Strategy for SIDS

The right strategy to adopt in the future for SIDS, particularly in the Pacific, is a matter of debate. They have obtained substantial renewable resources under their *de jure* legal control (by virtue of UNCLOS). Converting this into a sustainable flow of wealth to achieve national, fisheries and human development will require a mix of approaches. The optimal strategy may be for these nations, where appropriate, to collectively undertake the management of their resources by getting development aid for the setting up of good monitoring, control and surveillance (MCS) systems. They can then charge an access fee, which is a resource-rent tax, a tax related to the 'above normal profits' earned from the fishery. This measures the difference between the value of the catch and the economic cost of fishing effort. It is difficult to estimate the cost of fishing effort, but this is not an intractable proposition if there is sufficient political will to set up the right kind of institutional

arrangements for doing so. The experience of a country like Namibia (though not a SIDS) in achieving control over its fishery resources in the face of the huge vested interests of developed nations against doing so, is a sterling example of what is possible, given the political will (Sumaila, 2004).

Unlike Namibia, many Pacific islands also have a vibrant artisanal and small-scale fishery, which should be given positive support. They cater to crucial domestic fish-food needs, and provide 'monetized livelihoods'. These fisheries also often provide innumerable opportunities to engage in the emerging global markets for a variety of living aquatic products, which are best harvested by such operators even today. As mentioned earlier, the experience of efforts to build up a domestic export industry through the direct involvement of the State in fishery enterprises, have not been too encouraging. Experience the world over has shown that this is best left to the private sector, given the high risks (for example, price fluctuations for tuna), high costs and skill requirements. The role of the State should be to provide the right economic policies and the institutional arrangements that will make investments attractive for outside investors. Investing more time in choosing good investors will give greater reward.

Calling for Greater Transparency

It is in the interest of the developing countries to call for more stringent implementation of the mandatory notification procedures for subsidies in accordance with Article 25 of the ASCM. Under this article, any member of the WTO may request for information on the nature and extent of any subsidy granted or maintained by another member. However, it has been pointed out that compliance so far is not satisfactory. Just 7-8 per cent of global fisheries subsidies granted in 1996 were actually notified (Schorr, 1998). This is a very poor record for the developed countries, which give most of the subsidies. Consequently, greater pressure for transparency is strategically important. It is well known that the information gap with regard to subsidies is wide even in the developed countries (Steenblik and Wallis, 2001). However, what is surprising is that when it comes to countervailing actions and anti-dumping measures against developing countries, the mechanisms that the developed countries possess to elicit data and information, even within the borders of the developing country, are impressive. The trade divisions in the consulates and embassies of developed countries take great pains to gather strategic information within the developing countries by making contact with academic institutions, NGOs, trade departments and other stakeholders. This gives them

a great headstart in any dispute settlement mechanism (DSM) case within the WTO. Developing countries should obtain technical assistance from appropriate international organizations such as the FAO and the WTO for greater capacity building and for the creation of the data and information base to assess the economics of fisheries. The strategy for supporting developed countries that make a call for greater transparency is welcome and appropriate.

Honouring Multilateral Environment Agreements (MEAs)

Developing countries should honour all MEAs as measures to support resource conservation and management. Such actions are clearly defensible under current GATT Article XX (g) provisions for 'the conservation of exhaustible natural resources.' Emphasis on fisheries management is in the long-term interest of developing countries and their trade in fishery products. The international community should consider a well-managed fishery resource in a developing country as collateral to attract international finance assistance from multilateral bodies. Viewing marine fishery as a common heritage of humankind, the positive externalities generated by investment in management of fishery resources by developing countries, particularly the least developed among them, should be compensated by the international community.

Dealing with International Environmental NGOs

Developing countries must also carefully examine the positions being taken by the large international environmental NGOs in the debate on fishery subsidies. The extent to which their current positions on subsidies are in the overall long-term interest of the developing countries requires close introspection. It is abundantly clear that these powerful organizations have played a major role in keeping up the pressure in the public sphere and among the trade negotiators of the industrialized countries to reinforce the 'subsidy-overcapacity-overfishing' links. This has been undertaken without a historic perspective and without any solid empirical evidence to prove the links, particularly in tropical waters. These links have been successfully raised to the level of an article of faith. However, in this process, these organizations must also be credited with the service they have done in bringing the hitherto neglected fishery sector into the global limelight. They have achieved this in a manner that would not have been possible by any of the stakeholders in the fishery sector itself. Strategically, these NGOs have been able to ally with some industrialized countries that have a commercial and political interest in disciplining fishery subsidies into the future, although they have themselves

benefited greatly from subsidies in the past. The current positions of these NGOs seem a long way from their earlier concerns and global campaigns pointing to destructive technologies (drift-nets, deep-water trawls, etc.) and economic/population growth as major factors in fishery resource depletion.

Enlisting the Support of International Civil Society

The increasingly important role being played by many sections of civil society in global affairs is both noteworthy and welcome. There is great vibrancy on this account in the developed countries and, gradually, in the developing countries too. As we have indicated throughout this paper, we cannot envision sustainable trade practices without having sustainable production and sustainable consumption. The nascent and rising consumer movements in support of the latter are important initiatives to relate with, because they play a significant role in modulating the 'conscience' of the market. The initiatives for fair trade, food sovereignty, fishworkers' rights, low-energy production and so forth will come to play a vital role in influencing the way citizens in the developed countries perceive the world and relate to it in the future. The fisheries sectors in developing countries are, by and large, still in a context where they can easily make a transition to sustainability if the contours of the markets for primary products can be shaped to give a fillip to such initiatives. Making these linkages and facilitating greater networking with such initiatives will help to give a new focus to the issues pertaining to fisheries in developing countries, including those relating to subsidies.

Negotiating into the Future

Negotiating into the future involves careful consideration of the realms indicated for creating policy space for national development, fisheries and human development, which we articulated in the earlier Section 7. Deciding on the right balance between market, State and community in these realms will be conditioned by a variety of country-specific economic, social and cultural concomitants. Untangling fisheries subsidies from issues relating to trade is a knotty problem. It can take the form of the huge knotted drift-nets that sway in the oceans undertaking 'ghost fishing'. These 'efficient' walls of death were the product of huge subsidies once extended by industrial fishing nations. They were left in the sea by irresponsible fishery operators using industrial fishing fleets. Untangling them is out of the question. However, it can also take the form of the twisted and torn multi-layered, ecofriendly, trammel-net of an artisanal fisher that was caught in a coastal sea current

while fishing for exportable prawns. Untangling this can and will be done. But it will take the shade of the coconut palm, keen eyes, deft skill of hand and a great degree of patience. This is the right approach for developing countries to take. The payoff will be worth the wait.

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APPENDIX A

Revealed Symmetric Comparative Advantage

The comparative advantage of a sector of the economy in export trade can be measured by the Export Performance Ratio (EPR) (see Balassa, 1965). Since the comparative advantage is revealed by the observed pattern of trade flows, it is called Revealed Comparative Advantage (RCA). The RCA for the fisheries sector of a country is measured by the share of fisheries exports in the total exports of that country (Sfc) relative to global fisheries exports to total global exports (Sfw).

RCA= Sfc/Sfw

If RCA is greater than unity, the country has the comparative advantage, and not if RCA is less than unity.

To make the ratios symmetric, an index called the Revealed Symmetric Comparative Advantage (RSCA) is calculated by using the formula:

RSCA= (RCA-1)/ (RCA+1).

This measure ranges between +1 and -1.

APPENDIX B

Millennium Development Goals and Fishing Communities

In the developing countries, achieving all the eight Millennium Development Goals (MDGs) can be taken to be most applicable to the population in the fishing communities. There is a special urgency to ensure that fishing communities do not lag behind in these achievements. This is particularly so, given the fact that in most developing countries, they have been 'outliers' even in the normal course of development, despite their greater engagement in international trade. In general, the per capita foreign exchange contribution of a fisherman in a developing country is much higher than that of his counterpart in agriculture.

Achieving the MDGs must be seen in this context.

1. Eradicate extreme poverty and hunger

Fishing communities in many developing countries – particularly those involved in marine fisheries — are known to experience poverty and hunger due to the greater risk and vulnerability that they face due to a multiplicity of factors. Estimates from the FAO put the number of persons experiencing income-poverty in marine and inland fisheries to be about 6 mn (FAO, 2002:70). The uncertainty of the marine fish harvest and its seasonality, and adverse weather conditions often lead to cyclical hunger and food insecurity periods. Though in terms of income measures they may not be poorer than small peasants or agricultural labour, in terms of quality of life, the fate of fishing communities is much worse.

2. Achieve universal primary education

Literacy and educational levels in fishing communities are very often below the national averages of developing countries. The lack of physical facilities or their distance from the place where fisherfolk live is one important reason for lower school attendance. Another is the need for children – mainly boys — to learn to fish at a young age, given the nature of 'artisanal' skills required in small-scale fisheries, which are only learnt by doing. Another reason is the opportunity to make small amounts of money by participating in the range of shore-based activities (fish sorting, clearing, net repairing, etc.), which provide incentives to keep away from school. Along with these disabilities, religious reasons may be important in discouraging girls from going to school. Also, the practice of the girl-child being given the responsibility for babysitting, while

the parents are involved in fishing and fish processing, is another reason for lower literacy rates and schooling for girls in some countries.

3. Promote gender equity and empower women

In most developing countries, women are not involved in fish-production activities, particularly in the marine sector. They are, however, more actively involved in the fish processing and marketing realms. One feature noticed in several fishing communities is the adverse sex ratio in the general population, with significant ratios of 'missing women' in the adolescent and reproductive age groups. This has been attributed to poor health (particularly pre- and post-natal healthcare, and maternal healthcare) and sanitation facilities in fishing villages, which lead to higher morbidity and mortality among women in these age groups. Female literacy and education levels can also be low (see above), which then result in disparities and discrimination within the community and the family.

4. Reduce child mortality

Studies have shown that infant and child mortality in fishing communities is higher than the regional/country averages. The low levels of female education contribute to poor infant and childcare practices. The overall poor physical environment and habitat in the coastal areas — due to lack of drainage, poor housing for want of land rights, inadequate supply of clean water, and lack of health facilities — contribute to higher infant and child mortalities.

5. Improve maternal health

As mentioned in 3 above, this is a realm where focus is warranted in the coastal areas of developing countries.

6. Combat HIV/AIDS, malaria and other diseases

Poor habitat (particularly water logging) is a major cause for the continuance of vector-borne and water-borne diseases in the coastal areas in many countries. There have been reports of increasing incidence of HIV/AIDS among fishermen who migrate from their homes to other regions (and countries) in search of fish, and also among those working on distant-water fishing vessels that stay away from their home ports for long periods of time.

7. Ensure environmental sustainability

The fisheries in most developing countries have degenerated into open-access realms, where only 'possession rights' exist. This has fuelled a race for fish,

with its attendant consequences of resource depletion and ecosystem damages. The coastal zone receives all the pollution from the upstream terrestrial ecosystems. These unidirectional negative externalities are uncompensated. They play a significant role in causing harm to the natural resources of the coastal land and sea. This, in turn, affects the life and livelihoods of coastal fishing communities.

8. Develop a global partnership for development

Sustainable development of the people in the fisheries sector of developing countries calls for greater partnership arrangements at the national, regional and global levels. This is certainly true with respect to international trade, given that about 40 per cent of all fish harvested enters the global market. Many of the above-mentioned MDGs can be achieved if a fairer global trading system can be fashioned. Lower tariffs and reduction in tariff escalation can result in higher employment and incomes. Aid and debt repayments can be substituted by earnings from trade.

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Untangling Subsidies, Supporting Fisheries: The WTO Fisheries Subsidies Debate and Developing-country Priorities

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Untangling Subsidies, Supporting Fisheries: The WTO Fisheries Subsidies Debate and Developing-country Priorities

This paper examines, from the fishery perspective of a developing country, the current debate on the role of fisheries subsidies in the context of the negotiations relating to the General Agreement on Tariffs and Trade (GATT) and the World Trade Organization (WTO). While providing a background on fish production and trade in developing countries, it sketches the history of the role of the State and subsidies in the fisheries of the now-developed fish economies of the world.

It goes on to analyze the manner in which fishery issues and the fisheries subsidies debate have been carried out in the GATT and WTO negotiations, leading up to the Doha Ministerial Declaration, which is the basis for a more structured negotiations on subsidies.

Drawing on the analysis, the paper envisions some of the development priorities that developing countries must pursue, and the nature of support they need to achieve them. Finally, it suggests what ought to be done by developing countries in the current negotiations on fisheries subsidies.

This paper will be useful to anyone interested in fisheries, fishing communities and subsidies and international trade.

ICSF (www.icsf.net) is an international NGO working on issues that concern fishworkers the world over. It is in status with the Economic and Social Council of the UN and is on ILO's Special List of Non-Governmental International Organizations. It also has Liaison Status with FAO. Registered in Geneva, ICSF has offices in Chennai, India, and Brussels, Belgium. As a global network of community organizers, teachers, technicians, researchers and scientists, ICSF's activities encompass monitoring and research, exchange and training, campaigns and action, as well as communications.

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