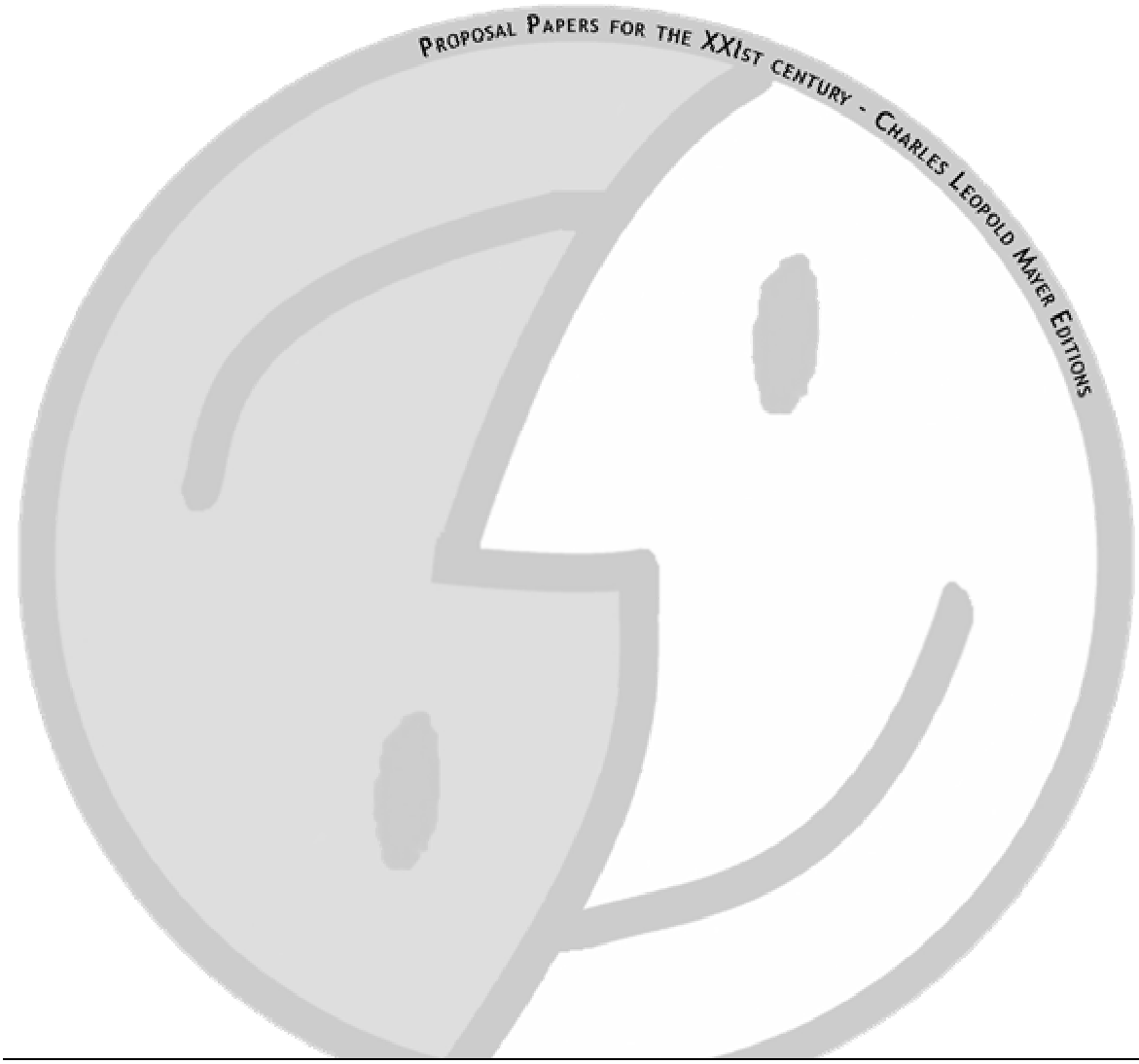
SÉRIES GOVERNANCE AND CITIZENSHIP

Challenges facing Artisan Fishery in the 21st Century



Proposal papers for the 21th century

The proposal papers are a collection of short books on each decisive area of our future, which assemble those proposals that appear the most capable of bringing about the changes and transformations needed for the construction of a more just and sustainable 20th century. They aim to inspire debate over these issues at both local and global levels.

The term 'globalisation' corresponds to major transformations that represent both opportunities for progress and risks of aggravating social disparities and ecological imbalances. It is important that those with political and economic power do not alone have control over these transformations as, trapped within their own short-term logic, they can only lead us to a permanent global crisis, all too apparent since the September 11th attacks on the United States.

This is why the Alliance for a Responsible, Plural and United World (see appendix) initiated, in 2000-2001, a process of assembling and pinpointing proposals from different movements and organisations, different actors in society and regions around the world. This process began with electronic forums, followed by a series of international workshops and meetings, and resulted in some sixty proposal texts, presented at the World Citizen Assembly held in Lille (France) in December 2001.

These texts, some of which have been completed and updated, are now in the process of being published by a network of associative and institutional publishers in 6 languages (English, Spanish, Portuguese, French, Arabic and Chinese) in 7 countries (Peru, Brazil, Zimbabwe, France, Lebanon, India, China). These publishers work together in order to adapt the texts to their different cultural and geopolitical contexts. The aim is that the proposal papers stimulate the largest possible debate in each of these regions of the world and that they reach their target publics whether they be decision-makers, journalists, young people or social movements.

Presentation of the proposals paper « Challenges facing Artisan Fishery in the 21st Century »

This document compiles papers by several fishers' and fisherworkers' networks, organizations and communities who reflected on the challenges of artisanal fishery in the 21st century and the strategies to be promoted. It is divided in two parts:
- The contribution of the International Collective for Support of Artisanal Fishworkers (ICSF).
- A range of analyses, proposals and experiences related to the activities of the World Forum of Fish Harvesters and Fishworkers (especially its General Assembly held in Loctudy in October 2000) and of its members.

We present a compilation of contributions, diverse in their nature and by the networks involved, but presenting a shared assessment of the situation and, converging towards similar strategies. Integrating these contributions and enriching them with the views of other communities and organizations will be part of the tasks to be achieved in the coming months.

An effort to reflect the richness of these documents and to put them in dialogue is sketched in the Overview which opens this document.

We wish to thank :

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Challenges facing Artisan Fishery in the 21st Century

Paper coordinated by Juliette Decoster and Pedro Avendaño Garcés

The Charles Léopold Mayer Foundation for the Progress of Humankind (FPH)
Havana group, constituent assembly process
of the World Forum of Artisanal Fish Harvesters

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OVERVIEW

The traditional fishing sector contributes in a crucial way to human nutrition and to social and economic progress. Fishing and agriculture provide 6% of the total protein and 16% of the total animal protein annually consumed by humanity. Worldwide, the fishing sector indirectly gives employment to 50 million people in services, transformation, transport and commercialization. Thus, its social, economic, political and cultural importance is confirmed. Women carry out a very important role in the fishing sector in spite of this not being reflected in official statistics.

Despite this situation, the traditional fishing sector doesn't receive the recognition it deserves. It is marginalized or excluded by diverse organisations responsible for coming up with development policies (international organisations, governmental and non-governmental organisations). On the other hand, artisan activity has to confront the progressive diminishing of it resources as it competes with industrial fishing that operates in the same spaces, with the same resources and for the same markets. However, they do so in totally unequal conditions.

In this context, the traditional fishing community and its organisations, as well as workers in the fishing sector organised in local or regional networks, international forums and traditional fishermen's aid organisations are mobilising to reflect on and create strategies. They also demand real participation of the fishermen in the decision-making process at the local, national, regional and world level. They furthermore demand responsibility in the management world fishing, access to fishing resources and respect for the cultural identity of the traditional fishing communities.

The traditional fishing communities share common strategies and confront the challenges of the 21st century.

1. The craft of fishing constitutes an age-old form of social organisation, production, feeding and commercial interchange. It is based on the territorial rooting of the traditional fishing communities in coastal zones and their cultural and environmental relationship with fishing resources. The marginalization of the traditional fishing communities is a social constant that goes much beyond the diversity of places and ages. However, this hasn't weakened their capacity to organise and conserve their cultural conceptions and privileged relationship with the marine environment. This isn't about a social process "fixed in time", but on the contrary. This is so because based on their own experiences, these fishing communities **have been able to come up with development projects and proposals that permit the conservation of fishing resources. This has also led to obtaining territorial sovereignty over coastal zones, contributing to sovereignty and food security of the population, offering opportunities for relatively stable work and maintaining a family economy**. At the same time, they contribute to the earning of foreign currencies through exportation that are so valuable for national economies.

2. The survival and development of the fishing communities depends a great deal on:

- **fishing resources being recognised as the patrimony of nations and humanity** and the rejection of its privatization. In fact, this privatization would inevitably benefit the large multinational companies that in this way would increase their economic power. It would also concentrate world-fishing production in their hands and thus they would exercise control over foods from the sea.

- **alliances being forged with other sectors of civil society** affected by the free-trade model, above all farmers and indigenous peoples. The marginalization so characteristic of the fishing sector thus begins to lessen, giving way to an active and participative social fabric. This social fabric would have the capacity to look over fishing resources production and marketing models, environmental protection, the co-administration and management of natural resources and allocating production principally to direct human consumption.

3. The application or not of the International Agreements and Treaties relative to fishing is a subject that fishermen's organisations all over the world are currently raising. This is different from the situation that had prevailed over the last decades. Although the national framework continues being a privileged place for action, there are other levels that are also important:

- **the local level**, it permits establishing the bases for participative management of resources, according to which the whole of the fishing workers must respect ecological conditions.
- **the continental level**, where fishermen must keep in mind economic and political developments as well as ever broader spaces resulting from the progress of fishing techniques.
- finally, **the international level**: a great number of decisions are taken at this level. Thus it is necessary to reinforce fishing workers' organisations in order to guarantee their power in front of international agencies.

4. Thus, the issue of the contribution of living reserves from our oceans to the feeding of human beings is raised with greater insistence: Is it still possible to respond to the feeding challenges of the 21st century thanks to the sea? This question is crucial, above all, because nutritional needs are increasing. They are increasing due to the demographic growth of the world population and because agricultural production runs the dramatic risk of stagnating –or worse, diminishing– owing to the degradation of the soil.

5. It is necessary to introduce four great changes in the fishing sector:

- **To reduce the difference that separates the countries of the north from the south in terms of fish consumption and fishing resources.**
- **To consider fish not as a resource to generate currency on the international market, but as a source of food and human well-being.**
- **Not to allocate fishing production animal feeding, but to human consumption.**

- To develop sustainable agricultural models and to limit industrial agriculture.

We must always keep in mind that the traditional fishing communities, guardians of the universal maritime patrimony, constitute a human frontier that up to now has assumed the responsibility for avoiding the privatization of the living being and the sea. This is so because their existence depends on it.

Part I
Incredulous, Expecting Occupancy

A Review of the Situation Facing Artisanal Fishworkers at the Beginning of the 21st Century

The International Collective in Support of Fishers and Fishworkers (ICSF) is a non governmental organization working on issues facing fishers worldwide. This collective is affiliated to the Economic and Social Council of the United Nations. It is based in India and Belgium. The ICSF is a world network of activists, researchers and scientists, supporting the emergence of fishers organizations.

In October 2000, the ICSF undertook intellectual work to contribute to proposal booklets, the result of which is presented below. ICSF first reviews the situation of fishery at the beginning of the 21st century and then identifies the challenges with which fishers are faced.

Missing the Sea

Something removed roars in the ears of this house,
Hangs its drapes windless, stuns mirrors
Till reflections lack substance.

Some sound like the gnashing of windmills ground
To a dead halt;
A deafening absence, a blow.

It hoops this valley, weighs this mountain,
Estranges gesture, pushes this pencil
Through a thick nothing now,

Freights cupboards with silence, folds sour laundry
Like the clothes of the dead left exactly
As the dead behaved by the beloved,

Incredulous, expecting occupancy.

--- Derek Walcott

Fishing as a Livelihood is as Old as Human History

Fishing is among the most ancient of occupations, and men and women of coastal communities have, for generations, derived their livelihood from fishing and related activities. The world's first 'maritime people' are considered to be the Maglemosians, during the Mesolithic era around 10,000 years ago. Evidence indicates that maritime societies existed in Africa, along the mouth of the Nile, 8,000 years ago. Salted, dried and pickled fish was the staple food of the Greeks and of rest of the Mediterranean countries.

In ancient times, bread and fish, together with olive oil and wine, formed the most substantial parts of the diet of both rich and poor. But fresh fish was quite expensive and beyond the reach of the poor. The Greek biographer Plutarch (50-120 A.D.) reports the complaint of Cato the Censor (234-149 B.C.) that "a fish sells for more at Rome than a cow, and they sell a cask of smoked fish for a price that a hundred sheep plus one ox in the lead wouldn't bring, cut in pieces." Since fish was an essential item in the diet of the people, governments tried to ensure regular supply. The fishermen had to guarantee a stipulated supply to the government and could sell only what was caught in excess.

Fish Nourishes the Poor

Fish provides a vital source of protein to millions of people all over the world. As global fish production increased from 21 million tonnes in 1950 to 120 million tonnes in 1995, the quantity of fish available for direct human consumption went up to about 80 million tonnes. However, the worldwide per capita consumption of seafood, which was 9 kg in 1950, has actually declined from a peak of 19 kg in 1989 to 14 kg in 1995, as a result of expanding demand and limited supplies. Not surprisingly, international prices for seafood have been rising by 4 per cent per year in real terms over the last decade.

In 1994, at an average of 27.9 kg per person per year, people in industrial countries consumed three times as much fish as did people in the developing world (9.2 kg per person per year). Yet people in developing countries rely on fish for a much larger portion of their animal protein than do people in industrial countries. It is the prime source of animal protein for more than one billion people in developing countries. People in some countries, such as North and South Korea, Maldives, Ghana, Indonesia, Congo, Malawi and the Philippines, depend on fish for more than half of their animal protein needs.

According to an FAO estimate made in 2000, there are about 36 million fishworkers in the world and 80 per cent of them live in Asia. Sixty per cent of the global population of fishworkers are in marine capture fisheries, 25 per cent in inland and marine aquaculture and the remaining 15 per cent in inland capture fisheries. China, India, Vietnam, Indonesia, Bangladesh and the Philippines have the largest number of fishworkers in the world.

The Last Five Decades of the 20th Century Have Been Revolutionary

For fisheries, the last five decades of the 20th century have been extraordinary. From 1950 to 1990, there was a five-fold increase in fish catches. This revolutionary growth sprung mainly from the rapid development and expansion of industrial fisheries, and the globalization of the market for fish. In the latter case, the development of industrial food production (or factory farming) led to a rapid increase in demand for fishmeal as one of the main protein sources for animal feed. About 30 per cent of the global fish catch is converted into fishmeal and oil, mainly for cattle, pig, poultry and, increasingly, fish. Aquaculture now consumes 40 per cent of the world's fish oil and a third of the world's fishmeal, with nearly a quarter of all the world's fish supplies being diverted to support fish farming.

On the consumer side, the market for fish has developed rapidly, mainly in countries of the North. Around 40 per cent of the fish catch enters international trade, and Northern countries account for 90 per cent by value of the imports of fish (USA, Japan and the EU accounting for 77 per cent). While this has provided artisanal, small-scale and traditional fisheries with market opportunities, there is a flip side to the story. In many cases, the increasing demand has only fuelled the growth of non-selective and environmentally destructive fishing practices, like bottom-trawling in tropical waters for shrimp.

As Technology Gets More Sophisticated, Fish Production Stagnates

Developments in the fishery sector in the post-Second World War period have been characterized by the rapid growth in technology. Large vessels employing sophisticated technology for finding and catching fish were responsible for the huge increase in fish production in the 1960s and 1970s. However, several important fisheries have been overfished, catches of important commercial stocks are declining, and marine fish production appears to have peaked.

In 1998, total world fisheries production, including both capture fisheries and aquaculture production, stood at 117 million tonnes. This comprised 86 million tonnes from capture, and 31 million tonnes from culture fisheries. China was the biggest producer (44 million tonnes), followed by Japan (6 million tonnes) and India (5 million tonnes), thus all the top three producers were Asian countries. Asia was also the biggest producer of fish in the world, and contributed to 68 per cent of world production. This included 43 million tonnes from capture and 27 million tonnes from aquaculture.

Of the top seven fish producing countries in the world, five were developing countries and three were from the Asian region (China, India and Indonesia respectively). China alone contributed to 32 per cent of the world total. However, because of their large fishers' populations, the per capita share of marine fish production of China, India and Indonesia is quite low 1.7, 0.5 and 1 tonne respectively (1998 figures).

The difference is very striking when we compare these developing countries with Nordic countries. For the same year, Iceland, for example, had a per capita marine production of 334 tonnes, Denmark 325 tonnes and Norway, 125 tonnes. The

difference is quite stunning when we look at the export figures. When China, India and Indonesia had per capita export earnings of U.S.$300, U.S.$190, and U.S.$790 respectively, Iceland, Denmark and Norway had U.S.$285,400, U.S.$600,000 and U.S.$161,440 respectively.

After showing a 6 per cent annual growth rate in the 1950s and 1960s and a 2 per cent growth rate in the 1970s and 1980, the world capture fisheries production has levelled off in the 1990s (FAO 2000). Most of the fishing areas in the world have reached their maximum potential for capture fisheries production. For stocks for which information is available, about 10 per cent have been depleted, 65 per cent are either fully exploited or overexploited and the rest are under- or moderately exploited. Only areas with some potential for production increases are the Eastern and Western Indian Ocean and the Western Central Pacific.

Since capture fisheries have reached their limits, any long-term rise in the value of exports, according to FAO, depend, to a significant extent, on increased aquaculture production or product prices. In the1990s, the annual growth rate in aquaculture production went up to 10 per cent, from 5 per cent to 8 per cent since the 1950s. Most of this increase in aquaculture production took place in Asia. As a result, since the 1980s the Asian region has been experiencing the most rapid growth rate in fish production, compared to other continents.

Statistics Give A False Sense of Security

FAO estimated that by 1994, 35 per cent of the 200 major fishery resources were senescent (i.e. showing declining yields), about 25 per cent were mature (i.e. plateauing at high-exploitation levels), 40 per cent were still developing and none remained at low-exploitation levels (undeveloped). This indicates that around 60 per cent of the major world fish resources are either mature or senescent and are in urgent need of management action to halt the increase in fishing capacity or to rehabilitate damaged resources. There has been a gradual increase in the estimated number of stocks requiring management, from almost none in 1950 to over 60 per cent in 1994. This also underlines the fact that figures of rising world fishery production give a misleading vision of the state of world fishery resources and a false sense of security. Statistics indicate that catches in most fishing areas, with the exception of the Indian Ocean and the South-East Pacific, are declining .

Similarly disturbing is the fact that, as a result of the overfishing of many species at the higher level of the food chain, the composition of global catches has shifted to smaller, bonier fish at the lower end of the food chain. The proportion in weight of the total marine fish landings accounted for by pelagic fish (generally small, short-lived species that travel in schools in the open ocean, and which, with the exception of high-priced tuna and other large pelagics, are relatively low-priced fish) has risen from about 50 per cent in 1950 to over 60 per cent in 1994. Global landing of pelagic fish have shown an underlying upward trend since 1950. In contrast, landings of higher-value demersal species showed an increasing trend until the mid-1970s and have since generally levelled off . In parts of the Atlantic and the Pacific Oceans especially, landings of demersal fish have been declining. FAO points out that, while environmental factors have almost certainly played a part in some declines (e.g. in Northwest Atlantic), overfishing has been a major

factor responsible for declining production.

Overcapacity Comes from Too Many Boats Chasing Too Few Fish

It is widely acknowledged that the problem of overfishing, in general, and overcapacity, in particular, is threatening the sustainability of the world's fisheries resources for present and future generations. According to the FAO, between 1970 and 1989, the total gross registered tonnage (GRT), a measurement of volume, of world fishing fleets increased by an average of 4.6 per cent a year. During the same period, total world fisheries landings increased at an average of 2.4 per cent annually. Thus, the world fishing fleet grew about two times as fast as the landings.

Another estimate for the same period indicates that the GRT of world fleets increased by 90 per cent, while the technical capabilities of the world fleet as a whole increased more than three times as fast, by 330 per cent, signifying a massive escalation of fishing power and effort. Despite the investments and improvements in fishing technology and harvesting capacity and the growth in world fish catches, landings per gross registered ton (catch rate) declined by 62 per cent overall during these two decades. Large boats were catching less for the same amount of effort—a direct consequence of overcapitalization. It is estimated that Iceland and the European Union (EU) could cut their fleets by 40 per cent and Norway by 66 per cent, and still catch the same amount of fish.

At the international level, the problem of excess fishing capacity and the need to control fishing effort have been recognized (consider, for example, the Rome Consensus on World Fisheries, 1995; the FAO Code of Conduct for Responsible Fisheries; the 1995 UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks; and, the Kyoto Declaration, among others). FAO analysts recommend a reduction in fishing capacity between 25 and 53 per cent, depending on price increases or cost reductions.

The reality, however, remains different. A study by John Fitzpatrick and Chris Newton in May 1998, supported by the environmental NGO, Greenpeace, focusing on vessels larger than 24 m and over 100 GRT, notes that the world's fishing fleets have continued to expand over the period 1991-97. Throughout the period, additions to the world's fleet continue to exceed deletions. 1549 new vessels (of 24 m and over and 100 GT or larger) were added between 1991-95, of which four States accounted for 53 per cent (and the EU, 16 per cent). Another 105 vessels were built in 1996. Evidence, therefore, indicates that fishing fleets are not being restructured and that the problem of overcapacity continues as States with open registers increase their capacity.

Technomania Repeats the Mistakes of the Past

New fishing vessel construction trends show more vessels are being built with technology used to fish either large amounts of relatively low-valued species, or widely distributed species that are at depths which were previously beyond technological and economic reach. Modern construction is being specialized toward large vessels using gigantic mid-water trawls, highly specialized auto long-

lines of up to 50,000 hooks and deep water fishing with trawls/longlines on sea mounts and in deep ocean ridges.

The efficiency, or fishing power, of fishing vessels is also increasing. Newton and Fitzpatrick estimate that a large factory trawler (supertrawler) built in 1995 has two and a half times the fishing power of a similar sized factory trawler built in 1980 and over four times the fishing power of a vessel built in 1970. Between 1980-1995, fish finding and catching technology increased rapidly, not only to more advanced electronics and hydraulic equipment, but in refrigeration, fuel efficiency, remote sensing equipment and improved vessel design configurations. Their calculations show that, while the world's fishing fleet increased by three per cent in terms of tonnage between 1992 and 1997, the world's fleet actually increased by 22 per cent in terms of potential fishing capacity through new additions to the fleet and refits. In order to relieve fishing pressure on overexploited stocks and help their recovery, they call for a reduction of at least 50 per cent in the size of the industrialized fleet.

Flags of Convenience Dot the Oceans, Dodge the Rules

Newton and Fitzpatrick's analysis also shows that the number of vessels flying "flags of convenience" continues to rise. More countries are offering their flags than ever before. Reflagging enables vessel owners to "dodge the rules" to avoid conservation and management measures which their own flag States might otherwise enforce.

Greenpeace further estimates that a relatively small number of fishing vessels makes up about half of the total capacity of the world's entire fishing fleet (13 million GRT of roughly 26 million GRT on the seas today). These are the approximately 35,000 ships (or one per cent of the total number of about 3.5 million fishing boats) that can be classified as large-scale, industrialized fishing vessels. Broadly speaking, this is seen a class of vessels that weigh over 100 gross registered tonnes (GRT). As a general rule, 100 GRT vessels correspond to an approximate length of 24 metres.

Greenpeace estimates that these 35,000 vessels catch between half and two-thirds of the world's reported catches from world fisheries (almost all the fish caught for reduction to fishmeal and oil and about half the fish caught for human consumption). It, therefore, recommends that the greatest conservation benefits can be achieved by substantially reducing the large-scale fleet.

Faced with Overcapacity, the Industrialized North Exports Its Fishing Capacity

With severe overfishing and overcapacity in the Northern hemisphere, industrial countries are now willing to pay a high price for access to the Exclusive Economic Zones (EEZs) of Southern countries. Such subsidies both discourage the exit of fishing vessels from troubled fishing industries and encourage overfishing in the economic zones to which access is subsidized.

The fisheries access agreements between the European Union (EU) and African countries are striking examples of subsidized access to foreign fishing grounds.

These agreements have permitted the EU to redeploy large numbers of fishing vessels from overfished EU fishing grounds to those of African countries. The first agreement was signed in 1979 and, since then, the EU has created a network of fishing access agreements with 19 African countries. As of 1996, the compensation paid to African countries under these agreements amounted to at least $229 million annually—representing 43 per cent of the entire annual EU budget for fisheries restructuring during the 1994-99 period—primarily for the benefit of French, Portuguese, and Spanish fishing companies, thereby exporting the overcapacity problem from North to South.

By the early 1990s, the investment by the EU in access to African fisheries had achieved the effective redeployment of some 1000 vessels to African waters. The bulk of the EU fleets cost of access is paid by the EU through its compensation package to the country. Vessel owners, in contrast, pay only a fraction of the total cost of access. While the compensation package paid by the EU as a contribution to the cost of access is an explicit subsidy, the low licence fees and arbitrarily low assumed annual catch for tuna vessels in the agreements represent an implicit subsidy.

From the point of view of African nations, debt service is the key motivation for annual renewal of access agreements. States in Sub-Saharan Africa earn substantial revenues in hard currency from various types of compensation, royalties and fees from fishing agreements negotiated with non-coastal countries. It is estimated that, in 1993, gross revenues and compensations (licence fees excluded) from fishing agreements in force between the EU and Sub-Saharan African States amounted to nearly US$ 300 million.

However, vessels fishing under fisheries access agreements are known to violate the provisions of the agreement. For example, catches (which form the basis for future agreements) are regularly under-reported. Enforcement of the few environmental provisions that do exist is generally scant, and conflicts with the local artisanal fleet are common.

Aquaculture and Trade Are Set to Dominate Future Fisheries

FAO forecasts for the first quarter of the twenty-first century a scenario where aquaculture will dominate fish supplies, edging out capture fisheries to the second slot. With their competitive labour markets, developing countries will dominate both fish production and processing. Trade, as a result, will play a greater role, with the OECD countries becoming greater importers of fish and fish products. With significant dependence of rich countries on fish supplies coming from the developing world, FAO speculates that most trade barriers in the OECD countries will be removed by the year 2030.

In 1998, about 40 per cent of global fish production entered international trade. In the absence of effective fisheries management, several fisheries that enhanced production in response to demand have been overfished. Examples come from both developed and developing countries. Trochus, *beche de mer*, and giant clam fisheries in the Pacific, Atlantic Cod fisheries in Newfoundland, Canada, Alaska Pollock fisheries in the United States and Argentine Hake in the Argentinean

waters are examples of overfishing. It is instructive to note that most of the overfishing pressures worldwide are on stocks that are slow reproducing and easily accessible, or stocks that are fished with highly efficient bottom trawls.

Even if, as FAO predicts, aquaculture will make the single largest contribution to fish production in the 21st century, fish from capture fisheries are bound to enjoy better market prices in world market if the current price differential between culture and capture fisheries products is taken as an indication for the future.

Subsidies Contribute to Overcapitalization of Fishing Fleets

According to the FAO, subsidies are one of the primary reasons for the overcapitalization of fishing fleets. In 1993, FAO estimated the costs of, and the revenue from, fishing. It estimated that the fishing industry received subsidies worth approximately US$54 billion, i.e. the difference between the value of the catch, estimated at US$70 billion, and the cost of fishing this, estimated at US$124 billion.

A more recent assessment indicates that subsidies are more likely to be in the range of US$16-22 billion each year. Using data from the few governments that keep track of these expenditures—China, the EU, Japan, Norway, Russia, and the United States—the estimate found that global fishing subsidies in 1995 totalled $14 to $20 billion. Between $3.0 and $3.5 billion were budgeted specifically for domestic fishing subsidies, plus $1 billion for buying access rights in foreign waters. Tax breaks and lending totalling $3 billion acted as subsidies for buying fishing boats and gear. An additional $7 to $11 billion came from unbudgeted subsidies and low-interest loans and tax preferences for shipbuilding, harbour development, and related infrastructure projects. Based on these data, 20 to 25 percent of current global fishing revenues come from subsidies. This is seen as a conservative estimate, since, for instance, it has taken only an incomplete account of environmental externalities, and not all countries are included in the reckoning. It is also likely that countries like Japan, China and Russia are under-reporting their subsidies.

Many governments today continue to give fishers immense amounts of subsidies. Most of this money actually bolsters fishing capacity and upgrades existing boats, thus encouraging fishers to try to catch even more fish. Given that most of the world's fisheries are already depleted or under heavy pressure, the continuance of subsidies only exacerbates the problem, as State support goes primarily towards paying for more and bigger boats, or more advanced technology and equipment, such as radars and remote sensing devices. They favour, for the most part, large-scale fishers over smaller-scale fishers.

Subsidies Should Instead Contribute to Sustainable Fisheries

It has been suggested that subsidies that lead to overcapacity should be dismantled. The emphasis could instead be on environment-enhancing subsidies that contribute to a sustainable fishery. Subsidies could also be redirected to help reduce fishing capacity, while increasing employment at the same time, thereby minimizing negative social impacts. For instance, the more highly mechanized

ships can be phased out and the funds thus released could be used more productively. It has been estimated that each US$1 million of investment in industrial-style fishing provides only 1-5 jobs, whereas the same investment in small-scale fisheries could employ anywhere from 60 to 3000 people. For example, half of the United States bluefin tuna fishery is now allocated to the least capable gear such as handlines or rod-and-reel, so that almost 80 per cent of jobs are supplied by ships with labour-intensive tackle, in contrast with 2 per cent on the part of ships with larger tackle.

Multinationals, Backed by Financial and Political Muscle, are Increasingly Dominating Fisheries

Investments geared towards increasingly efficient and high-cost technology keeps pace with the race for limited fish stocks. In view of the huge requirements of capital, fisheries production, marketing and processing are increasingly dominated by multinational corporations (MNCs). For example, Resource Group International (RGI), a conglomerate, controls almost 10 per cent of the world's whitefish (cod, hake and pollock) production, with operations concentrated mainly in Alaska, South America and Russia. It has a fleet of 37 modern vessels—one of the largest and most efficient fishing fleets in the world, consisting primarily of factory trawlers and longliners. Similarly, the Spanish company Pescanova accounts for 20 percent of world hake production. Set up in the 1960s, the group embarked on an ambitious expansionist strategy forming joint ventures with countries like South Africa, Namibia and Mozambique. Today, Pescanova owns a fleet of more than 140 boats (mostly freezer trawlers), seven factories and 25,000 retail outlets.

Large multinational companies such as these have the required financial backing and political influence both to pressure their own governments to underwrite their efforts to remain financially solvent and to persuade foreign governments to give them cheap access. For example, RGI managed to obtain a sum of grant monies from the Norwegian government in 1995/96 to build 16 new factory freezer for Russia, exceeding all the monies granted to the entire Norwegian coastal fishery put together.

High Rates of Discards and By-catch Add to Inefficiency

Substantial by-catch and discards have been reported in large-scale and medium-scale fisheries. It has been estimated by the FAO that discards worldwide total at least 27 million tonnes per year, equivalent to one third of fish landings. This amount is likely to be higher, since fishers have little incentive to report discards and by-catch. In all demersal (bottom) trawl fisheries, by-catch rates are unacceptably high, with unknown damage inflicted on life-supporting benthic ecosystems. Trawling for shrimps is particularly problematic and it is estimated that, at times, shrimps make up as little as 10 per cent of the total catch.

The introduction of quota management has encouraged 'monospecies fishing', targeting single species of high commercial value. This leads to a high rate of discards, as non-target species, small fish and over-quota fish are thrown overboard or landed and sold illegally in the black market as 'black fish'. Quota

management has prompted the practice of high-grading, whereby fish of the highest quality and economic value is retained, while discarding fish of a lower value and quality, so that the total quantity declared is kept within quota limits.

Fish Eat Fish, As Fishmeal Production Grows

About one third of global fish production—almost 30 million tonnes—is transformed into fishmeal and oil. Technological growth (more efficient purse-seines and fish detection devices), combined with increasing demand, has led to the increase in industrial fishing, which almost exclusively targets small pelagic species, such as anchovies, sardines and horse mackerel. The demand for fishmeal comes primarily from the agriculture sector (intensive pig and poultry farms). However, with the increasing popularity of soya substitutes for pig and poultry rearing, the demand for fishmeal is increasingly from the aquaculture sector.

Over half the world's fishmeal comes from Peru, Chile and Japan. Southern countries supply half the world's fishmeal and are responsible for 70 per cent of its international trade. While imports into Northern countries have been stable of late, imports into those countries of the South that are promoting intensive shrimp aquaculture systems, such as China, Philippines and Thailand, has been going up.

The transformation of fish into fishmeal leads to a loss of protein—around five tonnes of fish are used to produce a single tonne of fishmeal. Moreover, when fish is consumed by poultry, cattle, fish or shellfish, a further loss of protein occurs. For example, about 2.7 kg of fishmeal (made from 15 kg of fish on an average), make up one element of the total feed mix, which contributes to the production of a salmon weighing 3 kg.

It is important to raise the question as to whether the conversion of fish to fishmeal take away fish that could possibly be used for human consumption. Some researchers argue that part of the catch reduced to fishmeal can go to feed human populations, providing some investment in appropriate processing technology is made. They allege that conversion to fishmeal is basically in response to the greater purchasing power of cattle and pigs raised in the North, and of high-value aquaculture species (such as shrimp) also marketed in the North.

It has also been pointed out that the future of industrial fisheries targeting fishmeal species appears to be linked in no small way to the future growth in the intensive culture of carnivorous species, like shrimp and salmons. This is because soya substitutes are increasingly replacing fishmeal as feed for cattle, poultry and pig rearing. The projected future demand for fishmeal is mainly from the rapidly growing aquaculture industry.

Will Aquaculture be the New Face of Fisheries?

Aquaculture is the practice of farming aquatic plants and animals, including fish, molluscs, crustaceans and aquatic plants in a modified environment. Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators etc. Broadly, it ranges from intensive aquaculture, which involves a high degree of control over the production process and the use of external inputs such as feed and fertilizers, to extensive and traditional aquaculture systems, which require few, if any, external inputs and minimal manipulation of natural production processes.

Aquaculture has been traditionally practiced in Asian countries, often as part of integrated farming systems that are well integrated with the local environment and within the bonds of available resources. However, in recent years, there has been a rapid expansion of intensive monoculture systems raising predominantly carnivorous, highly profitable species that demand large amounts of feed, water and fertilizers. Many high-value species are now raised primarily for export.

The production of shrimp, for example, one of the most profitable commodities in aquaculture, is increasing. In 1995, brackishwater shrimp species contributed to almost 5 per cent of total aquaculture production. In Bangladesh, Ecuador, Indonesia, and India, as well as the more established shrimp-farming countries of Thailand and China, shrimp culture comprised a $6.3 billion industry and yielded a major export product. However, shrimp culture has been responsible for several environmental and social problems in these countries, such as mangrove destruction, conversion of farm lands to aquaculture ponds, pollution and salinity incursion, even as the industry itself as suffered several setbacks due to disease outbreaks.

While high-value species such as cultured shrimp and salmon are primarily exported, low-value freshwater species, such as carps and tilapias, contribute importantly to food security. It is significant that most of the increase in aquaculture production has been due to the growth of aquaculture practised in freshwater environments in inland areas.

The Environment in Coastal Areas is Rapidly Degrading

Coastal, inshore waters are very productive and provide vital spawning and breeding grounds for fish. About two-thirds of all commercially valuable fish species spend the first, and most vulnerable, stages of their lives in these waters. In particular, coastal habitats and ecosytems, such as mangroves, mudflats, bays, wetlands, estuaries, saltmarshes, sea grass and seaweed beds and coral reefs, are known to be highly productive.

However, coastal fish habitats are rapidly being degraded in many parts of the world by industrial, urban and agricultural pollution, landfill, the damming and diversion of rivers, the clearance of mangrove, sedimentation, mining and oil exploration and extraction, marine-based pollution, etc. According to United Nation's Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP), land-based sources account for 44 per cent of marine pollution,

airborne pollution for 33 per cent (much of it originating on land), dumping of wastes 10 per cent, marine transport 12 percent and offshore production one per cent.

Pollution and habitat destruction disproportionately affect fish that spend at least part of their lives in coastal waters and habitats, and the livelihood of fishworkers. In addition, the displacement of fishing communities through competitive resource use is not uncommon in coastal areas.

While the fisheries sector suffers harm globally, it is also, itself, responsible for environmental damage. Local pollution from fishing vessels and fish processing plants can be significant. Non-selective fishing practices and gear, such as bottom-trawling and the use of fine-mesh nets, are seen as damaging to the benthic environment and to local fish stocks. They are also responsible for a high rate of by-catch and discards. A critical problem is the environmental degradation often associated with intensive, aquaculture practices, notably of tropical shrimp and salmonids in temperate zones. In tropical reefs, the use of cyanide poison is a growing threat to marine species and their habitat. Over time, such practices can kill most reef organisms and damage the reef habitat.

Clearly, there is an urgent need for integrated coastal area management programmes, that take into account the priorities and interests of stakeholders in the fishery sector.

Scales of Fishing Operations Matter

It is estimated that more than 200 million people all over the world depend on fisheries, directly or indirectly, for their income. Recent statistics indicate that more than 21 million people worldwide are fishers. The figure may be higher since not all fishermen are full-time—many of them fish part-time or seasonally, supplementing other sources of income. Almost 90 per cent of all fishers are artisanal or small-scale operators and 95 per cent live in developing countries.

Typically, the artisanal and small-scale sector may have some of the following attributes: use of small craft and simple gear of considerable diversity, but considerably low capital intensity; fishers work as share-workers or owner-operators of their fishing units; live in decentralized and spatially dispersed settlements; fish close to their home communities in relatively near-shore waters in single/day/night operation; supply local and hinterland markets; depend considerably for finances on middlemen or on those who buy their harvest; etc. With the exception of some motorization of canoes and the introduction of nylon nets, the fishing technology of small-scale fishers in the developing world remains largely unchanged.

There are a number of characteristics by which the small-scale sector may be differentiated from the large-scale sector: size of crew (the largest crew on a small-scale fishing vessel is generally greater than the smallest crew on a large-scale fishing vessel); on-board processing (many large fishing vessels include a complete processing plant while small vessels usually have limited or no processing capability); duration of voyage (small-scale vessels usually make day

trips, while large-scale vessels may be away at sea for much longer periods); level of technology; etc. However, especially in countries of the North, the dividing line is not always clear cut, and there are many features, such as the use of navigational aids or fish-finding equipment, that cannot be said to be a definite characteristic of one sector rather than the other.

Small May Still Be Beautifully Efficient

States all over the world promoted an industrial model of fisheries development from the 1950s. The artisanal and small-scale sector was largely seen as backward and inefficient. However, with the crisis in world fisheries, this model of development is increasingly under scrutiny. It is being pointed out that small-scale and artisanal fisheries contribute vitally to local food security and to employment, even as benefits from the resource are distributed more equitably within the fishing community. At the same time, artisanal fishing operations tend to be more sustainable and less damaging to the environment, since the use of passive fishing gear and techniques (such as gillnets), as against the active fishing techniques pursued by the large-scale sector (such as trawling and purse-seining), is more common.

It has also been pointed out that small-scale fisheries is much more than a business enterprise. It is also a social and cultural enterprise and a way of life for millions of people all over the world. That is why small-scale fishers will often persist in fishing, clinging to their accustomed way of life, even when the returns from the fishery decline.

A comparison of some important characteristics of the small-, medium- and large-scale sector is illuminating. Around the world, only one per cent of all fishers work in large-scale fisheries, while over 90 per cent are small-scale fishers, either using traditional equipment or operating small, relatively modern boats. It would appear that to catch a given amount of fish, small-scale fishers tend to employ more people, require less capital and produce less waste. At the same time, almost all the fish caught by the small-scale sector goes towards human consumption.

It would seem that small-scale fisheries should be central to policy-making if economic and social considerations, as well as considerations of resource conservation and management, are given due importance. This is especially so since a fundamental problem of small-scale fishers around the developing world remains their absolute and relative poverty, despite decades of fishery development and national economic growth.

How Can We Define "Traditional", "Small-scale", "Artisanal"?

What exactly do we mean by terms like "traditional", "small-scale", or "artisanal" fisheries? These terms seem to have gained currency during the post-mechanization phase in many developing countries as a descriptive characteristic of those fisheries that were not mechanized, and those fisheries that were opposed to mechanization. Traditional, small-scale or artisanal became the antonyms of "modern", "large-scale" or "mechanized", and "industrial" fisheries. These terms had political significance in some contexts where they became

rallying points for fishers who were against the introduction of destructive forms of bottom trawling, especially in Asia.

However, the situation changed with the widespread adoption of motorization in small-scale fisheries all over the world. Traditional, artisanal or small-scale fisheries now include a range of fishing activities targeting sedentary molluscs in the littoral waters to highly migratory tuna stocks According to FAO, 50 per cent of the tuna production in the Indian Ocean originates, for example, from artisanal fisheries, meaning tuna that are caught in all gears excluding purse-seines and long-lines in the distant waters. It includes subsistence fishers in the South Pacific as well as those fishing mainly for the export market, in Senegal and Chile. Its range spreads from resident women crab gleaners in the mangroves of northeastern Brazil, to Mexican long-line fishers who go up to 200 nautical miles in their 7 m fibre-reinforced plastic (FRP) boats with 200 horse power (HP) outboard motors (OBMs) in pursuit of shark, and to the migrant long-line fishers of Sri Lanka who fish the farthest points of the Indian Ocean targeting tuna and shark resources. It may be an activity that is resident or migrant; occasional, seasonal, part-time or full-time.

Traditional, artisanal or small-scale fisheries include rudimentary 3 m dugout canoe with a crew size of just one in Madagascar, to the 18 m *pirogue* of West Africa and the 16 m plywood or FRP boat of India that employ up to 40 crewmembers on board a single fishing trip, and further to shore-seines of Sri Lanka and India that would employ as many workers on shore to haul the net as a *pirogue* or a plywood boat would employ on board for purse-seine operations. Artisanal fishing thus includes *highly individualized* fishing operations like cast nets and handlines; *small-crew* operations like setting traps or pots in lagoons, estuaries, or nearshore waters, diving for sedentary species in reefs and lagoons, operating a regime of gillnets and long-lines; and the *labour-intensive* purse-seining and shore-based, beach-seining operations.

The terms “traditional”, “small-scale” or “artisanal” could, however, have distinct connotations in different techno-economic, political, cultural and social contexts. In Madagascar, for example, the definition of what constitutes traditional, artisanal or small-scale in an economic sense, is *fishing operation-specific,* although the definition of traditional fishing *per se* also has social overtones. This primarily applies to a small trawler sector of around 600 vessels fishing mainly for the local market. Whereas the term *artisanal* refers to motorized fishing for the domestic as well as for the international market, the term *traditional* refers to unmotorized, kinship-based fishing for subsistence or for the local market, undertaken by fishers who respect local taboos and customs.

In Fiji, the term *artisanal* is used to refer to fishing units harvesting for the domestic market; it is thus *market-specific*. In India, only the term *traditional* is legally recognized, but unlike Madagascar, it denotes traditional fishing craft Traditional craft means a fishing craft already in use before the arrival of mechnized fishing vessels. They also include boat designs of foreign origin that were adopted during the colonial times. The definition is thus, *craft-specific*.

In Indonesia and Malaysia, the term *traditional* is used but, unlike in India, the

term is used in a *gear-specific* sense. All fishing units, excluding trawling, are defined as *traditional* fishing units. In Peru, *artisanal* is the term in vogue, defined in *tonnage-specific* terms to indicate fishing vessels below 30GRT According to *Federacíon de Integracíon y Unificacíon de Pescadores Artesanales del Perú* (FIUPAP) the organization of the artisanal fishers of Peru, about 85 per cent of fishing vessels in Peru are below 10GRT.

In Chile also the term artisanal is used to indicate vessels below 50 GRT and less than 15 m in length In France, the term used is artisanal, but the definition is *length-specific*. All vessels up to 25 m in length are categorized as artisanal units. The term used to denote the equivalent is *inshore* fisheries in Canada, which refers to fishing vessels that are below 20 m in length. A major distinction between the North and South is that, irrespective of the size of the unit, trawling operations, in general, are not considered small-scale or artisanal in the South.

There is thus no elegant definition. The problem of defining traditional, artisanal and small-scale categories has been compounded of late because of new technical changes, *viz*., motorization of hitherto unpowered vessels, the use of powered gear-hauling devices, ice boxes, synthetic webbing for fishing gear, and the adoption of modern miniaturized electronic aids for navigation and fish detection. We assume that the *artisanal* and *small-scale* fisheries, in general, refer to the smallest viable fishing units in a country or a province, with downward or lateral compatibility in fishing gear operation. It refers to a specific regime of fishing craft, gear—or both— in combination, and at the bottom-end of the fishing power hierarchy in a particular fishery in a country or province An artisanal or small-scale fisher can be defined as one recognized to originate from a fishing caste, community, or a tribe and participating in an artisanal or small-scale fishery.

Artisanal and Small-scale Fisheries Have a Special Role in Developing Countries

Artisanal and small-scale fisheries are accorded special recognition by the 1995 FAO Code of Conduct for Responsible Fisheries, and is, in fact, the only fisheries sub-sector specially mentioned in the Code. Article 6.18 of the Code states: "Recognizing the important contributions of artisanal and small- scale fisheries to employment, income and food security, States should appropriately protect the rights of fishers and fishworkers, particularly those engaged in subsistence, small-scale and artisanal fisheries, to a secure and just livelihood, as well as preferential access, where appropriate, to traditional fishing grounds and resources in the waters under their national jurisdiction."

The share of developing countries to world marine fish production in 1998 was 60 per cent. Of the top seven fish producing countries in the world, five are developing countries. Three of them—China, India and Indonesia— have a huge population of nearly one billion people living below the UNDP income poverty line of US$1 a day (UNDP 1999). Artisanal, small-scale fisheries contributed to more than 25 per cent of the world catch, and accounted for 50 per cent of the fish used for direct human consumption. What is most significant about the contribution of small-scale fisheries to world fish production is that it has been achieved in spite of receiving very little subsidies from governments and insignificant development assistance from the international donor community.

According to an FAO estimate, there are about 36 million fishworkers in the world, of which 80 per cent are in Asia. Sixty per cent of the global population of fishworkers are in marine capture fisheries, 25 per cent in inland and marine aquaculture and the remaining in inland capture fisheries. The proportion of fishers to total population is highest in Vietnam and Indonesia—one in every 25 of the population is a fisher in Vietnam, and one in every 44, in Indonesia. Most of them are employed in artisanal, small-scale fisheries.

In absolute terms, China, India, Vietnam, Indonesia, Bangladesh and the Philippines have the largest number of fishers in the world. Chennai, the capital of Tamil Nadu State in India, alone has an active fishers population of 31,000. In contrast, Iceland and New Zealand put together, for example, account for less than 12,000 fishers, but their combined fish production at 2.6 million tonnes (1998 figures) equals the total marine fish production of India.

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Small-scale Fisheries Have Created Jobs, Alleviated Poverty and Earned Foreign Exchange

According to the FAO, when employment in agriculture in developing countries grew by 35 per cent in the last 25 years, employment in fisheries doubled Employment in fisheries in the OECD countries, however, suffered a one-third decline in the same period, with the exception of Iceland and Portugal. Small-scale fisheries, being an economic activity in the far-flung areas of many coastal countries, especially in areas where alternative sources of employment are scarce, seem to have played a crucial role in employment creation, income generation and poverty alleviation, arguably because of resilient coastal fisheries where people from other less-rewarding occupations, or from occupations that cannot guarantee a basic livelihood due to factors such as drought conditions on land, immigrate. Madagascar, Senegal, Peru, China and India provide examples for this kind of migration. It has also been estimated by FAO that for every full-time fisher in the small-scale sub-sector, additional employment for about one to three persons is generated in the fisheries sector.

Since the small-scale sub-sector also targets fish for the international market, it contributes to foreign exchange earnings. The contribution of small-scale fisheries to foreign exchange revenue in many developing countries is significantly much higher than the contribution of small farmers or peasants in agriculture. Though commodity export prices of cocoa, rubber, palm oil, coffee and tea have been considerably depressed since the 1990s, that of fish exports have not. In several African, Caribbean and Pacific (ACP) countries, for example, fisheries exports, especially from the small-scale sub-sector, are now the major export earner ahead of tea, coffee, cocoa and groundnuts – e.g. Senegal Fisheries products are one of the few areas where ACP countries have seen their participation in world trade increase. Between 1976 and 1986, ACP fish exports to the EU rose from 36 MECU to 309 MECU, while, by 1996, the value of ACP fish exports exceeded 946 MECU. In the four years from 1992 to 1996, the ACP share of total EU fish imports rose from 16.4 per cent to 22.5 per cent. This contrasts with general ACP trade performance, which saw the ACP share of imports into the EU decline from 6.7 per cent to 3.4 per cent in 1994.

Conservation and Management Measures are of Paramount Importance

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs...
-Brundtland Commission

In the absence of conservation and management measures, resources can be overfished, especially when there is demand from external markets that are prepared to pay prices higher than the domestic market. The market in rich countries is likely to pay even a higher price for fish that are responsibly produced. However, with effective conservation and management measures, the market incentive can be judiciously exploited to achieve goals of employment, income, foreign exchange and food security in several developing countries. Nordic countries, and countries like Australia and New Zealand—countries with small fisher populations— have already demonstrated that effective management is a good business proposition in conjunction with programmes to enhance the value of fish production through efficient post-harvest activities.

There are strong incentives for developing countries to adopt conservation and management measures because most of the fish that the rich countries would like to consume are increasingly produced by developing countries. This calls for a proactive engagement with fisheries conservation and management issues both by the State and the industry. To set national product and process standards to access lucrative markets in other countries would imply co-ordinated and time-bound action, especially the implementation of principles and standards for conservation of fisheries resources. This would involve acting upon international obligations under the 1982 United Nations Convention on the Law of the Sea (UNCLOS) as well as other non-binding legal instruments like the Agenda 21, the 1995 FAO Code of Conduct for Responsible Fisheries and other regional instruments of relevance to fisheries and coastal area management.

Although net earnings from fisheries exports for many developing countries are quite high, little significant investments are made in conservation and management by most developing countries. Although with a gross value of fisheries output at US$ 5 billion in 1997-98 (at ex-vessel prices) and an export earning of over US$ 1 billion, India spends insignificant amounts on activities that can be treated as fisheries management. While Norway spent about 8 per cent of the total gross revenue of marine fish landings, Iceland, 3 per cent and Newfoundlan,d 20 per cent in 1999, Thailand had spent only 1.64 per cent, although its fishery is beset with overcapacity and overfishing problems. However, the Thai figure for 1991 was only 0.70 per cent. Such investments, which are essentially long-term in nature, should be seen as an investment in the future of the fishing industry and in building up the image of its products in the world market.

Pressure from Environmental Groups Wins Over Affluent Consumers

Without effective conservation and management measures, it may be difficult to gain consumer acceptance in the US and European markets in future, since

environmental groups have begun to successfully persuade consumers to take responsibility for the fish they consume. As resources come under increasing pressure from market forces and poor management, and with consumers wanting to have a greater say in how fish should be produced, the market for ecolabelled fish in future is bound to expand from its current sliver. Those countries in the forefront with better conservation and management regimes are bound to benefit from better marketing opportunities. Consumers of fish and fish products in rich countries are likely to express a greater desire to consume fish that are produced under better conservation and management regimes. The origin of ecolabelling schemes like the Marine Stewardship Council, for example, is based on such expectations.

The Marine Stewardship Council is a Controversial Initiative

The market does not distinguish an ecologically sustainable scale of matter-energy throughput from an unsustainable scale, just as it does not distinguish between ethically just and unjust distributions of income. Sustainability, like justice, is a value not achievable by purely individualistic market processes.
-Herman Daly

The Marine Stewardship Council (MSC), launched in early 1996, was set up mainly to design and implement market-driven incentives for sustainable fisheries, which translates into responsible, environmentally appropriate, socially beneficial and economically viable fisheries practices that maintain the biodiversity, productivity and ecological processes of the marine environment. The Principles and Criteria (P&C) developed through an international consultation process set the standard. The P&C described indicators against which a fishery was to be compared, to enable it to make a claim that the fish it sells to processors, retailers and consumers alike originated from a sustainable and well-managed source.

The multi-stage process of certification is set into motion at the request of a fishery. The onus is on the fishery to formally agree to comply with the MSC certification and to choose an MSC-accredited certifier after undergoing a Gap Analysis— geographic approach to the protection of biological diversity using Geographic Information System (GIS) technology—a proactive approach to protecting biodiversity, developed in the United States in the late 1980s for the terrestrial environment, and extended to the aquatic environment in the mid-1990s. Depending on the report of a pre-assessment visit from the certifier, the fishery would decide whether or not to proceed with certification. If the report were acceptable, the certifier would undertake a full assessment of the fishery to the MSC standard and decide whether or not to award the certification. The whole process could take about two years, if we take the example of the fisheries that are already certified.

Although the scope of MSC was marine fisheries activities up to, but not beyond, the point at which the fish is landed, the need to confirm to the consumer that fish from certified sources could be traced and held separate from the stage of production to the final retailer, requires that these certifying firms have also to do a 'chain-of-custody' audit. Products from certified fisheries are to be marked with an on-pack, "*Fish Forever",* logo to inform consumers that they come from

sustainable, well-managed sources.

The MSC accreditation scheme was subsequently established in mid-1998 and the first seafood products certified by the MSC were launched in early March 2000. The first MSC-certified products were from the UK –Thames-Blackwater fishery for herring, employing drift-nets and with an annual production of 150 tonnes – and from Australia – the US$ 200 million fishery for rock lobsters, caught in waters up to 60 km. depth using pots/traps. The combined employment in production, processing and marketing generated by both these fisheries would not cross a couple of thousands. The Alaskan salmon fishery (using trolls and nets) is the third one that has obtained MSC certification.

Very much on the agenda of the MSC is the promotion of exports of fish from well-managed fisheries in developing countries and assistance to ensure that such fisheries are responsibly managed. Several fisheries from developing countries have expressed an interest in MSC certification. They include: the Galapagos lobster and mixed fishery of Ecuador; the Ceara lobster fishery of Brazil; the artisanal hake fishery of Chile; the PhaNga mixed fishery of Thailand; and the Sulu Sea blue crab fishery of the Philippines. The Ecuadorian Government has publicly endorsed MSC. Sainsbury's Supermarkets Ltd., which has an annual turnover of over US$300 million in fish and fish products alone, is now working with the suppliers of tuna in the Maldives with a view to achieving MSC certification. Sainsbury's already sells MSC-certified Thames herring and rock lobster.

Several concerns about the implications of the MSC certification process for the artisanal and small-scale fisheries in developing countries have been expressed and some of them were discussed in *Fish Stakes* (ICSF 1998). The main concern of ICSF is about "the practicability of a private accreditation programme such as the MSC, claiming to promote sustainable fishing, based on universal standards that are developed without due consultation with fishworker organizations, and that do not take into consideration the diversity of fisheries in the developing countries". Other concerns include: the issue of market access; the autonomy of fishers in the small-scale artisanal sector; the certification and chain of custody costs; and in cases where the MSC standards are practicable, the costs associated with adjusting fisheries to make them comply with these standards.

The MSC Process Has Ignored the Role and Opinion of Artisanal Fishworkers

Although the P&C claim to be a product of an 18-month worldwide consultation process, there was no consultation whatsoever in regions with the largest number of fishworkers and with the largest production of food fish in the world. There were none, for instance, in important fish producing and exporting countries such as China, India, Indonesia, the Philippines and Senegal. In all the consultations organized by MSC, the participation of fishworkers, without exception, was poor. Moreover, the list of signatories and supporters of MSC mainly includes wholesalers, retailers, environmental groups and consultancy companies; there are no fishworker organizations from any developing country.

Unilever has already made it known publicly that only fish carrying MSC logo will be sold through its outlets by the year 2005. According to the MSC Fisheries

Certification Process, although it is the fishery that contacts the MSC for certification and not vice versa, the autonomy could still be threatened if wholesalers and retailers in the markets of developed countries insist on an MSC logo.

MSC May Well Become a Non-tariff Trade Barrier to Fish Exports from the South

Very few developing countries have worthwhile fisheries management programmes. Even if a developing country fishery would like to seek MSC certification, it would, therefore, be almost impossible to show, as required by the P&C, that the fishery under consideration is subject to an effective management system. Thus, the way the MSC is designed, it could cause problems of access to the markets for ecolabelled fish in Europe and the US—the largest markets for fish and fish products, after Japan—for the fishery products originating from most developing countries. Products from fisheries such as the hake fisheries of Namibia or the tuna fisheries of Maldives, however, could benefit since these come under an effective management system. But these are exceptions.

Even if the fisheries of developing countries are potentially certifiable, they could be unable to defend a claim that they maintain the integrity of the ecosystem, if they lack the financial resources to undertake the necessary study and documentation to establish this claim. The current certification process appears to be elaborate and expensive. Increasing costs and problems with market access could also arise from the requirements for 'chain-of-custody' audit. The P&C visualize the MSC certification programme also working in conjunction with other complementary certification programmes such as the ISO 14000, which will further enhance the costs. These programmes are expected to evaluate, for instance, the environmental and food safety standards of post-harvest facilities that handle fish originating from the MSC-certified fisheries. The costs considerations are further worsened because there is no clear signal from the market as yet that the price for ecolabelled fish could more than offset the costs of certification.

Are Seafood Companies and Traders Really Concerned About Sustainable Fishing?

It is moot whether the seafood firms that have endorsed the MSC are, in fact, concerned about sustainable fishing. They seem to be interested in the MSC logo mainly to improve their own market access and public image. Speaking at the Asian International Seafood Show, Hong Kong, in May 1999, David Carter, General Manager of Kailis and France Group, Australia, which has strong interests in the rock lobster fishery, gave three reasons for supporting the MSC initiative. These were: (1) a reduction in tariffs on Australian products entering the EU; (2) the potential to increase market share; and (3) an opportunity to improve the general public's perception about the fishing industry. He further said the fishing industry had only two choices: "to embrace and be the engineers of change or to be squashed like a bug on the windshield of rising public concern" (see *Advisory Board Newsletter* Volume 1, Issue 1, May 1999, published by the MSC). Firms such as Unilever and Sainsbury's also have interests in other businesses. Associating with high-profile environment campaigns could certainly provide a better image for marketing highly profitable, non-fishery, not-so-green products.

Artisanal Fishers May Well Suffer for Fishing Responsibly!

Lastly, many artisanal fishers would not be in a position to benefit from an MSC certification programme since, in most instances, using responsible fishing methods, they often compete for the same resource with large-scale fishing units that use non-selective and environmentally destructive fishing methods and practices. Since, under the MSC scheme, the unit of certification is a fishery in its entirety, there is no scope to reward the responsible fishing methods of the artisanal sector, and to reprimand the destructive fishing activity of the large-scale sectror, if both co-exist in the same fishery. In such fisheries, unless there is co-operation between the artisanal and the large-scale fisheries, there is no way of obtaining MSC certification. In this sense, several of the artisanal fisheries that have expressed interest in MSC could very well be proved wrong in assuming that they could benefit from the MSC scheme, unless they are the exclusive harvesters of the resources or can strike an agreement with their large-scale competitors.

The Future of Ecolabels and "Fair Trade" in Fish is Hazy

It is still unclear, or too early to say, how the market will respond to either ecolabelled or "fairly traded" fish, although it is very likely that the market will accept them in the future. In the light of growing interest in linking environment and labour standards to international trade, we could view these developments as either an opportunity or a bottleneck. Environmental and labour standards could complement the standards for food safety, which are strictly adhered to in the US, EU and Japan. (In fact, the greatest denial of market access for fish and fish products from developing countries occurs under the mantle of food safety norms.)

Environment and labour standards and those for food safety could complete the triangle of external concerns about fish production and consumption. One can actually conceive of a situation where a fish product imported from a developing country and sold in an EU supermarket, for instance, may carry three logos—one for food safety, one for its origin from a sustainable fishery, and one for being exported by an association of fishworkers that complies with the core human rights conventions of the ILO!

But fisheries in developing countries could still benefit from these developments. Fishers using environmentally selective fishing methods and practices and those belonging to genuine fishworker co-operatives or associations could hope to benefit. While making all efforts to profit from such developments, fishworker organizations and national governments should exercise sufficient caution to prevent such standards from acting as an external barrier to trade. National or provincial fisheries authorities, together with fishworker organizations and the scientific community, could develop sustainability criteria and a management mechanism that are realistic and practical. These should then be effectively implemented.

Well-managed and well-organized fisheries are becoming important marketing opportunities in international trade. Governments, fishworker organizations and

other concerned groups should proactively interact in these developments. Unlike many of the other exports from developing countries, fish is not a commodity easily substitutable with fish from the waters of developed countries. This realization, coupled with a proactive engagement with the concerns of consumers, could very well promise a better future for both fish and fishworkers.

Food Safety May Be Injurious to the Economic Health of Artisanal Fishers

From the point of view of market access, more than environment-related issues, the biggest challenge faced by developing countries, especially in the US and European markets, is mainly on account of food safety. A recent estimate of the Centers for Disease Control and Prevention (CDC) of the United States claims that 76 million cases of gastrointestinal illnesses in the United States in 1999 are food-borne, which resulted in 5,000 deaths. Since the early 1980s, 'a food safety paradox' has been observed— a significant increase in the number of diseases linked to food in developed countries, in spite of a significant share of food being produced under stringent hygienic conditions. Although end product sampling was increased to tackle this problem, it was not successful—and considered inadequate— in reversing this phenomenon. The Hazard Analysis and Critical Control Point (HACCP) system was introduced in this context to "address all the relevant hazards in food production" at the level of production, processing and distribution. It had also proved its efficiency in controlling the hazard posed by a common toxinogenic bacterium, in low-acid canned foods. In the HACCP system, each substance, microorganism or condition of food that can cause disease is called a "hazard".

The WTO Agreement on the Application of Sanitary and Phytosanitary Measures

According to the FAO, fish "can be contaminated from the moment of capture until it is eaten. Contamination may occur because pathogenic micro-organisms form part of the normal flora of the fish. In other cases, toxic substances are introduced through cross-contamination, recontamination or faulty handling and processing". Canada, the European Union, and the United States introduced regulations based on HACCP system in the 1990s. In 1997, the HACCP system was incorporated into the WHO/FAO Codex Alimentarius and thus HACCP system became the basic reference for international trade disputes under the WTO Agreement on the Application of Sanitary and Phytosanitary Measures.

Many countries have set up processing and inspection methodologies that satisfy HACCP requirements over the last decade. In mid-1999, there were 50 countries complying with the European Commission's HACCP-based regulations. Of these, 37 were developing countries. But, as FAO points out, "not all developing countries were able to make the necessary initial investments. Sometimes credit for this purpose was scarce or non-existent and, as a result, some countries suffered a drastic reduction in the number of establishments authorized to export to EU markets. Cape Verde and Guinea-Bissau became extreme examples of this in mid-2000 when the EC banned all imports of fish from these countries."

Although HACCP system is believed to be an improvement on traditional fish

inspection and its application is expected to lead to a reduction in food-borne diseases, so far there is no documentary evidence to prove this point. In a 1999 CDC study quoted by FAO, it is stated that there is no indication of food-borne diseases "getting better or worse" as a result of following HACCP-based regulations.

HACCP is Seen As Another Non-tariff Barrier Imposed by the Developed World

Only a few developing countries have made HACCP system obligatory in their domestic markets. It has been mainly seen as a non-tariff barrier to trade put up by developed countries. Developing countries comply with it only to the extent they can export their products to the developed country markets. However, as FAO points out, "developing countries that extend the HACCP system to their internal market should expect to reap public health benefits", because to apply HACCP, it is necessary to ensure basic hygiene for all of the activities related to fish production. In several countries in Asia, Africa and Latin America that suffer from water-borne and food-borne diseases, applying a HACCP system can contribute to improve the quality of life of the poor.

A compartmentalized approach to standards—higher standards for the export market and lower ones for the domestic one— although sometimes sensible in the short run, can be counterproductive in the long run, since it will be difficult to maintain such distinctions in a convincing manner. Developing countries should wholeheartedly build up standards and implement measures that can contribute to improve the status of exploited fish stocks as well as the quality of life of fishworkers and consumers. Upgrading national standards to levels that are compatible with international ones, which they themselves are party to in their development, can certainly put developing countries in a better position to isolate protectionist tendencies in seafood export markets

Only an Ecosystem-based Approach to Fisheries Management Will Work

Sustainable development is the management and conservation of the natural resource base, and the orientation of technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations. Such development conserves land, water, plant and genetic resources, is environmentally non-degrading, technologically appropriate, economically viable and socially acceptable.
--Food and Agriculture Organization of the United Nations

Unlike the single-species model in fisheries management, which is by far the most prominent model in most parts of the world, an ecosystem-based approach to fishery management could be an effective tool in developing countries since it may take into account the complexity of the marine and coastal ecosystems, an attribute already factored in a limited way into the decision-making processes of several traditional, small-scale fishing communities A multitude of species, however, could complicate adopting such an approach to fisheries in the tropical belt.

According to the FAO FishBase, in India, for example, about 263 out of the 1,000

marine and brackish water fishes, identified so far, are commercially significant, as against just 25 out of 250 in Norway, and 21 out of 300 in Iceland. In Indonesia and the Philippines, countries with the greatest marine biodiversity in the world, the figures are 681 out of 2,511 and 616 out of 2,255, respectively. Each of these fish will have several stocks and the total number of stocks could run into thousands. Very little is known about the impact of fishing on these stocks.

There Are Many Challenges to Managing Small-scale Fisheries in Developing Countries

The main challenge in applying an ecosystem approach to small-scale fisheries management is in negotiating the adverse impacts on the ecosystem arising from factors outside the control of the small-scale sub-sector. If we are talking about applying such an approach to small-scale fisheries, then we are confined to discussing input and output control measures, and institutional arrangements to regulate access to fishing grounds especially when they are overcrowded or are in a state of ecological stress. In multi-species, multi-gear and multi-cultural fisheries, especially in the small-scale sub-sector, what indeed would be the best locus of measures to manage fisheries would be a moot point. Quota management regimes are ruled out because, by using such measures, it would be impossible to manage with any reasonable degree of success the "mosquito" fleet operating from a multitude of landing centres in many developing countries. Moreover, the associated problems of such regimes, particularly high-grading and concentration of ownership in the hands of a few, would only exacerbate social problems in labour-surplus, small-scale fisheries.

While discussing the need for fisheries management in small-scale fisheries, especially effort control and limited-entry measures, the role of conventional management measures is limited by poor institutional arrangements. The problem is further complicated by numerous landing centres, and too many fishing vessels as well as people in the fisheries. It would, therefore, be difficult, if not impossible, for governments to successfully regulate marine fishing activities, especially to introduce limited-entry regimes in small-scale fisheries without the active participation of fishing gear groups or fishworker organizations. There is, however, a lacuna of such organizations in many developing countries.

The State May Have to Focus More on Human Dimensions

Although, in industrialized countries, fisheries management programmes can directly focus on fishing capacity, fisheries resources and fish habitat-related issues, such an approach may be difficult in developing countries where the State, as a priority, may have to focus on the human dimension in the fisheries sector, especially the need for poverty alleviation and food security in coastal areas. The short-term goals of small-scale fisheries management under the aegis of the State cannot be exclusionary in nature, given the widespread poverty and unemployment in rural societies in many developing countries. A State that cannot provide alternative employment to fishers may also not find it easy to ask people to leave the fishery to alleviate overcrowding in fishing grounds. However, such

exclusionary regimes can be designed and implemented by the small-scale fishing industry itself and legitimized by the State machinery.

We are yet to see effective fisheries management programmes in any labour-surplus, small-scale fisheries in developing countries that are successfully implemented by the State. Even in large-scale fisheries, for that matter, there is hardly any success story of fisheries management, especially from developing countries. Despite their large-scale fisheries, important fish-producing countries like China, Thailand, India and Indonesia still do not figure as countries with effective management programmes. Given the collapse of fisheries even in countries like Canada—which was believed to have an effective fisheries management system until the collapse of the Canadian Atlantic cod fisheries in the 1990s—the lack of political will, or confidence in the feasibility of fisheries management programmes, is understandable in many developing countries.

There is no straightforward, universal solution to many of the vexing problems of overfishing and overcapacity in small-scale fisheries, however, and this calls for a better understanding of the structure of fisheries, the motives of, and compulsions on fishers, and the interaction between various components of fisheries, especially between the large- and small-scale, and between different gear groups within the small-scale sub-sector.

Given all the failures—and indifference—of the past, new fisheries management initiatives should be based on a process of dialogue with the small-scale fishing industry, to arrive at long-term and short-term goals for management, taking into account social, economic, ecological, and other relevant aspects of labour-surplus fisheries in developing countries. Such initiatives can be taken by the State. One way to create room for such a dialogue would be to progressively redistribute fishing space to the small-scale fisheries sub-sector by phasing out large-scale, non-selective fishing units. Such a measure would also consolidate the recognition granted to small-scale fisheries by several governments since the 1990s and by the 1995 FAO Code of Conduct for Responsible Fisheries.

Simultaneously, there should be a serious effort initiated by the State in the long run for greater institution building—building up fishworker organizations, for example—that will help devolve principal fisheries management functions to the representative small-scale fishing industry organizations. A devolutionary process should aim at delegating authority—not just decentralization—based on the subsidiarity principle, meaning, implementing management functions at the most effective level, starting from the bottom. In large countries like China, Brazil, India and Indonesia, where it is almost impossible to have a centralized—or a provincial level— effective fisheries management progamme, such an approach seems to suggest better sense. These institutions, however, should be designed in such a manner that they become true representative bodies, that they do not become hegemonic or inequitable, or end up just as mere conduits for State patronage.

There is Need to Build On Community-based Fisheries Management

In developing countries, there is a greater need to look into the best institutional structures that are ideal for undertaking fisheries management functions. Some lessons may be drawn from traditional community-based fisheries management initiatives involving fishing communities, especially to regulate access to fisheries and to limit fishing capacity. These tend to be more localized initiatives among homogenous gear groups, and often have a conflicting relationship with other gear types. They are forms of rights-based fisheries, often based on rotational access to fisheries resources, but their effectiveness is more confined to stationary or beach-based gear or to sedentary species, than to mobile gear or species.

There are already several examples of such traditional arrangements in developing countries. The most salient aspect of these arrangements is that they have clearly defined rules of exclusion based on allegiance to a caste, community or a group. These arrangements, however, most often emphasize aspects of allocation, and are mainly designed to mitigate conflicts within their membership over access to marine fishing space—to preserve "the social order, not the balance of nature", as Cordell puts it. The fishing capacity of the members, however, could exceed the regenerative capacity of the resource and can contribute to overfishing pressures, especially in the context of new technical changes in fisheries.

In Pulicat Lake, India, for example, there is the *padu* system, a system of rotational access to shrimp fishing grounds, but it does not mitigate pressure on shrimp resources because different groups of members, in a rotational fashion, are incessantly harvesting the resources. Similarly, in several estuarine fisheries in Asia, although several stake net groups practice rotational access, the mesh size is below the legal limit and it often contributes to overfishing of juveniles of diadromous species. We also notice that traditional arrangements to regulate access are challenged under conditions of greater market demand, when non-member gear groups in coastal fishing villages refuse to recognize the legitimacy of these arrangements, and often do so with the support of the government .

The issue of legitimacy is further exacerbated by the conflicts between exclusionary traditional arrangements and the non-exclusionary formal arrangements under the auspices of the State. This can be effectively tackled if the governments throw their weight behind traditional systems. In exchange for lending formal recognition, the governments can insist that these arrangements should adopt and implement effective conservation measures.

A "Crossword" Approach May Work In Small-scale Fisheries Management

Conservation of fisheries resources, protection of fish habitats, and allocation to fishers are the three most important considerations in fisheries management. The vantage point to start from is the gear group because, without its cooperation, it would not be possible to adopt effective conservation measures and to protect fish habitats from fishery-related stress. It is thus the principal link in fisheries management, especially in small-scale fisheries in developing countries.

Initiating fisheries management measures in small-scale fisheries in developing countries could be through a "crossword" approach, i.e., filling up management

niches that are relatively easy at first, and then moving on to more difficult ones with the aid of early breakthroughs or solutions.

Stationary and beach-based gear groups, gear groups fishing around artificial reefs, and gear groups targeting sedentary stocks are arguably better candidates to collaborate in a fisheries management programme. The most difficult ones could be the migrant gear groups, who may have a vested interest in maintaining an open-access regime, like the long-line fishers of Senegal.

Formal and traditional fisheries arrangements need to combine, to give rise to effective fisheries management policies and programmes. Simultaneously, measures should be drawn up to regulate large-scale fishing operations, including a proscription of fishing gear and fishing operations that are destructive or socially inappropriate.

International Cooperation Is Needed to Manage Small-scale Fisheries

As a global solution to the national, provincial, or local problems of overfishing and overcapacity, there are three possibilities that should be considered. First, the industrialized countries should not transfer their excess fishing capacity to developing countries even as an article of aid. What is in fact required is weeding out of the excess capacity problem—Northern countries should not be building up excess capacity in the first place. Subsidies are still extended for fleet expansion, for example, in several EC countries and this practice should be strongly discouraged.

Second, for small-scale fisheries that are overcrowded as a result of demographic pressure in developing countries, industrialized nations may contribute to alleviating such pressure by facilitating temporary migration of surplus labour into their domestic or distant-water fisheries, particularly into fisheries that are characterized by labour shortage. The substitution of labour with capital in many developed country fisheries, *inter alia*, is believed to be a function of growing labour shortage. The average age of a Japanese and Korean fisherman, for example, is over 60 and that of a Canadian fisherman in the Maritimes is around 47.

Instead of substituting labour with capital, fisheries at low levels of technical intensity can be maintained, even in the event of chronic labour shortage in the North, if well-trained migrant workers from developing countries are recruited. Threats to immigration can be addressed by carefully designing time slots for transient accommodation of labour. Already several OECD countries are employing migrant fishworkers from developing countries in their fisheries because of labour shortage. This is especially noticeable in Spain, France and Italy. There are several examples of employment arrangements between the North and the South, especially in relation to the employment of computer and medical professionals from countries like India in the US and Europe. Needless to say, this will not be a solution to the problems arising from demographic pressure, but it would certainly be seen as a positive gesture from the North to the South.

Third, for the management of overexploited fisheries in developing countries

there is need to set up a well-designed, time-bound, international fisheries management assistance fund in exchange for a commitment to manage fisheries in a consultative and transparent manner, within the framework of an ecosystem approach. However, the governments in developing countries should also consider investing in fisheries management from existing revenue sources. Although net earnings from fisheries exports for many developing countries are quite high, little significant investments are made in conservation and management by most developing countries. With a gross value of fisheries output at US$ 5 billion in 1997-98 (at ex-vessel prices) and an export earning of over US$ 1 billion, India, for example, spends insignificant amounts on activities that can be treated as fisheries management. In 1999, when Norway spent about 8 per cent of the total gross revenue of marine fish landings on fisheries management, Iceland 3 per cent and Newfoundland 20 per cent, Thailand had spent only 1.64 per cent, although its fisheries have been beset with overcapacity and overfishing problems for some time. The mindset is yet to change from considering fisheries as an extractive industry, to an industry based on renewable natural resources.

An Ecosystem-based Approach is a Holistic One

An ecosystem-based approach is a holistic approach within a broader time frame. Such an approach to fisheries conservation, management and development can make it possible to look at all aspects of fisheries, including land- and sea-based, as well as known and unknown factors. It can enable the sub-sector to address issues of immediate and long-term concern, especially to prevent the impact of destructive fishing practices on fish stocks and fish habitats, to prevent the impact of land-based sources of pollution and coastal degradation, to rebuild depleted fish stocks and to restore marine habitats. It can facilitate building up, and strengthening, traditional knowledge systems in artisanal and small-scale fishing communities.

An ecosystem approach is of greatest significance to small-scale fisheries because it can broaden the scope of fisheries management. It can help bring about a greater control over destructive fishing operations that employ non-selective fishing gear like bottom trawling, especially in minimizing the cascade effect of such fishing operations on fish stocks, fish habitats and on the livelihood of fishing communities. Such controls could even include a phasing out of destructive forms of fishing operations. A potential strategy for governments could be to first phase out destructive forms of large-scale, industrial fishing operations, in exchange for a commitment from small-scale fishers to stop destructive fishing operations such as dynamite and cyanide fishing, and the use of fine-meshed nets.

There is need to broaden the artisanal/small-scale knowledge-base to encompass ecological parameters hitherto not sufficiently understood or not taken into account, e.g., the greater impact of natural factors, the broader picture of prey-predator relationship, the larger role of fish habitats, and factors that contribute to unprecedented habitat degradation like pollution. There should, however, be a sense of “historical continuity”, in an ecosystem-based approach, an attempt to build up on what already exists, especially to transmute the past traditions with new scientific insights to meaningfully address the needs of the present, or the

contemporary systems of marine resource use.

Further, the development and application of an ecosystem-based approach to fisheries management in many developing countries should be made meaningful by building up strong fishworker organizations and by devolving management functions to them. This would help to address the problem of 'limited reach' of the State machinery to remote fishing centres in many coastal States.

Developing the building blocks of an ecosystem-based approach with social sensitivity is complex, difficult and expensive and require a "global partnership for sustainable development", as quoted in the epigraph of this paper. It should be based on a crossword approach, which implies a realistic time frame to implement various components of an ecosystem-based fisheries management programme in a progressive manner, i.e., using available knowledge to solve bits of the puzzle, while simultaneously expanding the knowledge-base to fully address the locus of problems at the macro level.

Women Maintain the Social, Cultural and Economic Fabric of the Fishing Community

Women of fishing communities play vital roles both within the fishery and the community, nature of the work of women differs by country, culture and region and between rural and urban areas. Women, whether of the North or South, can be seen playing the following kinds of roles:

As workers within the fisheries (paid and unpaid):
Women may work in fish marketing, in the preparation of bait, making and repairing nets, collecting crabs and shellfish, gathering and cultivating seaweed and algae, in smoking, salting and drying fish, and, though in rare cases, actual fishing.

Unfortunately, women's role in fisheries is often ignored or brushed aside as mere "liaison work" that many wives of fishermen undertake. In several areas, women take on work on behalf of their fishermen husbands, such as dealing with financial institutions for credit for fisheries operations and for repayment, dealing with the governmental fisheries agencies, and so on. These roles are rarely recognized, let alone paid for.

As workers in processing plants:
Women are very active in the seafood processing sector, as part-time or full-time workers in processing plants.

As workers within the family and community:
Women, as everywhere else, are almost entirely responsible for the care and nurture of the family. Where the men stay away fishing for long periods, women run the household in the absence of their husbands. They are important actors in the fishing community and are crucial in maintaining social networks and the culture of the community.

As workers outside the fisheries:

Often, women of coastal fishing communities take on activities outside the fishery, that give them some form of stable monetary income, since the income from the fishery is inherently unstable and unpredictable. Women may start some work that generates income, such as running a small shop or a restaurant, either individually, or as part of groups.

As members of fishworker movements:
Where women have organized, they have been active in political struggles, as for example, against Individual Transferable Quotas (ITQs) in Chile, against indiscriminate tourism development in Senegal, against joint venture arrangements in India, etc. As part of a local church group, women of the coastal community of Redondo, in Ceara, Brazil, were active in initiating and supporting the movement against predatory fishing of lobster resources. The issue of the destructive impact of trawling in the State of Kerala, India, has frequently been raised by women fish vendors too, since they have been directly affected by the falling market prices as a result of large trawler catches. The fishermen's wives' organizations in France, under the banner of FIFEL, are actively participating in the events leading up to the review of the Common Fisheries Policy (CFP) in 2002. They are lobbying against privatization of the rights to the fishery, and are demanding a role for fishermen and their wives in elaborating fisheries policy. In all these cases, the participation of women has helped strengthen the movements and broaden their agenda.

Obviously, any understanding of the fishery and of coastal fishing communities must take into account the roles and work of the women, alongside the fishermen and children of these communities. Being part of the sector in important ways, women are not only directly influenced by the kind of technology and management practices adhered to at sea, they also influence what happens within the fisheries.

A Feminist Perspective Questions the Dominant Discourse on Development and Fisheries Management

While the nature of women's work within the fisheries differs, the common factor is that it is rarely seen as "productive". It has low social value and is normally seen as an extension of the "domestic" space. Little value is attached to the domestic and community tasks performed by women. It is important that we recognize the value of what is largely invisible--including nature and its resources--but which we all know has intrinsic worth.

There needs to be a central focus on the concept of "production". This needs to be understood to refer to both the production of commodities *and* the production of life, generally called "reproduction". In mainstream discourse, the production of life is considered something "natural" and is relegated to the private sphere and, therefore, is considered to have no real cost. It remains invisible. Bringing this vital aspect back into the reckoning will call for a recognition and valuation of the labour that goes towards the creation and sustenance of life, a large part of which is performed by women. This would also call for an appropriate valuation of, and respect towards, nature and its resources.

A feminist perspective would then question mainstream thinking on what is valuable and what is not, and raise vital questions such as: Is the value of women's work less because it is not reflected in economic data and is not valued by mainstream society and discourse? Is the value of the services provided by nature less because it is not "counted" in mainstream economic analysis? Is the value of artisanal fisheries any lesser because its contribution is underrated?

By restoring the value, by bringing into the matrix the "invisibles", development priorities will be reshaped. There will be a rethink on issues such as the use of technologies, which may bring in higher incomes for a few in the short run, but which affect the quality of life of communities and the sustainability of resources, in the long run.

Restoring the value to certain types of work and roles, hitherto undervalued and taken for granted, should also lead to a redistribution and sharing of these roles, and a reshaping of gender relations. That would then make it possible to move towards a vision of healthier and more viable fishing communities and fisheries that are sustainable.

But this will also mean questioning the dominant discourse and those who set the terms for this discourse, as well as redefining what is valuable. Redefining what is valuable will also mean redefining the power relations that exist between the rich and poor, between men and women, between races and nationalities.

A feminist perspective will, therefore, raise vital questions on the current development paradigm, on mainstream thinking and on technology, and attempt to make visible the links between these issues and the issue of women's marginalization in society, in general, and in fisheries, in particular.

Thus, while it is important to work towards valorizing the work and roles of women in fishing communities and in increasing their representation and role in decision-making bodies and processes, this must be within the context of strengthening the capacity of fishing communities and fishworker organizations to counter adverse forms of development and to work towards a sustainable, equitable and gender-just fisheries.

For development to be life- and livelihood-centered, the relations between men, women and nature need to be equitable and sustainable. Production should ensure food and basic needs for all with equitable access to resources, and social institutions should ensure the equal participation of men and women, so that the gap between the private sphere (the present family arena) and the public sphere is significantly minimized. Nurture or unpaid labour should be undertaken by both men and women, and natural resources should be seen in their living contexts of ecosystems and not merely as resources for extraction. Such a development perspective would be truly gender-sensitive.

Artisanal Fishworkers Appear to be Perched on the Edge

At the beginning of the 21st century, communities in the South that depend on fishing and fish resources face an uncertain and increasingly challenging

situation. Overfishing, competition to access to resources, trade barriers, food security, privatization of fish resources, globalization, gender inequity --- the issues read like a veritable litany of woes. Yet, they can neither be wished away nor left unattended. Fishworkers around the world need to be heard, and artisanal fishworkers perhaps need to be listened to more carefully.

Never have these words appeared more appropriate:

Humanity stands at a defining moment in history. We are confronted with a perpetuation of disparities between and within nations, a worsening of poverty, hunger, ill health and illiteracy, and the continuing deterioration of the ecosystems on which we depend for our well-being. However, integration of environment and development concerns and greater attention to them will lead to the fulfilment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future. No nation can achieve this on its own; but together we can - in a global partnership for sustainable development.

---Para 1.1, Preamble, Chapter 1, Agenda 21: Programme of Action for Sustainable Development

The time for a global partnership is long overdue. The time to act is now.

Part II
Documents from the World Forum of Fishworkers

Chapter 1. The World Forum of Fishworkers : Origins and Proposals

1. A Historical Review Of The World Forum Of Fish Harvesters And Fishworkers

The Constituent Assembly of the World Forum of Fish Harvesters and Fish Workers took place in October 2000, in Loctudy, a fishing port in Brittany, France. During the assembly, a document titled "WFF Historical Review" was discussed. The paper talks about the distant origins of the process. It started in 1984 during the FAO (Food and Agriculture Organisation) conference. Organisations from India contested the absence of fish harvester representation during the conference, whose purpose was to produce a development strategy for the fishery within the new 200-mile EEZ (Exclusive Economic Zone). The Indian organisations succeeded in organising a parallel conference. Later, in 1986, the support network ICSF (International Collective in Support of Fishworkers) was created. This network organised several international meetings that initiated relations between fish harvester organisations. It also specifically worked on gender relations (between men and women) in the fishery. In 1995, during the fiftieth anniversary of the FAO in Québec (Canada), the organisations from India (NFF - National Fishworkers' Forum) and Canada (CCPFH - Canadian Council of Professional Fish Harvesters) launched the idea of a world fish harvester and fish worker organisation. Both India and Canada faced the growing development of industrial fleets (shrimp in India, cod in Canada). The FAO for its part accepted to reconsider the small-scale fishery as the future of the world fishery. The NFF and the Canadian Council were entrusted with the mission of organising the first fish harvester organisation meeting in New Delhi. This took place in November 1997 and gave birth to the World Forum with a 17-point charter and a Co-ordination Committee presided by Thomas Kocherry of the NFF and assisted by François Poulin of the Canadian Council.

The WFF Historical Review also explains the results of the three Co-ordination Committee meetings, whose purpose was to organise world fisheries day, celebrated on the 21 of November every year, and to prepare the Constituent Assembly. The Co-ordination Committee adopted several decisions including Loctudy, France as the location for the Constituent Assembly. It was decided, under pressure of women's groups, to adopt the principle of equal-gender-represented delegations for each country. In France, the *Comité local des pêches du Guilvinec* (Guilvinec local fishery committee) and the *Collectif Pêche et*

Développement (Collective for fishery and development) were entrusted with the logistics of the Assembly.

In October 2000, 32 delegations met in Loctudy to adopt the constitution prepared by the Co-ordination Committee and to work on developing a policy paper.

Because of dissent within the temporary coordination committee, this meeting led to the existence of two separate forums: the World Forum of Fisherpeople (WFFP) and The World Forum of Fish Harvesters and Fishworkers (WFF). Today, both forums strive to build strong bases for their organization and to elaborate policies to defend artisanal fishery worldwide.

2. Strategies And Proposals From The Constituent Assembly Of The World Forum Of Fish Harvesters And Fishworkers

The Constituent Assembly of the World Forum of Fish Harvesters and Fishworkers (WFF), which took place in October 2000 in Loctudy (France) gave birth to two organisations. This scission, however, represents only a regrettable and unfortunate mishap within the general movement which enables artisanal and small-scale fishing to emerge as the sole path to the future for a responsible approach to fishing. The meeting in Loctudy demonstrated that, beyond the differences of opinion, there was fundamental agreement about a large number of future trends and concerns. The charter which was adopted unanimously is proof of this. Moreover, in spite of everything the preparatory discussions and contributions to the debate enabled a certain number of fundamental points to be examined in great depth. The scission meant that it was not possible to develop a position paper on policy orientation, but the foundations were laid.

1. Artisanal and small-scale fishing constitute the basis for a responsible fishing model

This principle was first strongly stated in 1984 in Rome at the parallel conference of fishworkers. At the time this position was far from being acknowledged because artisanal fishing seemed like a thing of the past, seen only as a means of preserving jobs and not as a model for the future. During the 1990s, international agencies (Food and Agriculture Organization FAO, United Nations Development Programm UNDP, etc) gradually reviewed their positions and today acknowledge the viability of artisanal fishing as the basis for responsible fishing. This acknowledgement opens up possibilities for artisanal fishworker organisations. However, artisanal fishing must face up to the reality of the growth of liberalism which, in the fishing sector, takes the form of a trend toward the privatisation of resources, particularly ITQs (Individual Transferable Quotas). It also takes the form of trade liberalisation. This out and out liberalisation is being felt in both the North and the South. In a country like Chile, for example, the imposition of ITQs has given rise to very bitter conflicts. And in India privatisation has taken the form of public sector support to the development of industrial fishing totally oriented toward the export market. This offensive launched by liberalism is threatening the

existence of communities of traditional artisanal fishers who very often have their own systems for regulating their activities.

2. Strengtening Fishworker Organisations

The traditional community structures of fisherfolk are today greatly destabilised, if indeed they have not already disappeared, and they are unable to respond on their own to the new challenges posed by the crisis in resources, the opening up of trade, and the threats of privatisation, etc. In many countries (Chile, India, Senegal, the Philippines, Canada, Iceland etc) national independent organisations have gradually been formed and have enabled artisanal fishers to defend their options in the face of development options made by the nation state. These organisations, often with the support of NGOs, have also been able to make their voices heard in a variety of international *fora*, and to influence the development of several international reference texts such as the FAO Code of Conduct for Responsible Fisheries. Their presence is however too weak if not non-existent in many countries, and is ineffective in negotiating with many international organisations in order to counterbalance the clout of the industrial fishing sector which is well organised and resourced.

3. Guaranteeing the rights of traditional and artisanal fishers

On land as on the sea, fishing communities are subject to increasing pressure which is threatening their access to the seaboard and to the sea's resources. In Senegal and in many countries of the South as well as the North, the pressure of tourism is tending to deprive the fishers and their families of access to areas which are essential to the running and to the development of their activities. It is therefore necessary to guarantee their land rights on the coastline. In Asia above all, the pressure of tourism is exacerbated by that of industrial prawn fishing. It is equally essential, in the face of the threat of privatisation of access to fishing resources, to legally guarantee rights of community access and usage. These rights constitute the basis for the co-management of maritime resources and areas between communities and the nation state.

4. Absolute protection of the coastal and marine environment

Alongside forestry and nomadic pastoralism, fishing represents the last major activity based solely upon the exploitation of the natural productivity of ecosystems. Any threat to this productivity represents a threat to the survival of fishing communities. The dangers derive mainly from pollution from land-based sources and from the destruction of coastal areas (mangroves, corals, humid zones etc). They also derive from the sea in the form of oil spills. Fisherfolk's organisations everywhere are vociferous in their denunciation of threats to the integrity of coastal and maritime zones. Environmental organisations can often be allies. However, these organisations sometimes develop approaches to protection which are too narrow, targeting their actions upon certain species (seals, whales, dolphins etc) without taking full account of the protection of ecosystems in the round. Overprotection of one species can give rise to harmful imbalances in the areas concerned, and for the activities of the fisherfolk. The debate about the

relationship between the Forum and Greenpeace, for example, has illustrated the complexity of relations between fishers' organisations and environmental groups.

5. Promoting traditional aquaculture to counter industrial aquaculture

All fishers are confronted with the growth of industrial aquaculture which is developing at a rapid rate in response to increasing demand from the Northern countries whose natural stocks are limited. There is fierce competition for access to terrestrial and maritime areas, and to markets. Industrial aquaculture pollutes the coastal and seaboard zones, it consumes a growing volume of fish meal, and it gives rise to the same problems as intensive livestock production. It is strongly criticised by artisanal fishers' organisations who are demanding that it should either be banned or it's growth regulated within a strict framework. On the other hand, traditional shellfish farming (in France or Asia, for example) or traditional fish farming make best use of the natural potential of the areas farmed and represent an environmentally-friendly form of aquaculture suited to family businesses.

6. Controlling trade to counter rampant liberalism

The liberalisation of trade promoted by the World Trade Organization (WTO) is of concern to all fishers, owing to the explosion in the trade of produce from the sea. While some artisanal fishers benefit from the growth in exports, most of the profits elude them and the growth in exports is often harmful both to resources and to food availability for coastal populations. Liberalisation also threatens access by fishers to resources, for it favours access by those who have capital (for example ITQs). And finally the growth of exports can destabilise markets for artisanal fishers in the importing countries, and some countries have lost interest in the development of the local fisheries sector because they have access to cheaper imports. All organisations are therefore in agreement that the liberalisation of trade should be resisted and that mechanisms must be developed to control international trade and access to resources.

7. Acknowledging and integrating women into fishers' organisations

After lengthy debate, the world Forum strongly stated its willingness to ensure parity in its management structures. If it is seen as a good thing to support a community approach to small-scale and artisanal fishing, the major role played by women in fishing must be acknowledged. This is clear enough in the countries of the South, where women are to be seen on the beaches, but in the countries of the North while women have been marginalised from their traditional roles (management, marketing etc) the fisherman can only do his job at sea because his wife maintains the family unit; therefore women must be part of the decision-making processes and of the organisation of the industry. It is often during crises that the essential role of women comes to light. Several organisations have made efforts to promote the role of women, but there is still a long way to go before parity becomes a reality.

8. Valorising the know-how of artisanal and traditional fishers

The industrial model of fishing is couched in terms of the logic of investment; it leads to overcapitalisation and to a uniformisation of fishing techniques which are ill-adapted to the diversity and variability of maritime zones. By contrast, traditional artisanal fishing is based upon subtle adaptation of fishing gears and practices to the diversity of marine ecosystems. These traditional practices can evolve and adapt if traditional know-how is respected. Artisanal fishers have generally been able to adapt to motorisation while paying heed to the functional characteristics of their vessels. Fishing communities have also been implementing systems to regulate their fishing activities. We should acknowledge and valorise this traditional knowledge, and use it as a basis for making and managing the necessary changes.

9. Promoting an alliance between fishers and smallholder farmers

By inviting representatives of Via Campesina to its General Assembly, the world Forum showed its willingness to strengthen links with smallholder farmers' organisations in the context of globalisation. Smallholders and fishers have much in common. The model of small-scale and artisanal fishing favoured by the Forum is close to that of smallholder farming. Often fishers are also smallholder farmers, particularly the millions of seasonal fishers. Smallholders and fishers alike contribute to food security, and they are confronted with the same multinational corporations and with environmental degradation. They share in common the need to manage and conserve the zones in which they carry out their activities. Often in a minority in their countries, fishers stand to gain from developing alliances with organisations who share their concerns, in order to add to their respective clout.

10. Seeking alliances with the consumer

Most of the output of small-scale fishing is consumed locally or in the hinterland, but in the countries of the South a growing proportion of the catch is often exported. In fact the nature and volume of fishing is increasingly linked to demand from the North. Consumers' groups in these countries, as well as many NGOs, are beginning to take a closer interest in the conditions of production in the countries of the South. In collaboration with these groups, fishers' organisations can define terms of trade and thus apply pressure to import-export companies to respect fishing practices which are compatible with the interests of fishing communities. On a more general level, the whole of civil society in the North should get involved in defending the rights and interests of fishing communities.

3. 14 measures for sustainable, equitable development of a small-scale traditional fishery

John Kurien, of Kerala, India, has been an early advocate of world mobilization for a traditional fishery. In 1996, he published the paper "Pour un développement durable de la petite pêche," following research conducted as part of United Nations initiatives to coordinate policies and sustainable development. In that paper, he presents 14 measures.

Free trade, the global economy and the modern technology that has spread throughout the world have definitely led to rapid growth. While this has produced many benefits, there is also a growing realization that it has also triggered economic and social imbalance around the world. To correct the situation now requires a radical change in attitudes and policies. Government and all other players in civil society must define a new ethic that creates a greater role for the concept of sharing and cooperation.

1. The need for fundamental reform of the sector

Right of initial sale
Small-scale fish harvesters, "owner-operators," must have the exclusive right, entrenched in official texts, to set their own terms for the initial sale and price of the fish they land on beaches or in ports.

Right of review over export levels
Society absolutely must have a right of review over export levels. Assuming that fishing capacity is soundly managed, the processing infrastructure must still be brought into line.

2. Restore the role of traditional expertise

The gradual loss of traditional expertise over decades of development that disparaged the small-scale fishery has definitely been a serious, if not the greatest, tragedy. Reviving something that has been scorned by the powerful in society poses a truly daunting task.

3. Mix and transfer of technology

Scientific and technical research must be conducted to develop appropriate technologies to facilitate development of a small-scale fishery. The best approach would be to begin with a serious study of gear and methods currently in use in this sector, to understand their origins and the rationale behind shapes and processes, especially for gear. These are carefully adapted to the target species, passive and used seasonally.

In the area of technology transfer, South-South cooperation and direct contact between people should produce very interesting results.

4. Delegate more power to organizations of fish harvesters

To truly establish, revive or support a small-scale fishery, we must first recognize the utility of these associations. Without them, there is no point in hoping to implement the "fundamental" reforms required in the maritime sector and the accompanying programs for action.

5. For joint management of the resource

Fish harvesters demanding the "territorial right to use of the coastal zone" will be given prime responsibility for the health of these ecosystems, by using the resource sustainably and, if necessary, taking appropriate actions to restore that resource. They are the guardians of this wealth so this must be their collective field of action. However, since government is the ultimate trustee of fisheries resources, a system of joint management must be implemented. The rights and duties of fish harvesters, represented by their own organization, and those of government must be clearly defined and periodically reviewed. In practice, this decentralized system will lead to the creation of committees for management and access rights that will form a coordinated network for handling problems of sharing the resource among neighbouring sectors and the disputes that are sure to arise from time to time.

6 – Recognize and develop the role of women

In communities of small-scale fish harvesters where the vagaries of the sea have a strong influence on the psychology of men, women are almost always synonymous with stability and balance in the home. A small-scale fishery provides a living due as much to the support provided by women and their federative role as to the skill and knowledge of their men. We must restore the balance between male and female roles, and capitalize on the development potential of women. In the area of managing the resource, women can take initiatives such as exerting pressure to defend the rights of small-scale fish harvesters and organizing mutual loan associations.

7 – For community development

In many developing countries, populations of small-scale fish harvesters have been ignored for decades, abandoned at the bottom of the social and economic ladder. We must now introduce a series of social and economic measures to close the gap between these communities and the rest of society.

The goal is not to minimize the role of government and national community development policies, but instead to recast fisheries policy and focus action more on enhancing the role of human resources, on society and on the physical environment, which also constitute capital assets in this sector. The material capital (equipment, technology) will no longer be the main driving force of development, but must take second place.

8 – Diversify employment

We often hear the expression "too many fishermen, not enough fish." This is touted as the main cause of all the socio-economic problems and resource problems in the small-scale fisheries sector in Asia. Many people therefore advocate the following solution: help people leave the sector by giving them other options. There is no shortage of scholarly studies on this subject, but in the developing countries, there are very few cases in which this has truly proved effective.

Programs of action designed to create more jobs and boost incomes must focus on three fronts: promote change in institutions and techniques to absorb the available work force more effectively, develop social capital within communities, and enhance the value of fish in villages.

9 – Multisector program to defend the environment

The shore fishery practised by small-scale fish harvesters is not affected solely by specifically water-based activities. Coastal ecosystems are also influenced by the impact of land-based economic activity in the hinterland, through watercourses and runoff: silting caused by deforestation, agricultural and industrial effluent, urbanization and urban waste, and tourism. All these activities leave traces in watercourses and the sea. In many cases, the environment that supports small fishing villages is on the edge of the precipice. To restore balance requires community and multisectoral action.

10 - International consumer support

Banning exports of fisheries products from developing countries to developed countries is no solution. This would adversely affect the standard of living of millions of small-scale fish harvesters. We must now strike a balance, which is no mean feat.

Consumer movements in the United States, Japan and Europe can exert pressure on importers to refuse to buy shrimp under a given size, to ensure that they obtain shrimp caught with passive small-scale fishing gear.

11 – The civil society shows solidarity

NGOs and various other pressure groups have made a significant contribution to renewed interest in small-scale fisheries and fishing communities. For many years, volunteer associations in some countries have maintained ongoing relationships with these communities. They have facilitated matters and achieve progress to benefit organizations that have emerged among these populations. They have helped alert decision makers and the general public to their problems and have advocated the ability to demand their own rights.

12 – Support from international organizations

Ideas more readily translate into tangible actions when they obtain support in international circles. UNDP, FAO, UNESCO and the World Bank, to name just a few, have stressed the merits of small-scale fisheries and acknowledged that these fish harvesters must participate in development and implementation of fisheries development programs. The decision makers, scientists and pressure groups involved must use their influence to raise these issues at the national level.

13 – Establish a database

For the fisheries sector, we have more reliable statistics on fish than on the people who catch them, and this is a global phenomenon. The lack of information on the various aspects of small-scale fisheries, especially the socio-economic and cultural characteristics of the populations involved, poses a major problem for decision making and policy selection. In future, gathering of socio-economic data on small-scale fishing must be a priority objective: demographics, equipment, costs and profits, work force organization, loans and savings, and social infrastructures.

14 – Support from research

No program designed to give fishing populations a better opportunity to participate in fisheries development can achieve sustained success if not solidly supported by appropriate studies. These absolutely must take a multidisciplinary approach, and the socio-cultural, technical and ecological aspects must be handled with a “maritime” perspective.

John Kurien

Chapter 2. Fishery access and mangement : current issues

1. Is market economy the solution for fishery crisis ?

Charles Menzies believes that analysis of the fisheries crisis is deadlocked over the fundamental factor of strengthening the market economy, especially as part of government-supported globalization, which facilitates capital accumulation. This phenomenon explains the inability to implement resource management.

The dominant, so-called bio-economic, model is designed to maximize economic benefits without adversely affecting other commercially valuable species, but in practice this model remains centred on the economy and disregards the marine ecosystem as a whole. Advocates of the thesis of the tragedy of common ownership believe the solution is to institute ownership rights over fisheries, but this analysis is thwarted by the effects of the market economy, which feed the drive to expand operations. The search for a maximum balanced yield centred on harvesting a stock also disregards the ecosystem as a whole. If the optimum yield makes allowance for social factors, it disregards the effects of the market economy on fish harvesters. The same is true of community management or joint management systems, which appear to offer an alternative, but how can these systems withstand the onslaught of an industrialized world based on free markets? The future of conservation and management of stocks no doubt will depend on the ability to resist the forces of economic globalization.

Study of the common fisheries policy and its effects on the fishery in Brittany, especially the Bigouden area, shows how the combination of European Union policy and the actions of the French government led to a deadlock over the resource and a serious social crisis in the fishing community in 1993-1994. Initially, the government supported a program of modernization and development of a traditional offshore fishery that led to over-capacity, straining the resource, the profitability of vessels and the incomes of crews. At the same time, the policy of opening boundaries to fish from countries outside the European Union (USSR, United States – Southern countries) drove down the price of key species. Finally, concern for jobs promoted measures to support shipyards and equipment manufacturers. The policy introduced was much more a jobs and industrial development policy than a fisheries policy adapted to a limited resource. In the 1990s, the response to the crisis was based on reducing fishing effort through three types of measures that brought about a dramatic reduction in the number of fish harvesters without resolving the crisis in the resource:
- limits on the power and tonnage of vessels;
- retirement of vessels;
- limits on fishing efforts through regulations governing fishing gear and the number of days on the water.

These measures failed to limit fishing capacity because growth in fishing effort is now a factor of increased capital investment in vessels.

Today, new resource privatization policies based on **ITQs (Individual Transferable Quotas) and IVQs (Individual Vessel Quotas)** are preferred by fisheries managers and many countries (New Zealand, Iceland, Canada, Argentina, Chile, etc.). This method is designed to adjust fishing capacity to the resource by giving fish harvesters or companies holding rights an incentive to maximize their income and cut their costs, to earn the highest possible profit on their quota. The cost of managing the resource is also considerably lower. While the earnings of the remaining fish harvesters can be improved, this results in a sharp decline in jobs and a concentration of ownership where there is no restriction on the number of quotas a given person or company may hold. In practice, the trend therefore is toward greater concentration of ownership rights in the hands of large companies. Globalization can only aggravate the phenomenon by attempting to level production and trade conditions (prices, wages) as well as profit margins on a global scale.

Protecting fisheries and fishing skills requires a review of the capital accumulation inherent in the market economy, which runs counter to the reality of shared, limited marine resources.

Comments and questions

What does a review of market mechanisms entail?
John Kurien reminds us that by nature, fisheries need markets even in traditional systems, because catches are variable and fish harvesters are dependent on access to markets, unlike peasant farmers, who can achieve self-sufficiency through greater production control.
French fish harvesters had introduced fairly effective mechanisms to regulate prices and markets challenged by trade liberalization and the crisis in the resource. What conclusions must be drawn?
What experiments in controlling markets can prove useful?
Are there not contradictions between the interests of traditional fish harvesters depending on whether they live in exporting or importing countries?
How can these contradictions be addressed?

2. The "Prud'homies". Why institute the death of traditional organizations that practice responsible and sustainable fishery?

François Marty, fisherman and ethnologist in Gruissan (France), is an ardent defender of the "Prud'homies". These decentralized structures of management and organization of the fishing effort have existed in the French Mediterranean region for centuries. The "Prud'homies" were developed through natural circumstances, given that the Mediterranean Sea is small and the applicants to its exploitation numerous. The "Prud'homies" of traditional fisheries, constituted long before the state, were recognized and regulated in 1859 and confirmed in 1993.

The "Prud'homie" consists of a fishing community gathered at one or several harbours and in one fishing territory whose coastal limits are the limits of those harbours and whose sea limits are the zones of action of the various maritime

activities practised in the area. The French Mediterranean coastline is currently divided in 33 "Prud'homies" of varying size. Their attributions :

- **To Represent : 3 to 7 magistrates are elected for three year terms to represent the community.** The fishing community is *de facto* the social fishery unit, the "Prud'homie" is only its institutional expression. The election of the "Prud'homes" entrenches the adhesion of the social group to this management and discipline structure .

- **To Manage so as to favour community cohesion : since its origin, thanks to its moral authority, the "Prud'homie" has taken charge of managing services of general interest that benefit the whole community (colour-dying nets, storing fish, hauling the ships).** Solidarity is enacted through the institution of social assistance, support to help fishermen dealing with administrative services and the organisation of local celebrations. The "Prud'homies" have a collective heritage of variable nature and size (incl: headquarters of the community, drying lands, vehicles, buildings, etc).

- **Policing : with regard to the exercise of public power, the "Prud'homie" is endowed with unusual powers that guarantee fishery policing.** It concentrates in its hands :
  - The exclusive power to judge litigations between fishermen, going as far as pronouncing damages equivalent to the " fishing heritage" of the fisherman deemed in the wrong,
  - The authority of professional discipline that includes punishment by fines, unilateral constraints, seizures, etc,
  - The power to regulate, fishing activities in the territory
  - The power to establish contraventions to fishery policing

These considerable dismemberments of public power have caused legal criticism.

In the present state of legal reforms and EU law, the "Prud'homes" are no longer certain of their prerogatives.

Unfortunately, the French maritime administration, characterised as authoritarian and obsessed by productivism, has not refrained from trimming their powers and prerogatives during the past fifty years. About a year ago, 150 fishermen from the two Mediterranean regions, represented by their "Prud'hommes", researchers and political leaders (see The Green Book of the EU), (discovered incontestable characteristics of modernity in this institution. They decided together to demonstrate that this system, if supported by the state, could be a model for exploitation of the sea in sustainable and peaceful conditions.

Convinced y these ideas, they presented a document entitled "Experimental Programme for a Model of Decentralized Management for Small Responsible Fishery on the French Mediterranean Coastline " to the Minister of Fisheries, local authorities, and the European Union.

This project seeks :

- To redesign, on the basis of what already exists, the regulation of the techniques and their implementation in the context of sea resources management, as well as intra-sectorial and inter-sectorial competition.
- To look at the training of sailors-fishermen, trading, artisanal fisheries management, the statute of fishermen's wives.
- To conceive of fishery as part of regional development, formulate proposals of concerted actions with other partners of the coastal management.
- To set up technical and legal support for the "Prud'homes".
- To propose an assessment of this model with regard to responsible fishing.

Today, fishermen view daily the inability of the state and its representative structures to manage and organize sustainable fishery; thus, they regret that the ministry has not reacted to their ideas and proposals.
Consequently, they observe the slow agony of their organization and the suffocation of their horizontal and collective democracy to the benefit of a conceited and inefficient vertical administration.

Beyond the French state, might this model inspire other fishing communities ?

Peace between men participating in the exploitation, peace between men and their environment.

3. Reserve Zone – A Strategic Place for the Development of Fish Harvesters and Fish Workers Communities

The development of fish workers communities is closely related to the existence and right to exploit fishing resources, as well as to the existence of reserve zones, that is to say, areas in which the largest industrial enterprises or corporations are excluded from any activity.

Given that public policies often encourage industry, artisanal activities are forced to compete for the same resources. The traditional places for casting fish nets have therefore become a point of dispute, and most of the times fish workers communities end up as losers of this battle.

The reserve zone implies a political attitude of every State in order to protect the marine area located along the coast, near territorial settlements of fish workers communities, thus ensuring them a priority to keep on exploiting coastal resources. Several countries of the region have established reserve zones, introducing at the same time this concept into their national fisheries law. In the case of Chile, the General Law of Fishing and Aquaculture, in force since 1991, established as a reserve zone five nautical miles of territorial sea measured from normal baseline, between the Northern limit of the Republic and the 48th parallel. A big part of the national territory had to be protected from fishing industry. Peru also established a reserve zone of three nautical miles for artisanal fishermen. Meanwhile, similar laws and regulations protect resources and fish workers communities in Ecuador, Colombia, part of the coast and internal waters in Mexico and other countries.

Fully endorsed by national laws, these rules represent a step forward regarding equitable access to resources. Taking into account the political and economic models implemented in the last decade, the regulations strongly contrast with the reality of fish workers communities. As a matter of fact, the reserve zone has turned into a *currency of exchange,* into a transactional product for the domestic and even the international market. Especially in Chile, fish workers communities could never exercise their historical and legal right in relation with the reserve zone. In general, industrial corporations take advantage of legal ambiguity, since the own regulatory texts are unfit to prevent them from entering the area, exploiting it and developing fishing activities with highly destructive methods.

In the Chilean case, after a strong pressure put by industrial fishing sectors on the national Parliament in 1991 and with the approval of the own government, that same article to determine the existence of a reserve zone introduced an exception, according to which industrial vessels are allowed to accede to it, provided that they do not interfere with artisanal fishery, or that artisanal fishery is nonexistent in that area.

By means of legal exceptions, what it used to be an exception to the norm, is the norm since 1991 – apart from a few cases, the reserve zone has never since been closed to industrial activity. Furthermore, this legally temporary exception has become permanent in the practice.

There is something even more serious about the reserve zone. At least the following aspects were supposed to be considered by lawmakers: the conservation of coastal resources; the protection of fish workers communities; the preservation of trophic chain; and the fragile balance of the zone of five nautical miles measured from the normal baseline. Internal waters such as bays, fiords and gulfs were also protected. None of the assumptions to allow the legal existence of the zone was fulfilled by the different Chilean governments. On the contrary, during the discussion on the bill to establish a system of individual transferable quotas (ITQ) and more recently the bill that established a Catch Limit per Shipowner[1], the possible support to the small-scale sector was conditioned to a complete closure of the reserve zone, with the exception of such drilling windows whose exploitation had been already permitted by the Undersecretary of Fisheries. This is why the *Conapach* (Chilean coastal fishery association) states the reserve zone has become a currency of exchange before the governments and their fishery public policies.

Government officials argue the idea that, given the characteristics of artisanal fishery, this activity is unfit for an effective use of the reserve zone. So, valuable

[1]. In January 2001, the Chilean Parliament approved a temporary bill, establishing a Catch Limit per Shipowner. In so doing, it divided into fractions the industrial share among operating companies, transferring fishing licenses to industrial shipowners and allowing the latter to make an association, so that they can claim the sum of individual quotas. For example, 70% of the resource common hake go just to two fishing companies. Although this bill does not authorize the ownership of the quota, it does create appropriate legal conditions for a future amendment of the Fisheries Law, so as to permit the ownership of resources. In the same way, fishing companies were allowed to reduce their personnel, operate in the market with better and more modern fleets, and prepare a future participation in the market with a guaranteed quota for the Chilean fishing system.

coastal resources remain unexploited, the country fails to earn revenues and can not generate new jobs. Furthermore, the problem could be also solved by eventually restraining small-scale fishery in its area of five nautical miles.

In light of the conditions which are revealed in fish workers communities and according to their viewpoints, both positions are unacceptable. Artisanal fishery should not be restricted to the area of five nautical miles, not only because of the historical rights over marine resources, but also because the existence of such communities and the own resources depend to a great extent on this activity. On the other hand, it is not true that the only way to get foreign currency is through the exploitation by those companies with high-performance trawlers: world-wide experience has clearly proven that industrial activities in reserve zones hinder any form of sustainable development.

Governments are at the crossroad: either they encourage the development of fish workers communities, or they create exclusive conditions and support industrial corporations, obtaining foreign currency in the short-term – and the depletion of fish stocks.

The reserve zone must be regarded as a strategic place for development, and this is valid for the whole nation.

Pedro Avendaño Garcés, Conapach

4. Women Of Fishing Communities And Tourism Development: The Case Of Senegal

In August 1999, CNPS (*Collective National des Pêcheurs du Senegal*) [National collective of Senegalese fish harvesters] initiated a campaign on problems related to the development of tourism in fishing communities. CNPS requested that the land be allocated to the communities to ensure the continuity of their activities and particularly those of women fish transformers who need enough space for smoking, drying and salting fish. These problems are especially serious in M'bou. The problem is increasingly aggravated by two factors. First, tourism and its related activities, such as camping, luxury sport activities, etc. generate the situation. Those promoting building and tourism complexes make agreements with public authorities to confiscate beaches and coastal territory. Women are those affected the most and also the most determined in the struggle against expulsion and in protecting their territorial rights to the land. This situation is also happening in Saint Louis and in Hann, where the lack of available land has lead to the disappearance of transformation activities.

But another factor also aggravates and accelerates the expropriation phenomenon, since decentralization increases municipal authority's power at the expense of traditional authorities that sometimes participate in the movement against expulsions. Under lack of funds, municipalities use the rare available spaces of land as easy solutions to finance their operations. Land becomes a source of revenue and a game of speculation.

The effects of this type of territorial access include the negative aspect of tourism development. The benefits generated by tourism belong to foreign investors. Tourism also brings a trail of cultural aggressions. In the loss of land, water is also at even higher risk since the tourism enterprises use the water for their operations (pools, golf, etc…).

Besides the reallocation of land reserves, the fish harvesters request a joint study: State--fish harvester organisation, to evaluate the situation.

This case described by Aliou Sall, in Senegal, is one of many others in countries of the South confronted with the skyrocketing increase in beach and aqua tourism. It also affects some countries of the North, such as France with its Mediterranean coast and even some parts of Brittany where tourism is taking over the coastline more and more for ports and the marine resource. The competition for land becomes a competition at sea for fish with sport or hobby fishing.
Aliou Sall suggests a reflection on the following questions:

- Can the relationship between fishing and tourism evolve into a healthier complementary relationship in which fishing benefits tourism?
- In the development of tourism policies, is another form of tourism founded on cultural exchange possible without affecting fishing communities? Can these communities participate in this kind of touristic development?
- Fishing communities must participate in the debates on land regulation and allocation in order to protect their interests.
- How can we solve the contradictions between the general call for workers by tourism and the need to keep crew members for the fishery?

We can undoubtedly add this question: are their positive ways of developing tourism while respecting the activities and interests of fishing communities?

5. The WTO and its impact on artesanal fishery

For the first time, the World Trade Organisation will formerly discuss issues related to fishing and international fish produce trade at the Fifth international conference, which will take place in Cancun, Mexico, in September, 2003, as decided upon in Doha (November, 2001).

The WTO's struggle to control world trade is a key factor in the model of expansion and domination stimulated by world economic power, set up by multinationals, to increase their profits while condensing trade into the hands of several operators bestowed with practically unlimited power. The World Trade Organisation represents a neo-local international institution, which enables international consortiums to "legally" name the conditions that give them advantages.

If the WTO monopolises the fishing sector, industrial companies such as Pesca Nova in Spain, who operate on European Union money, North-American, Chinese,

Japanese and Korean consortiums, among others, will have the power to define the future of fishing communities, whose survival depends on access to and control of natural resources.

The WTO is seeking to increase company control over natural resources, so that decisions over the use of natural resources rely on the short term demands of financial markets, which will not occur without an increase in the exploitation of the traditional zones in which operate small-scale fishing, particularly in developing countries. With this outlook, they are seeking to change a country's internal juridical order, as a way to create conditions to insure an increased profit-earning capacity for international consortiums. Privatisation of resources is a way to insure the fishing trade has an increased profit-earning capacity for international consortiums; on this logic, countries transfer ownership of their fishing heritage to these companies, generally at no cost and on a perpetual basis. The WTO is in this way an instrument of pressure and threat: if the process of privatisation meets with obstacles, the WTO's arbitration mechanisms act in opening national economies or protecting company investments and expansions. The fixed objective is the systematic elimination of management and resource administration policies and the relation between these procedures and fishing communities, which are considered as commercial barriers. The WTO's regulation role in international trade is thus an illusion, as the rules concerning barriers, subsidies and protections are being applied in countries producing raw materials, but not necessarily in the European Union, the Untied States, or emerging Asian countries. Thus, all multilateral, bilateral, or internal agreements for resource management remain secondary to the general rules promised by the WTO.

In the case of fish, the WTO's actions are centred on their objective of preventing subsidies to open sea industrial fishing fleets. In Doha it was expressed as: "the intention to clarify and improve regulations in the fishing domain." What does the WTO understand by fishing subsidy? Is it a question of a new convention on the regulation of fishing access zones, a question which is always more charged for countries such as Chilli or South Africa? Modification of fishing codes and the appearance of new fish resource access regimes, favourable to national industry, who plan to sell or lease a portion of its quota to international industrial fleets, constitutes a part of free trade agreements, in which fishing is not only a highly problematic subject, but has also become an agent or currency of exchange. The consortiums are seeking ownership of fish resources in order to insure the trading of them. The WTO's involvement in the fishing sector will mean they will have the right to control food originating from the sea, and, will consequently be able to open an exclusive economic zone under the pretext of protection or subsidy barriers. Because of legal changes small-scale fishing communities have in appearance gained a share of fish quota, but in the long term they are progressively losing their historical access to the resources on which they depend.

The reasons for refusing the WTO and preventing fishing from falling into its control.

From a commercial point of view, global fishing is extremely important for developing countries, who are the principal world exporters. The WTO's probable invasion into fishing regulations will permit them to extend their domination over

a sector which was, up to the present, out of its control. Fishing is equally important in insuring a means of survival for rural communities in a number of African, Asian and American countries. Small-scale fishing provides a range of diverse fish species, rich in proteins, fats, oils and vitamins essential for human life. Yet the relation between resources and fishing communities is being more and more threatened because of a series of commercial and legal pressures, related to usage, extraction and the environment.

WTO and fish commerce: the priority is commerce and exchange before everything else. Policies of regulation, access and management of fish resources are secondary to the market, which is adverse to policies designed to protect fishing communities, the environment, human rights, etc.

WTO and democracy: It reduces the role of governments in the administration of and access to natural resources, putting pressure on them to liberalise trade, privatise resource ownership and create conditions to introduce changes into fishing legislation.

WTO and global rules: the active promotion of global trade damages community efforts and local markets in the securing of its own development. Agreements such as APEC, the European Union and FTAA consider fishing as a currency of exchange, "legally" obliging countries to open their doors, facilitating access to an exclusive economic zone and authorising open sea fishing fleets to enter into traditional fishing zones.

WTO and the principle of reciprocity: the International Free Trade Treaties cite reciprocity as the behaviour norm, making it into a synonym of liberalisation of trade. Yet, in practice, it is impossible that one country with a weaker economy is able to have the same guarantees and conditions for the placement of its products on international markets. In the fishing sector, the EU can access as far as traditional fishing zones in Third World countries, but these countries can not enter into EU waters or unload their products in European ports.

WTO, certification, country of origin product labels: There exists an increasing preoccupation with the certification of fish produce and the application of similar norms and standards for all countries; in this way, those who have access to international markets are those who dictate the norms and who are able to satisfy them, adapting to appellation or registering certificates on resources.

WTO and tribunals: the WTO's arbitration mechanisms are able to decide if a norm or a national law is "legal" in the light of its own regulations, so that there exists no possibility whatsoever of resource protection, establishing management norms or increasing community participation for responsibility-based fishing, because all of this in the language of the WTO only means protectionism.

WTO cannot control humanity's fishing heritage: 75% of the earth is covered in water, where, according to statistics, some 28000 varieties of fish live, of which 40% are fresh water. 25% of all salt water fish have a some kind of relation with the coral reef, and the archipelago indomalais contains within it alone more than 2000 species of fish. In fresh water ecosystems a similar diversity can be found:

the Amazon basin for example, homes more than 1300 species, whereas in deep lakes such as lake Tanganika or lake Baikal, each one contains more than 200 species. Other ecosystems such as mangroves are important for their capacity to give refuge to the progeny of new species. It is esteemed that 60% of animal proteins in Indonesia, and 50% in Ghana, originate from fish. Approximately 13 million people in the flood prone plains of Bangladesh are directly involved in fishing and for the large majority of the population, 114 million people, fish is the principle food. In some countries, fishing continues to remain "invisible" because of the lack of means for registering or declaring fishing activities; in the same way, the statistics that represent the work of women and children (Africa, Asia, Amazon, primarily) remain insufficient. Frequently, fishing proves to be a vital activity for a community's poorest groups, including landless people, for whom fishing becomes a means of survival by default. This food security function in fish biodiversity comprises an underestimated aspect of the natural capital that a country possesses, but which is extremely interesting for international trade, which seeks to secure ownership over these resources as a way to control and commercialise its produce.

If the WTO succeeds in definitely integrating fishing under its control, biodiversity will end up entirely submitted to the process of liberalisation of trade, and natural capital will be bound by commercial regulations rather than human needs.

We must take into consideration the fact that during the last two decades fish produce trade has increased exponentially, whereas world fish production has remained relatively stable. Currently, 44% of world sea water reserves are utilised, 25% of them are over-utilised and the remaining 31% could be utilised more. We could expect a moderate increase in production, between 20 and 25%, if adequate measures of management were taken. It is esteemed that 25% of world production is exclusively from small-scale fishing. 40% of fish produce is intended for human consumption.

WTO and subsidies: a deceptive debate

The WTO is questioning fishing subsidies granted by industrialised countries under the pretext that they falsify market activity and create a threat of extinction. Each year these countries appropriate between 14000 and 25000 million US dollars to protect non-efficient fishing industries. This figure is equivalent to between 20 and 25% of the sector's returns. Seen from this angle, this phenomenon partly explains the excess capacity (excesso de capacidad) of subsidised companies and producers, who consequently over-fish and in this way restrict the access of other fishers deprived of the support of their State, like, for example, small-scale fishing communities.

These considerations seem to precisely illustrate the important differences existent between producing countries (who posses important fishing zones), countries who send their industrial fishing fleets into the open sea and international market operators; however, they do not take into consideration the actual dimension of the debate that the WTO is preparing for the Cancun meeting. In fact, the discussion is not centred around subsidies granted by the European Union or the United States, but on the question of access to and management of

natural resources. In this sense, the positions are extremely clear: an eventual rigorous control of subsidies would affect the EU and the United States, but there is no indication that there exists effectively any disposition to do it, given that the fishing consortiums and the capital investments originate precisely from these regions. These same parties have put forward the argument that a control of this kind would strongly benefit those countries in the course of development, which are currently the biggest fish producers. To insist, on the contrary, on aspects of management and access implies evading questioning consortium investment processes in the third world, creating pressures so that legal and sometimes constitutional arrangements occur relating to control of and access to resources, thus creating internal conditions favourable to foreign investment and, fundamentally, using privatisation as an opening instrument. It is consequently easy to see that the most adverse effects will concern non-industrialised countries and small-scale fishing communities.

Pedro Avendaño
1st May 2002

Chapter 3. Fishing and food sovereignty

1. Fish Harvesters and Farmers: One Struggle against Globalisation

The World Forum invited José Bové, director of the *Confédération paysanne* [Farmer's Confederation] to represent Via Campesina at the Assembly in Loctudy. José Bové and the president of Via Campesina were both absent due to their international conference in India and were represented by Jean Cabaret, who is in charged of international affairs at the *Confédération paysanne*, French organisation for small to medium farmers who are struggling against globalisation.
Jean Cabaret evoked the complexity and the difficulty of advancing and federating organisations with very diverse economic and social realities, and climatic and geographic constraints. He also reminded everyone on the very simple obstacle of getting to know one-another.

Both the farmer's and the fish harvester's struggle coincide in that they are both confronted with natural resource conservation problems. Farmers and fish harvesters may have common interests in fighting pollution. Both also produce food and face the restrictions of globalisation, the power of agricultural food industry and corporate distributors. They are experiencing the dismantling of national food policies to benefit the unbridled development of trade. In agriculture, as in the fishery, the subsidies benefit the powerful and most industrialised first. In fact, the defence and promotion of small-scale agriculture coincides with the Forum's struggle in defence of the traditional and small-scale fishery. Farmers and fish harvesters increasingly visualise their future by integrating the management of land and sea.
Farmer organisations and several fish harvester organisations are on the front line in the struggle against globalisation in comparison to other organisations and associations (syndicates, consumer or environmentalist organisations)

Comments:
Farmers and fish harvesters are partners in the struggle against liberal globalisation and for public control over WTO.
However, beyond the common international level, the relationship between farmers and fish harvesters is underdeveloped on national and local levels. The present question is what means should be used to unite their objectives more often and concretely?

- form farmer-fish harvester partners to develop national food policies
-common reflections on agriculture, fishery and the protection of natural and threatened areas
- the struggle against pollution
- common work with consumer organisations (on labelling, for example)
- common struggle against industrial transformers and large distributing corporations
- the role of women in rural and fishing communities
- strengthen cultural exchanges

2. Recommendations From The Havana Meeting

30 people representing fisher communities and organizations from Africa, Europe and Latin America, as well as the Cuban Fishing Ministry, met in the Havana from August 31 to September 2, 2001. This meeting on " fishery and food sovereignty " constituted a space for exchange and reflection between artisanal fishers and a moment to prepare their participation in the World Forum on Food Sovereignty which gathered 400 people in the Havana from September 3 to 7, 2001. During the meeting, they had an opportunity to present and discuss propositions on the challenges for fishery in terms of food sovereignty, to share and confront their experiences and to facilitate dialogue and the elaboration of common actions and strategies between the fishing sector and other social actors who thereafter participated in the World Forum on Food Sovereignty (from September 3 to 7, 2001). The declaration of the meeting on"fishery and food sovereignty " is presented below.

An alliance with farmers :
A step in reversing the marginalisation of artisanal fishery

At the beginning of September 2001, Cuba constituted an important moment of meeting between farmers and fishworkers. For three days, about thirty people from fishers' organizations and NGOs of the fishery sector from Africa, Europe, South and North America met to reflect on the big challenges of artisanal fishery in the 21st century and to develop proposals at the international level. This meeting was convened by a group of people involved in this sector who deemed it important to provide a moment and locus for exchanges and the elaboration of proposals. As a reminder, in the fishing sector, two world organisations of fishers were born in October 2000, in Loctudy, in Brittany (France), at the time when the creation of a sole forum was expected (report 1: The Historical Review of the World Forum). The scism, which took place on the last day of the meeting, at the very moment when fish harvesters and workers were getting ready to celebrate the creation of a major world fishers' organization, has left hurt in the hearts and minds of the participants. It was therefore not so easy to initiate this process of exchange and meeting on the occasion of the World Forum on Food Sovereignty, which was organized by a dozen organizations from civil society. The opportunity to examine the question of fishery as part of the broader debate on food on the occasion of the World Forum constituted one of the motives to organise this event.

The meeting on "artisanal fishery and food sovereignty," gathering fishers and members of organizations supporting artisanal fishers, was an opportunity for very open discussions on present and future challenges facing artisanal fishery. The Havana declaration, written and approved on this occasion, constitutes an important contribution to defend and promote sustainable fishery at world level. It

insists on the role and place of fish workers and harvesters organizations, and ma inly the expression of a group of fisher citizens and of the civil society defending a more responsible approach to fishery, human communities and the management of seas and soft water.

In a second stage, this group participated in the World Forum on Food Sovereignty held in Havana from September 3 to 7. One of the main achievements of this Forum was the active participation of people representing fishers' organizations and the place of fishery in the debates. Fisheries are indeed often marginalized or completely forgotten in discussions on food. We talk a lot about agriculture and farmers' organizations, but fishery, the management of sea resources or soft waters are always belittled. In the Havana, it was not the case, the presence of about thirty people from the fishery sector out of 400 participants was even very much noticed. For the first time, farmers organizations and NGOs mobilised on food issues took into account and made alliance with fishers organizations which were there. It is a new historic fact. **To consider food, nutrition, the management of the natural resources, markets regulation while taking into account the issue of fishery is a new deal for many actors.**

DECLARATION AND AGREEMENT OF THE HAVANA, INTERNATIONAL MEETING ON ARTISANANL FISHING AND FOOD SOVEREIGNTY

Havana, Cuba, August 31, September 1 and 2, 2001

In the context of the World Forum on Food Sovereignty, artisanal fish harvesters and fishworkers, representing fishing communities and organizations from Africa, Europe, Latin America and North America as well as the Cuban Fishing Ministry, met in Havana.

Artisanal fish harversters, guardians of the fishing heritage of the world, stand up to affirm the dignity of the fight for a responsible and united world and propose an alliance with farmers, indigenous peoples, and civil society, so as to guarantee food sovereignty for all peoples of the earth.

For that reason:

They declare and commit themselves to:

- Food sovereignty
To exercise food sovereignty at local and regional level through the protection of fishery resources and to promote the use of fish and fishery resources exclusively for human consumption.

- Access to the fishery resources and establishment and protection of the reserve zone

The communities of artisanal fishers and their organizations will not on't give up their right to free access to fishery resources and demand the establishment and protection of a reserve zone for exclusive use of artisanal fishing.

- Ancestral or historical rights on the coastal area and inshore waters

Artisanal fishery organizations demand the recognition of their territorial rights in the coastal area and within inshore waters and reject any use of these areas affecting their territorial stability.

- Respect of the international commitments

Artisanal fishing communities and their organizations, in their respective State, work for the ratification and immediate implementation of the 1995 United Nations Agreements on High Sea Fishing, as well as for the implementation of chapter 17 of the Agenda 21 of the United Nations signed in 1992, related to the conservation of seas and oceans and the rights of coastal communities and artisanal fishing. They reject any Agreement and / or Treaty on industrial fishery concerning the cession of fishing rights to third States and the flying of Flags of Convenience in the Exclusive Economic Zone.

- Women's participation in artisanal fishing

The organizations of artisanal fish harversters recognize and favour gender parity in all activities of artisanal fishery, as well as the vital part they play in processing and commercializing products, and in preserving the fishing communities.

- Refusal of the privatization of fishery resources

The organizations of artisanal fishers reject any form of privatization of fishery resources, so that the latter would be considered not only as heritage of the nations but also as world heritage. The communities propose environmentally and socially sustainable fishery management regulated by the State, with direct participation of fishers organizations, and reject the establishment of private commercial patents on fishery resources.

- Sustainable aquaculture

Sustainable aquaculture and fish harvesting are possible as part of the contribution to food security and sovereignty. Fishing communities develop an alternative model to intensive industrial aquaculture, that is integrated in the traditional production systems. They reject the introduction and production of genetically modified organisms (GMOs).

- Alliances with other sectors of civil society

Fishery organizations will develop alliances with other sectors of civil society, such as the rural sector, indigenous communities and native peoples, consumers, environmentalists, scientists and unions, to guarantee food sovereignty thanks to the sustainable use of the wealth from the sea and earth collective heritage.

- Scientific research and artisanal fishing

Scientific research on fishery is frequently informed by political and economic power exercised by industrial corporations and governments. It is necessary to generate new relationships between science, scientists and fishers' communities, with special emphasis on social sciences, so that the knowledge of fishery communities is valued and that their cultural expression is considered. In this way, it will be possible to elaborate new public policies reflecting communities' approach on development.

- Professionalization

In order to permit their recognition, the profesionalization of artisanal fishers requires joint implementation of education and training policies so as to acknowledge and value the know-how and cultural, economic and social identity of artisanal fishers.

- Campaigns of diffusion and denounciation

Artisanal fishery organizations will launch national and international campaigns denouncing national and international policies affecting fishing communities as well as the threats that fishing industrial and acquaculture activities bear on food security and sovereignty. They will promote artisanal products as first quality foodstuffs, the defense of the environment, the conservation of resources and the securing obtention of fair prices in a transparent local and regional market.

- Trade and markets

Artisanal fishing communities denounce and reject the subsidy mechanisms entailing fishing overcapacity, affecting the interests of artisanal fishworkers and disturbing local, regional and international markets. They demand immediate change in subsidies policies so as to dedicate public funds to improving fishers life conditions.

They reject the actions of the WTO, World Bank, International Monetary Fund and other organizations, non-regulated international trade and structural adjustments of national economies that only serve the interests of big international corporations and free movement of capital, while impeding peoples sovereignty and peoples rights to food.

- Fish Harversters and Agriculture

Artisanal fish harversters, small farmers, indigenous communities and native peoples are food producers and have their own culture. Faced with the loss of their rights, the development of neoliberal globalization, food insecurity and the deterioration of the environment, fishery organizations will strive to establish strategies and actions at local, national, regional and international levels for the full respect and entrenchment of their rights.

Contacts:

ADEPA
BP 56
Abidjan 17
COTE D'IVOIRE
Tel : 225 20 22 75 88
Fax : 225 20 22 75 92
E-mail : k.demba@africaonline.co.ci

Collectif Pêche et Développement
1, avenue de la Marne
56100 Lorient
FRANCE
Tel : +33 (0)2-97-84-05-87
Fax : +33 (0)2-97-64-24-57
E-mail : peche.dev@wanadoo.fr
http://www.peche-dev.org

CONAPACH
Chilean National Confederation of Artisanal Fishers
Monte Alegre 398 Valparaiso
CHILE
Tél : 56 32 23 26 02
Fax : 56 32 23 26 02
E-mail : pescart@unete.cl

CREDETIP
Research Centre for the Development of Intermediary Technologies
BP 3916
Dakar
SENEGAL
Tél : 221 8 21 94 62
Fax : 221 8 21 94 63
E-mail : credetip@sentoo.sn

ICSF
Internation Collective in Support of Fishworkers
27, college road
Chennai 600 006
INDIA
Tél : 91 44 827 53 03
Fax : 91 44 825 44 57
http://www.samudra.org

FPH
38, rue Saint Sabin
75011 Paris
FRANCE

Tél : 01 43 14 75 75
Fax : 01 43 14 75 99
E-mail : pvuarin@fph.fr
http://www.alliance21.org
http://www.apm-monde.com

RITIMO
21, ter rue Voltaire
75011 Paris
FRANCE
Tel : 33 1 43 71 22 22
Fax : 33 1 44 64 74 55
E-mail : ritimo.voltaire@globenet.org

Other ressources

APM – Farming Agricultures, Societies and Globalisation
http://www.zooide.com/apm/htm/index2.html

CCFD Group on Sea
http://www.ccfd.asso.fr

World Forum of Fish Harvesterrs and Fishworkers (former page)
http://www.peche-dev.org/forum.htm

World Forum of Fisherpeoples,
http://www.wffp.org

Web Site of the FAO on fishery
http://www.fao.org/fi/

Economie et humanisme
http://www.economie-humanisme.org/

The Alliance for a Responsible, Plural and United World

Working together towards the challenges of the 21th century

Ever since the late eighties of the 20th century, numerous initiatives have been but forward from different regions of the world and extremely diverse contexts. Different social actors were thus put in motion with the aim of organising a vast worldwide process seeking to explore values, proposals and regulations capable of overcoming the modern challenges humanity is faced with.

A large number of thematic, collegial and continental meetings were organised in the early nineties, a process which led, in 1993, to the drafting of the *Platform for a Responsible and United World*.

Regional groups were set up, international professional networks and thematic networks on the fundamental issues of our era were developed: the Alliance was created. It is financially and technically supported by the Charles Léopold Mayer Foundation for the progress of Humankind (FPH), among others.

The Alliance is focussed on inventing new forms of collective action on both a local and global scale, with the aim of shaping together the future of an increasingly complex and interdependent world.

The challenge of the Alliance is to actively support unity in diversity by asserting our societies' capability to understand and appreciate the complexity of situations, the interdependence of problems and the diversity and legitimacy of geo-cultural, social and professional perspectives.

The Alliance, as a space of discussion, reflection and proposals, is built around three main orientations:

Local groups aiming to bring people of a community, a region, a country or a continent together by looking at the realities and issues of their own societies. This is the **geo-cultural approach**. It reflects the diversity of places and cultures.

Groups of socio-professional actors wishing to provoke dialogue and mobilisation within a given social sector or profession (youth, peasants, scientists, local representatives, etc.). This is the **collegial approach**. It reflects the diversity of social and professional milieus, their concerns and responsibilities towards society and the challenges of today's world.

Thematic workshops seeking to create reflection groups centred around the major issues of our common future (sustainable water management, regional integration and globalisation, financial markets, art and society, etc.). This is the thematic approach. It reflects the diverse challenges humanity is faced with in the 21st century. Thematic workshops are organised into four areas: Values

and Culture, Economy and Society, Governance and Citizenship, Humanity and the Biosphere.

Seeking both to draw on the richness of materials and experiences gathered by these reflection groups whilst networking with other citizen dynamics with a similar focus, the Alliance fixed itself the objective of obtaining collectively developed, concrete proposals. The following meetings were thus organised:

- international meetings, for each thematic workshop and each college,

- synchronized continental assemblies (Africa, Americas, Asia, Europe) and a regional meeting in the Arab world (Lebanon) in June 2001.

- a Citizen World Assembly, held in December 2001 in Lille, France, bringing 400 participants together from around the world.

These meetings together contributed to the drafting of some sixty *Proposal Papers for the 20th century* and a *Charter of Human Responsibilities*, published in several languages in different countries.

The Alliance has been involved in a process of disseminating and developing these outcomes since the beginning of 2002. Networks are expanding, branching out and their work themes are becoming increasingly transversal. They also strengthen links with other approaches aiming to create an alternative globalisation.

For further information, please visit the alliance website at www.alliance21.org, where the history of the Alliance, the challenges it is engaged in and the workshops and discussion forums being held can be viewed in three languages (French, English and Spanish).

E-mail: info@alliance21.org

The proposal papers on the internet

Whether in their provisional or definitive form, all the proposal papers and their corresponding translations can be accessed on the website of the Alliance for a Responsible, Plural and United World, at:

http://www.alliance21.org/fr/proposals

Themes available:

Values, education, cultures, art and the sciences

Teachers and education – Education to an active and responsible citizenship – The alliance and the media – Art and cultural identity in building a united world – Women – Youth action and proposals for social change – An intercultural cultural diversity in the era of globalisation – Proposals of the inter-religious college – War, genocide, ...restoring humanity in human beings faced by extreme situations – Thinking through university reform – Social control of the scientific production system – Information society, knowledge society: benefiting from change – time and sustainable development

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E-mail: ccamp@apu.cbc.org.pe

Centro Bartolomé de las Casas
Pampa de la Alianza 465
Cusco – Peru

Tel +51 84 236494
+51 84 232544
Fax +51 84 238255

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Fax: + 961 1 703 630

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Pipal Tree
139/7 Domlur Layout,
Bangalore 560071 - India

Tel: +91 80 556 44 36
Fax: +91 80 555 10 86

Chinese edition:
Yanjing group (Beijing)

GE Oliver (Haibin)
E-mail: ollie@mail.263.net.cn

Room 521, Goldenland Bldg.
#32 Liangmahe Road, Chaoyang District
Beijing, P.R. China
Postal Code 100016

Fax: +86 10 64643417