

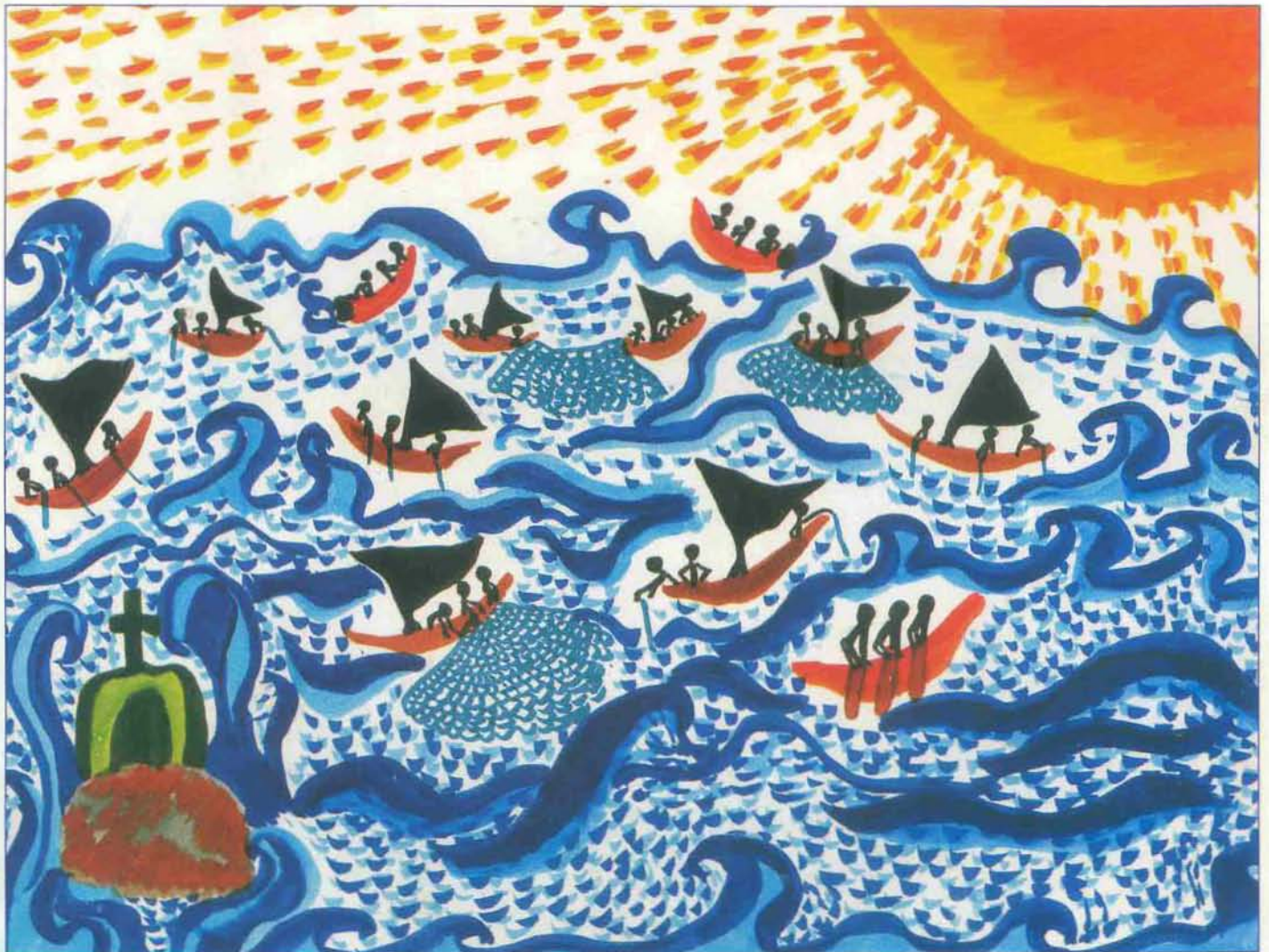
No. 16

November 1996

SAMUDRA

REPORT

INTERNATIONAL COLLECTIVE IN SUPPORT OF FISHWORKERS



A DECADE of ICSF

EIAs in Brazil

WOMEN in FISHERIES in El Salvador

FISH FARMING in sub-SAHARAN AFRICA

SOUTH ASIAN WORKSHOP on CAM

SENEGALISE VIEW of EU AGREEMENTS

FOLLOW-UP on MARINE STEWARDSHIP COUNCIL

NEWS ROUND-UP

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Comment

A toast to the coast

Close to a fourth of the world's total marine fish production comes from the artisanal and small-scale sector; and almost the entirety of this catch is taken from the coastal waters. Two-thirds of the total marine fish production comprises stocks which pass the first and most vulnerable stages of their life-cycles in coastal areas. Not surprisingly, therefore, the health of the coastal marine environment is inextricably linked to the livelihood of over 120 million people who are directly or indirectly dependent on this sector.

Normally, negative externalities from fisheries to other sectors are insignificant, but the reverse process—from non-fishing activities to fisheries—is formidable. Although fisheries do not pose any threat to agriculture or industry, the environmental impact of agricultural and industrial activities on fish habitats can often be devastating. Likewise, destructive and non-selective fishing methods and practices can also have a negative impact on fish habitats.

In many low-income food-deficit countries, the fisheries sector is usually the employer of last resort. Hence, the degradation of fish habitats is of even greater concern to fishing communities in these countries. This fact further underscores the critical importance of integrating fisheries into coastal area management.

But problems abound—from the definition of the coastal zone' to the coexistence of various forms of property regimes (private property, state property and common property). These only compound the difficulty in prescribing effective measures for coastal management. The variety of problems and the specificities of the coastal zone accentuate the need for a holistic approach to coastal area management.

However, the attempts so far have been, at best, compartmentalized and are inadequate to tackle the task. Developing, integrating and implementing a common framework for coastal management is still a remote goal. The recent South Asian Workshop on Fisheries and Coastal Area Management, organized by ICSF (see pages 40 and 44) threw up interesting proposals for better management of the coastal zone. The Workshop sought to define the coastal zone by recognizing the complexity, diversity and fragility of coastal ecosystems, and their contribution to sustaining livelihoods. Participants felt that the right to livelihood, based on human and ecological values, should be given priority over the right to earn socially irresponsible profits.

Principles of common property and community ownership, as well as decentralized and participatory regimes, ought to be part of coastal area management. The principle that the "polluter must pay" should be strictly adopted. Environment and social impact analyses ought to be undertaken before projects are sanctioned; and public review processes must be made mandatory. Without some sort of coherence among the relevant legislative measures meant to manage natural resources, precious little will be achieved. Equally vital is the creation of conflict resolution mechanisms. By addressing these issues, the Workshop thus provided "some firm foundation to construct future partnerships and regional linkages for the sustainable use of coastal zones and for promoting the livelihood rights of coastal communities."

In the final analysis, however, coastal zone management is not a problem confined to coastal communities; it reflects the anomalies inherent in the utilization of natural resources. The coastal zone is a sign of what we do to our environment and to our fellow-beings. If, as the Vietnamese say, "the sea begins in the mountains", the status of the coastal zone certainly reveals a sign of what we have done with our resources, both in the coast and in the hinterland.

Unless there are major attempts to change our outlook on resource utilization, and unless there are serious efforts to clearly define our rights and responsibilities in relation to such resource utilization, threats to coastal resources and coastal communities will continue unabated. In such a context, effective management of the coastal zone will remain just a distant dream.



The first decade of ICSF

Ten years ago, on 25 November 1986, a diverse group of anthropologists, biologists, boatbuilders, community organizers, economists, social scientists and sociologists from 16 countries, gathered in the small Indian city of Trivandrum. Their aim: the formation of the International Collective in Support of Fishworkers (ICSF).

That act was far from impulsive—it was the direct outcome of the historic, first-ever international Conference of Fishworkers and their Supporters, held in Rome in 1984, as a parallel meet to the FAO's World Conference on Fisheries Management and Development.

The founding members formed ICSF after "seeing the emerging needs for information, for training, for various kinds of support... to give form to the need for more international exchange and common action in support of the cause of fishworkers in all the regions". The term 'collective' was deliberately chosen to stress the non-hierarchical style of functioning and to emphasize transparency, flexibility and informality among the members.

It was in their individual capacities that the founding members took up the challenge to commit their time and experience to ICSF's programmes. Initially, the mandate was humble enough—to keep the organization going for at least three years.

At the 1990 Bangkok Conference, ICSF reviewed the four years of its existence—and decided to continue the organization's functioning by further streamlining programmes. The major emphasis has always been to defend the rights of artisanal and small-scale fishworkers to a better life and livelihood from fisheries resources, within the framework of the sustainable utilization of such resources.

The post-Bangkok period threw up a range of projects on, for instance, the implications of North-South fisheries agreements; the viability of maritime zoning arrangements; credit and insurance systems; and the ecological, social and economic aspects of fishing gear selectively.

One of ICSF's earliest campaigns was against the inequitable aspects of fisheries agreements between Senegal and the European Union. The campaign has since attracted several European NGOs, under the umbrella of the Coalition for Fair Fisheries Agreements (CFFA), and forced the incorporation of some demand of Senegalese fishworkers.

In the last quinquennium, ICSF intensified its campaigns. A task force looked into the conditions of work on industrial fishing vessels. ICSF also

undertook several exchange programmes to strengthen fishworkers' organizations and to transfer more environment-friendly technologies.

By actively associating with the preparatory and follow-up processes of the UN Conference on Environment and Development (UNCED), ICSF entered a new phase after June 1992. This included influencing the UN Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks, as well as the FAO's Code of Conduct for Responsible Fisheries, to highlight the importance of artisanal and small-scale fishing.

Samudra Report, an important output of ICSF, is published thrice a year, in English, French and Spanish, to disseminate information on a wide variety of topics. It has also served as a forum for critical debates on, for instance, issues straddling environmental and fisheries interests.

A decade after the formation of ICSF, one thing can certainly be said: global resource depletion and fishing overcapacity may have hampered the livelihood of artisanal and small-scale fishworkers, but many things have, in fact, changed for the better for fishworker communities, especially in the Third World. Not only are they more often consulted, but their worldview is also being better recognized by national governments, bilateral and multilateral agencies. The industrial model of development in fisheries is increasingly being challenged, while the role of traditional knowledge in fisheries management is being accorded a greater status.

ICSF's activities have been synergistic and the overall impact, quite positive. However, a great deal remains to be done: more contacts with fishworkers' organizations in several countries where ICSF does not yet have a presence; and, in the realm of fisheries management, steps to ensure a better future for fishworker communities and greater responsibility for fisheries resources.

For ICSF, it is a matter of pride that the world has more or less recognized artisanal and small-scale fishing and that special way of life. What remains to be done is to consolidate these gains through better programmes for resource management with community participation. Equally, if not more, important is to strive for a gender perspective on these issues.

One decade gone, a more ten years, but several nautical miles to go and many oceans to cross...

This piece has been written by V. Vivekanandan, Co-ordinator, Animation Team, ICSF

The view from the other side

As examples from Brazil show, EIAs often ignore the views of artisanal fishing communities

In Brazil, the Amazonian region represents the last frontier for coastal and inland fisheries. Fish represents the most important source of protein and income for the riverine population in the region. Brazil has the highest per capita fish consumption, equivalent to the consumption in Japan.

Traditional fishermen, however, are today confronted with problems created by the construction of large dams, water pollution by the mercury used in gold mining, the invasion of lakes and rivers by commercial or industrial fishing boats from urban fishing harbours, limits to access to resources through the establishment of large farms along biologically rich lakes and lagoons and, finally, by the establishment of national parks in those very areas in which they used to live.

All these factors are creating serious conflicts among local fishermen, big landowners, commercial/industrial fishing units and state agencies responsible for dam construction and environmental protection.

Since the 1960s, the entire coastal region of Brazil has been suffering from an intensive and destructive occupation of its ecosystems, particularly the estuaries, lagoons, coral reefs and mangroves, where most of the artisanal fishermen live and work.

This rapid occupation of the coastline became more intensive during the 'Brazilian Economic Miracle', during the military regime in the 1970s, when industrialization and urbanization along the coast became the most important socioeconomic processes. Industrial pollution, particularly the dumping of sugar cane waste from alcohol

production, was responsible for the biological impoverishment of estuaries and coastal lagoons.

During this period, artisanal fisheries were responsible for more than half of the fish caught, but the so-called 'modernization of fisheries', based on industrial fishing and promoted by FAO, largely disregarded the essential contribution of artisanal fisheries for food production and employment in coastal villages and towns. Many social conflicts occurred between artisanal and industrial fisheries, as large shrimp fishing destroyed the nets of small-scale fishermen.

As a result of this, fish resources were largely depleted by profit-eager industrial fishing companies. The marginalization of small-scale fishermen became more serious when many beaches came to be privatized for the exclusive use of tourist cottages and condominiums.

In the 1980s, to manage the use of the coastal area, the Federal Government started a Coastal Management Programme, institutionalized in 1988 through a law. From the start, however, the whole exercise became extremely bureaucratized, as coastal management was restricted to creating different maps on the land potential and constraints, based on sophisticated remote sensing and GIS techniques.

Wasted years

Consulting firms, interested only in 'selling emerging technologies of remote sensing techniques, were the bases for the initial exercises. Over a dozen years were spent in producing overlays and maps of different coastal states, but until now, not a single coastal management plan has been actually implemented.

As a result, ecologically and socially, the situation in the coastal ecosystems became critical. A new development is taking place in the northeastern state of Ceara, known for its beautiful beaches, growing tourism and lobster fishing (by both artisanal and industrial fishermen). An innovative and grass-roots experiment in coastal management has been undertaken by local associations of fishermen, assisted by a small NGO and a local university.

Instead of wasting too much time in searching *for* information and maps, they have established a Coastal Forum (Forum do Litoral) where negotiations occur among different groups on the use of coastal land and marine resources.

The Forum's activities lie in two areas. The first is a critical evaluation of a large government project called Prodetur, financed by the World Bank. The government's preliminary project proposal does not take into consideration the importance of the coastal fishing communities or the impact on these human cultures of the extensive tourist development projects along the coast.

If these local communities are not ready for an increase in tourism-related activities, the whole traditional production system based on small-scale fisheries, agriculture and handicraft will

be severely damaged. Some communities are organizing their own co-operatives to provide tourism services, while controlling the sale of their beach property to tourists. Through negotiations with the government and the World Bank, local associations are preparing themselves for the impact of the expansion of tourism. They thus hope to take advantage of the eventual benefits and restrict the negative impacts.

The second activity of the Forum comprises negotiations on managing the very lucrative lobster fishery, which employs around 12,000 fishermen in Ceara State. Fishermen are worried about the rapid decline of the lobster catch in the last few years.

After long negotiations between local fishermen's organizations, NGOs, universities, the fishing industry and IBAMA—the Federal Environmental Agency—plan for the management of lobster fishery was established in 1995. The plan put severe restrictions on the fishing of lobster juveniles by artisanal and industrial fishermen and a complete ban on diving for lobster. The artisanal fishermen's associations bought a boat to be used for the enforcement of fishing regulations.

Good results

This grass-roots coastal management scheme, based on extensive negotiations

with all users, is producing positive results, in contrast to the government's coastal management plan, which is based on long years of producing maps and ineffective top-down approaches.

Also revealing is the impact on small-scale fishing communities of a large irrigation scheme on the floodplain of the Sao Francisco River, in Marituba, a 'varzea' (a floodplain near the mouth of the river), in the coastal plain of Alagoas-Sergipe, in the northeast of Brazil. It covers about 200 sq km of marshes, resulting from periodic flooding of the river.

The swamp is crossed by the Barreiras Channel (about 20 km long) that connects the Sao Francisco River to Marituba River and Lago do Peixe. This natural channel plays an important role, as many species of fish migrate through it to reach the lakes inside the marsh. The most important lake is Lago dos Peixes, known for its abundant fish resources. The area is mainly marshy and contains several species of palm trees used by the local population for building thatched roof houses, for making traditional medicines and producing food. The Varzea da Marituba also contains important habitats for several species of fish, birds and small wild animals.

In the floodplain are two villages—Marituba de Cima and Marituba do Peixe, containing around 270 hamlets and 1,200 inhabitants who live mainly on small-scale fishing or agriculture, and handicraft. Fish and other products are sold in the nearby city of Penedo. The territory of the villages is now surrounded by sugar cane plantations belonging to a nearby distillery.

Field work undertaken by the Federal University of Alagoas has discovered that over 48 different species (including surubim, piau, cara and several species of shrimp) have been identified, and consumed and sold by the fishermen. The local fishermen have extensive and precise knowledge of the different habitats of the floodplain. Over 40 different habitats are known by the 'varzeiros' (inhabitants of the varzea) and these are exploited for fishing, depending

on the season and fish-eating habits. About 18 different fishing and fish management techniques are used by local fishermen, including a period of rest, when no fishing is carried out in the lakes and the use of 'brush parks'—bundles of branches placed on the bottom of the lagoon to attract fish, similar to the West African 'akaja'.

Two decades ago, the floodplain and their inhabitants started to undergo important changes. The first great set of impacts occurred in the 1960s, when important changes took place in the hydrological regime of the floodplain due to the construction of two large hydroelectric dams (Paulo Afonso and Sobradinho), hundreds of km upriver. The dams have regulated the flow of the river, and now fewer fish enter the varzeas than during the previous flooding period.

The second set of changes has been caused by the expansion of sugar cane plantations during the 1970s, as part of the government programme for the production of alcohol to be used as car fuel. A local sugar cane distillery bought up almost all the available land, and the sugar plantation now surrounds the lakes in the varzea. Intensive use of fertilizers and herbicides has a negative impact on the fish stocks.

The last remaining areas of forest were cut for expanding sugar cane plantations. As a result, many important habitats of game birds were lost, depriving peasants and fishermen of important sources of protein. Also, many fruit and palm trees, from which fibre was extracted for handicraft, have been lost. It is now difficult to find a tree suitable for making the traditional fishing canoe.

New transformation

The third and most important threat to the varzea is from CODEVASF, a government agricultural development agency which plans to transform the entire varzea into irrigated rice fields. This state company has already converted several larger swamps of the Sao Francisco River into rice growing projects. In the already established projects, there has been a complete transformation of the swamps and the entire hydrological regime has changed.

In the project called Betume (involving 10,000 ha), CODEVASF has blocked the waterways to the lagoons and stopped fish migration. As a result fish stocks diminished and local fishermen have found their livelihood affected. Apart from these serious environmental impacts, local populations have also suffered from the conversion of the wetlands.

Having lost their land, they have been forced to live in the outskirts of the project area. They were temporarily employed in the construction of the irrigated fields, but seldom received a plot in the project area. Rice plots with irrigation infrastructure were given to the better-off farmers, who were usually outsiders.

In 1985, CODEVASF decided to start a new project in the Marituba swamp that would lead to a complete transformation of the last existing varzea of Sao Francisco River, with the disruption of the fisheries and the hydrological regime. The peasants/fishermen would be resettled elsewhere.

The Environmental Impact Assessment (EIA), funded by the CODEVASF, argues that yields from irrigated rice plots would be higher than from the traditional planting methods of the villagers. Also, the scheme would create a large number of jobs. The EIA claims that there are no endangered species in the area and that the income people would get from irrigated rice planting will be higher than from fishing and handicraft. Overall, claims the EIA, the project has a positive regional impact.

In 1988, the University of Sao Paulo, in co-operation with the Federal University of Alagoas, started a participatory and interdisciplinary research project involving ecologists, biologists, anthropologists, historians and agronomists, and based on the ethnoscientific approach.

This project has shown that the conservation of this last remaining floodplain and its value for the livelihood of the inhabitants was higher than the benefits that might be generated by the transformation of the floodplain. It became also clear that the state company

only considered as 'productive jobs' those generated by the irrigated rice projects and not the jobs already existing through traditional activities. The varzeiros would lose their sources of income and would not receive plots in the modern rice project these were given to farmers outside the area, as had already occurred in the other irrigated schemes of the company. Very often, the choice of farmers for the project is made on a political basis, with preference given to those nominated by local or regional politicians. Another conclusion of the research is that the whole hydrological system of the varzea would be damaged, and traditional fishing would disappear, along with the important endangered species found during the research period.

As result of this research, at the public hearing to evaluate the EIA for the project, in February 1991 in the state capital of Maceio, an alliance of environmental NGOs, scientists and Marituba residents was set up. During the public hearing itself, the varzeiros made clear their disapproval of the project, but the political forces in support of the project were very strong. Thus the EIA was not rejected by the state authorities. However, new complementary studies were requested.

From this experience, it was clear that the criteria for costs and benefits were different for the different social groups involved. Since non-governmental funds and research expertise was made available, the point of view of the villagers, supported by ethnoscientific knowledge, was made clear in the public hearing. EIAs, funded by those who are responsible for the project, are usually biased against the interests of the local populations whose livelihood will be affected. Local populations and their organizations should receive specific public funds to implement their own EIAs.

Protected areas

The establishment of protected areas in coastal regions affects small-scale fishing communities. Bra-Al has around four per cent of its territory within different types of protected areas, mainly national parks, ecological stations and national forests. These correspond to around 380,000 sq km, an area larger than many European countries.

Most of the environmentally protected areas are located in Amazonia, covering around 13 per cent of the total Amazonian region. In addition, there are some protected marine and coastal areas along the coast of the Atlantic and Amazonian forests, covering adjacent coastal area ecosystems such as mangroves, estuaries and coral reefs, used by artisanal fishermen.

According to the Brazilian legislation on protected areas, which follows the model of the Yellowstone National Park in the us, people living inside have to be resettled elsewhere. This imported model has had a catastrophic impact on the livelihood of thousands of small-scale fishermen and other small producers who have lived in the area for many generations and who, due to their mode of production, were able to protect the forests and adjacent seas.

These traditional communities, often living in isolated areas, depend almost exclusively on the use of natural resources. They have a complex relationship with the natural environment which is not just of an economic nature.

Values, traditions and cultural perceptions built over centuries, play an essential role in defining their relationship with the environment and natural resources. These traditional peoples have a deep knowledge of the environment where they live and of the natural

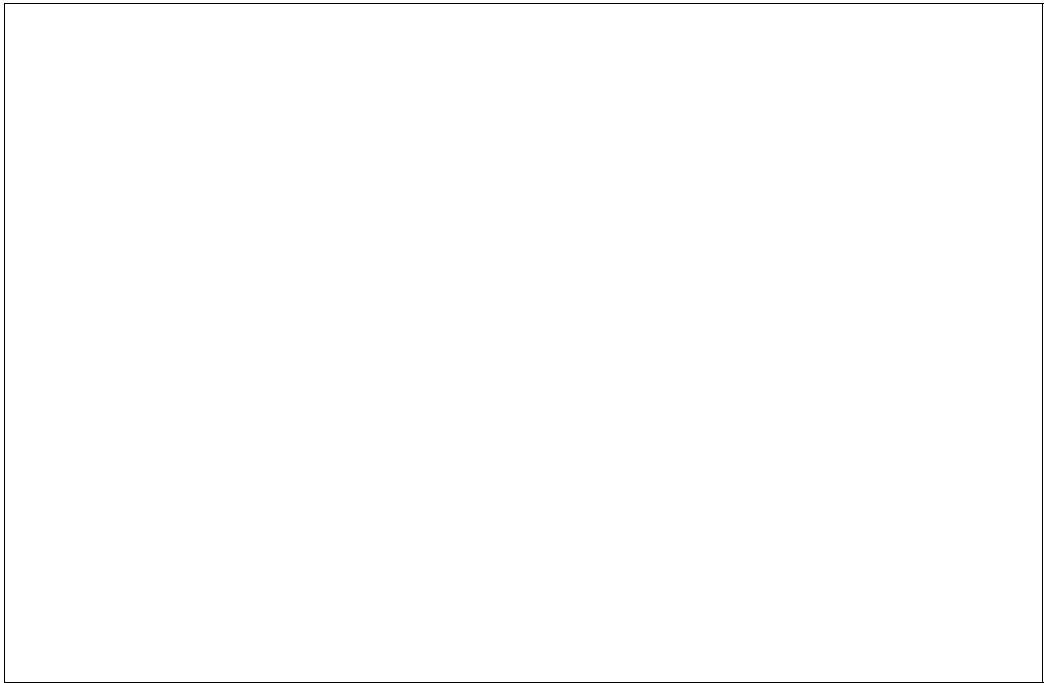
resources, and have developed, in coastal areas, knowledge-intensive management schemes.

Very often, when the government establishes a protected area, not only are the interests of local populations ignored, but the traditional territory of these people is also taken away, to be transformed into protected areas.

In coastal areas, where the pressure on ecosystems by land developers and speculators is high, leading also to the expropriation of the beaches of fishermen, the establishment of protected areas may actually hinder this process and, in the beginning, may benefit traditional fishermen. However, the park administration soon starts prohibiting most of the traditional activities of the inhabitants. Their situation then becomes unbearable, ultimately leading the communities to abandon the land of their ancestors.

Social revolt

The establishment of strict environmental protection units in large coastal areas have led local communities to a situation of social revolt, as the conditions for their subsistence are abruptly suppressed. As a consequence, the dwellers consider the newly established areas as nobody's land and start to overuse natural resources and to fish illegally, practices that they had refrained from earlier.



In addition, when these traditional communities move outside the park area, other users, such as tourists, poachers, mining and sawmill operators, may act more freely, leading to the degradation of the coastal area. Some conservationists may argue that, without uninhabited protected areas, biodiversity may disappear. However, in tropical countries, it is becoming clear that biodiversity is also protected—and even enhanced—by traditional practices.

It is becoming increasingly clear that this imported national park model, bereft of traditional dwellers, is becoming a failure, and is not achieving an adequate level of conservation. A new model of conservation has to be devised and implemented, making the traditional knowledge and management schemes of local communities the cornerstone of an effective conservation that also benefits traditional people.

In this sense, a new model of protected areas may lead not only to effective conservation but to an amelioration of the living standard of thousands of small-scale fishermen and producers. A new form of management, negotiated with the local dwellers, inside and outside the protected area, could be the basis of actions to protect simultaneously the ecosystems and the diversity of cultures of coastal dwellers in tropical countries. In the last few years, however,

local fishermen in Brazil are getting organized with the assistance of the Catholic Church (Pastoral of Fishermen) and the recently established MONAPE—National Movement of Fishermen.

In the beginning, local fishing communities started closing the entrance of the most important lakes to the commercial/industrial fishing boats. These actions led to violent conflicts. They attracted the attention of socio-environmental organizations which then started fisheries management schemes involving all the actors, particularly local fishing communities (as in Lago Grande de Monte Alegre in the middle Amazon).

The basic idea was to create areas where access to resources is restricted to local fishermen, while retaining other areas for commercial/industrial fisheries. In these restricted areas, local fishermen agreed to regulate their fishing activities so as to achieve a socially and ecologically optimal sustainable yield, applying the same principles that orient the extractive rubber tapping industry.

Ecological station

One example of these efforts is the establishment of the Mamiraua Ecological Station in a wetland area covering one million hectares along the Japura and Solimoes River, where 4,500 people live by

fishing and harvesting forest products. According to existing legislation, all the 50 small communities should be resettled outside this protected area. However, with the assistance of local organizations and NGOs, including the World Wide Fund for Nature, a conservation project was established in co-operation with the fishing communities. The communities themselves organized management institutions that regulate fishing, particularly during the dry season when several lakes are formed.

The management plan delineates six different types of lakes, some of them being considered as exclusive conservation areas, some left for subsistence fishing and others reserved for commercial fishing, also for upcountry commercial boats, provided that rules (particularly those banning the use of some predatory nets) are respected.

Overall, however, it is clear that not only ill-devised development projects but also ill-conceived protected areas may lead to the degradation of ecosystems and their natural resources, as well as to the increasing impoverishment of local populations who should actually be benefiting from these activities. It is also clear that local populations, particularly the traditional dwellers, should be involved, from the outset, in the planning of these projects, including the establishment of protected areas. This might appear contradictory, as national parks are supposed to protect biodiversity. In many cases, however, coastal protected areas, based on the imported model of the Yellowstone National Park, may lead to opposite results. These efforts lack the people's support, particularly of those directly affected by the resettlement measures or by the prohibition of traditional activities.

From these examples, it appears that protected areas should be established only after an EIA is made, taking as a priority the interests, knowledge and traditional management schemes of local dwellers. In any model, these should be actively incorporated in the management plans. The state should give the material and technical means to local communities to undertake their own environmental and social impact analyses.

Clearly, these examples reveal that costs and benefits of large projects, as stated in official environmental impact reports, very often do not take into account the views and interests of local fishermen. Presenting their own conclusions during public hearings will enable local communities to negotiate with the state and other social actors to arrive at a better solution to their problems.

This article is by Antonio Carlos Diegues, Scientific Director of NUPAUB: Research Centre for Wetlands Conservation, University of Sao Paulo, Brazil and a member of ICSF

Mangrove protection

Fact or fiction?**The control of shrimp exports from Thailand is based on considerations not purely environmental**

The US government recently lifted the ban on wild shrimps imported from Thailand. The ban had been in force since May 1995, consequent to the Earth Island Institute winning a lawsuit against the US government, on the ground that Thailand lacks the same measures that the US has to conserve sea turtles.

But now the game seems to be over and wild shrimps from Thailand can freely access US markets. It appears that the Thai and US governments are cheating the conservationists. There are about 30,000 trawlers operating in Thai waters, but only 2,000 vessels will be equipped with Turtle Excluder Devices (TEDs), as these are the ones which are supposed to catch shrimps. In fact, the trawler fishery in Thailand has never been separated into different sectors catching shrimps and demersal fish species. The fishermen say they use the same trawl net to catch both fish and shrimp. Depending on when fishing is done, shrimps can be caught at night and fishes during the day.

In contrast to Western nations like, say, Australia, Thai shrimp and fish trawlers are extremely different because shrimping boats consider fish as by-catch, and so their nets are actually designed to avoid trapping fish.

Wild shrimps reside on the seabed near the shore, which is also the habitat of sea turtles. As a result, TEDs are needed so as to release the turtle by-catch. However, fish trawlers may not need them, as they catch in the high seas. In the West, fish trawlers are often as big as floating fishmeal factories.

That means tens of thousands of tonnes of Thai wild shrimps exported to the US yearly come from those 30,000 trawlers, not from the 2,000 shrimping boats, as

claimed by Thai officials. Thus, sea turtles and other marine species in Thai waters are in danger, whether the trawlers are equipped with TEDs or not. It is a fact that trawlers always violate the fishery law that limits the three-km offshore area as a trawler-free zone. Thai fishery officials even inform the US officials that this law is a tough measure to protect sea turtles and their nesting grounds.

But, indeed, it has never been successfully enforced. The US officials too seem to regard the magic TEDs as an absolute solution to the problem of sea turtle conservation in Thailand. Recently, they checked about 441 trawlers and found that 370 had attached TEDs to their trawl nets. This observation, however, was made at the fishing ports, but whether the fishermen will use the TEDs or not, once out at sea, is another issue.

Eventually, the embargo on Thai wild shrimps was simply lifted. According to us diplomats, the US government is likely to hesitate in imposing a ban on Thai shrimp exports. It was only the ruling of the court that made it enforce the ban. It is almost certain that once TEDs are in place, the US administration will never raise more questions.

Chareon Pokphan, a large aquaculture group in Thailand, says that only two things in the world can ruin Thai shrimp farming—trade sanctions and environmental sanctions. These are imminent.

Taxes raised

Next January the European Union (EU) will raise the import tax on agricultural products from Thailand. The EU's real target is farmed shrimps from Thailand, which is notorious as a destroyer of mangrove forests. Currently, farmed

shrimps from Thailand exported to the EU attract a tax of around five per cent, the same as in Ecuador and Indonesia.

But next year, this will rise by 10 percent and then, over the next three years, by 15 per cent. This measure will ensure that the price of farmed shrimps in Thailand drops immediately by 30 per cent. To counter the EU attack, the aquaculture business group hired a recognized marine biologist to conduct research to rebut the EU accusation.

According to the research, 80 per cent of shrimp farming in Thailand employs the intensive method, using small areas to produce large quantities of shrimp. By feeding the shrimps with high-quality *food* and antibiotics, and by pumping fresh air into the pond around the clock, a one-acre size pond can produce, in just 100 days, tonnes of marketable-sized shrimps.

If 80 per cent of shrimp farms in Thailand are intensively cultivated, then only 20 per cent of the ponds invade mangrove forests. These use the traditional method or extensive system which pumps sea water into the ponds for six months or more, until the eggs of shrimps and fishes grow naturally, before being harvested.

The traditional aquaculture system is a shifting cultivation in mangrove forests, where fishermen slash the forests, dig

ponds and move on to other plots, before reversing the process. In fact, the traditional system is subsistence-oriented and self-sustaining, as the fishermen raise shrimps during the dry season, when the soil becomes saline.

But when the rains come, the fresh water pushes salt water away, so that the fishermen can grow rice. Of course, the ponds and paddy fields are in the mangrove area but on the higher ground covered by creepers rather than mangroves.

The boycott of farmed shrimps from Thailand will only encourage other nations to destroy mangrove forests. Once Thai shrimps are absent from the world market, the demand will rise and encourage other shrimp-exporting nations to produce more shrimps to fill the demand-supply gap.

Since a great deal of shrimp farms in large shrimp-exporting countries, such as Ecuador and Indonesia, still use extensive aquaculture, where productivity is low and reliance on land is the norm, increasing production means that mangrove forests will be extensively devastated.

Trespassing

The problem, however, is that shrimp culture, regardless of farming systems, encroaches on mangrove forests, since

trespassing the forests costs less than buying paddy fields or rubber plantations to create the ponds.

Vast areas of forests can be got by paying off corrupt officials. The encroachers know that raising shrimps in mangroves is unsustainable: after three crops, the ponds will get totally polluted. But who cares, as long as more and more ponds can be dug in the forests. Last August, the Forestry Department of Thailand revoked logging concessions in the mangrove forests.

About 600,000 acres of concession areas have been closed and redefined as a conservation zone. However, the logging ban is irrelevant in protecting the mangroves from invasion of shrimp farms, as very few concession areas are converted, compared to upcountry concession areas which are defined as economic or even conservation zones. In these areas, over 300,000 acres have been illegally converted into shrimp ponds.

Various measures of the Thai government to protect mangrove forests and control pollutants from shrimp farming are just making things look good, and are fostering shrimp exports, but the condition of mangrove forests in Thailand has not really improved. ¶

This piece has been sent by Alfredo Quarto, Co-Director of the Mangrove Action Project, Seattle, us, who obtained it from a communication from an independent source in Thailand

The tattered net of statistics

Data is often gender-blind, as in El Salvador, but there are several policy benefits in making women's roles more visible

From anecdotal evidence, casual observation and ethnographic studies, it is obvious that women are an indivisible part of the artisanal and industrial fishing economy. Yet researchers consistently underestimate the rote women play in harvesting fish, in generating household and national income from fishing activities, and in providing labour to the fish processing industry that ultimately enables economies to earn much-needed foreign exchange.

This is lately because quantitative survey instruments fail to capture the gender diversity of the fishing economy, and systematically introduce biases that underestimate the role women play in the fishing economy. As a result, women's contributions remain unrecognized and policymakers fail to take account of women's roles in environmental and development planning.

A cursory examination of the official statistics for El Salvador reveals that very few women fish. The 1990 Fishing Census by the Ministry of Agriculture identifies a little over six per cent of all fishers in El Salvador and almost nine per cent in the department of La Union to be women. Yet, observing the daily activities of fishers and the pattern of household involvement in fish production and processing in El Salvador and much of Central America, this figure differs markedly.

In El Tamarindo, La Union, El Salvador, the economic and subsistence activities of the fishing households have gone on, largely unaffected by the turbulence of the civil war and the insecurities of the reconstruction period after the 1992 peace accords. Men and women continue to fish in exactly the same way as they have for hundreds of years, in wooden kayaks with

nets and paddles. The differences are that now some have motors and others have fibreglass boats.

While men fish in the open seas, the majority of female fishers confine their activities to the estuaries and shore line, catching a range of freshwater and marine fish, crustaceans and mollusc. A few women also fish in the open sea, accompanying other members of their families, to catch shrimp in the coastal waters of Usulutn, La Union and the Gulf of Fonseca.

Women are disproportionately involved in cleaning, eviscerating and processing the catch. They prepare and dry fish for sale in local and regional markets; they contribute to the value added of shrimp exports, deheading and packing the shrimp in ice; and they gather shellfish and crab in the estuaries, providing essential nutrients and proteins to supplement the family diet of corn and beans.

A quantitative survey of 110 mangrove households and 489 individuals was undertaken in 1993 and 1994 in El Tamarindo. The purpose of the survey was to document the nature and extent of the relationship men and women had with the resource base. To capture information about seasonal variation in fishing and agricultural activities, the survey was undertaken during both the wet and dry seasons.

Primary occupation

It revealed that 50 per cent of men in El Tamarindo fished as their primary occupation. A further three per cent were involved in fish processing and marketing. However, only one woman declared herself to be a fisher, and only six per cent stated that they were actively



involved in fish processing and marketing. The majority of female respondents defined their occupation to be 'housewife', and did not perceive their fishing activities to shape their occupational identity.

Yet, the household consumption and expenditure data revealed that almost 29 per cent of the women in El Tamarindo earned an income. At first glance, this appeared to be contradictory. How could we reconcile the women's economic activities with their stated occupations? In search of more data about how these women earned their income, we added a time allocation questionnaire to the survey. This consisted of detailed questions about how all members of the household spent their days, breaking down the array of household and market activities into their component tasks. Using the additional data, we were able to determine that almost 26 per cent of women fished either in the estuary or close to the shore line; approximately 60 per cent cleaned the fish and processed the catch; 33 per cent mended the nets, along with other household members; 42 per cent cleaned the boats and helped their husbands haul the catch in from the beach; and 17 per cent sold the produce in local markets, restaurants or bars.

If both men and women fish, and are equally visible in the fishing economy of

El Tamarindo, why then do the official statistics state that only nine per cent of all fishers in La Union are women? Perhaps the answer lies in the use of survey and census questionnaires that are too rigid in their definition of what constitutes a fisher, too inflexible in their precoded responses, and too gender-blind to seek out both male and female respondents.

The majority of survey instruments are precoded. The expected responses to the questions are laid out as a range of potential answers, so that the enumerator only has to check off the correct category. This offers very little flexibility and precious little time to delve deeper into the subtleties of the responses.

In most questionnaires, to qualify as a fisher, the respondent must: fish regularly for an extended period of time; concentrate his/her activities in the open sea; and demonstrate the possession of (or access to) fishing capital, such as a boat, nets, and a motor. Since the questionnaires are structured to capture this information, they may filter out those who fish sporadically, without capital and close to the shore line or in the estuaries. The individuals who are excluded in this fashion tend to be women.

Questionnaires faulty

Another reason why women are consistently not identified as fishers is because many questionnaires are directed

at a single household head, the principal breadwinner in the family. The survey usually requires the respondent to identify himself or herself as a household head and state an income that sustains the majority of the household expenditure.

Almost 80 per cent of women in El Tamarindo did not declare themselves to be household heads, although they were subsequently found to be significant decision-makers in the household and to contribute consistently by providing much-needed family income. Unless women are actively sought out as survey respondents, much of the information concerning their lives, their activities and their roles in the household economy will not be revealed.

Typically, surveys directed solely at the 'household head' fail to document or value the activities of other household members, regardless of their gender. This is particularly important for policymakers concerned with the extraction of fisheries resources, or conservationists who would like to harness the skills of all individuals whose livelihoods depend on their environment, to ensure its protection.

If there is any genuine concern about poverty and income inequality, it is also important to realize that a failure to understand the nature of each individual's contribution to household survival, and the constraints faced in generating income, may result in the inappropriate application of transfers or the wrong targeting of those facing economic scarcity. Where households depend on fragile ecosystems, poverty can prove an overriding constraint that limits all individuals' ability to change their resource use and adopt more sustainable practices.

As women are not recognized as fishers, they do not have access to the financial and physical resources and extension services they need to improve their productivity and increase their incomes. Moreover, their ability to undertake resource conservation, to fish sustainably, or switch the focus of their fishing activities may be severely limited by their lack of fishing capital. Women's lack of access to fishing capital, credit and extension services is thrown into sharp

contrast when we compare their experience with that of male fishers.

According to the survey, the majority of men in El Tamarindo earned more than women, although the women worked longer hours and undertook both market and household activities. On average, men earned US\$ 72.29 and women US\$ 29.19 a week. Men were disproportionately able to offer fishing capital (boats, nets and motors) as collateral and, therefore, had better access to credit. This enabled them to overcome cash shortages and make investments in upgrading technologies, or switching to different modes of extraction and different fisheries.

Approximately 70 per cent of those individuals who had obtained formal credit from a bank or agency had secured the loan by offering the boat and motor as collateral. The majority of these loans were used to purchase new equipment and to upgrade or repair the boats, nets and motors that they already owned. The recipients of such loans were all men.

Only one woman, a household head whose husband had left her and who fished with her sons, declared the boat and all the fishing capital to be hers. The majority of the remaining women who fished, or collected molluscs and crustaceans in the estuary, used tackle and capital that they did not own, which were loaned to them temporarily by male family members.

Due to their inability to access credit with which to purchase fishing capital and improve productivity, the women's incomes are substantially lower than those of men. This is because they are dependent on a particular set of coastal resources that have a lower market value. Furthermore, without fishing capital, they are unable to switch to offshore fisheries that yield higher returns and can be fished more sustainably.

Limited access

The majority of women who fished did so in the estuary or close to the shoreline. The women were confined to a resource base by their limited access to capital and by the time constraints they faced balancing their productive activities with their household



tasks. They fished for resources that were increasingly scarce, or contaminated from pesticide run-off and siltation.

The establishment of shrimp farms and salt ponds in the mangroves had encroached upon their fisheries and destroyed many of the breeding grounds for molluscs and crustaceans. Increasingly, the resource base on which they depended was being threatened, and more women were competing for limited resources. As a result, the resources were being depleted too rapidly and extracted unsustainably.

Since women are less visible as fishers, they are also less likely to receive extension services that furnish them with the required knowledge and inputs to change cultural practices and extraction patterns. None of the women who fished in El Tamarindo had ever received a visit from the fishing service of the agricultural ministry, or been invited to a local meeting to discuss fisheries resources. While the number of visits by fisheries extension agents of the Ministry of Fishing was extremely low for all fishers, many of the male fishers had met with the local representative and regularly registered their catch with the fisheries census monitor.

Without access to such knowledge and information, combined with their lack of fishing capital, the women of El

Tamarindo were unable to switch to different fisheries and to halt their unsustainable extraction of estuarine resources.

This invisibility of women means that their rights are more likely to go unrecognized. Local legal, economic and political institutions determine the allocation of common property and the use to which that property may be put. In societies where women depend disproportionately on the commons, such institutions determine the nature and scale of women's production activities and their degree of environmental dependence.

In El Tamarindo, the consensus was that estuary fishing had become unsustainable and was threatening offshore fisheries by depleting breeding grounds and undermining a source of nutrients for marine fish. Recognizing local opinion and the Ministry of Agriculture's concerns, the community leaders imposed an informal ban on estuary fishing.

Poor institutions

Consequently, women's access rights were not preserved and a vital source of household protein lost, while women's income-earning activities were displaced. Although the institutions that allocate access rights may not be appropriately structured to enable women to conserve the commons, they may not be immutable.

In several villages in Mozambique's Inhaca Island, for example, women who traditionally fished the estuarine resources of one large mangrove ecosystem institutionalized the customary allocation of resource rights. Women began by limiting the number of fishers in the inter-tidal zone. Each inter-tidal area was delimited and assigned to an individual village or group of houses in such a way as to ensure that the number of fishers was in proportion to the size of the resource base.

By pressuring the community institutions that guaranteed resource rights, the women were able to secure their individual economic needs by clearly designating and enforcing property relations. The women carefully defined who had access to particular inter-tidal areas, prevented encroachments by outsiders and limited fishing for particular species to specific periods. In this way, they were able to gain the full benefits of conservation efforts, while continuing to meet their subsistence requirements.

In noting the contributions women make to the fishing economy, the evidence from El Tamarindo is not isolated. Yet, on the whole, the body of knowledge on women's fishing activities remains extremely small. Without a doubt, the role that women play as fishers supports households and generates income in many developing countries. In Pangasinan and Bataan in the Philippines, women generate, respectively, almost 34 per cent and 25 per cent of total household income from their primary fishing activity in the estuaries and lagoons. Cumulatively, they dedicate a little over 10 months of the year to these activities.

However, such examples of the careful documentation and quantification of women's economic activities in the fishing sector are rare. As a result, policymakers have little information about women's roles and contributions. Conservation and development policies may, therefore, be inappropriately designed.

As the data from El Tamarindo shows, the effective revision of survey instruments to include the full range of activities that women perform in the fishing economy is

a prerequisite to enabling social and political institutions to respond appropriately and ensure the sustainable use of fisheries resources. Researchers should judiciously use qualitative and quantitative methods to gather information about fishing populations. In this way, policymakers can be better informed about the needs of women fishers and be better able to channel resources to support changes in resource use and extraction.

Fishing data need not be gender-blind. By overcoming the systematic exclusion of women from statistical surveys and reports, women may become more visible and their activities more prominent. Furthermore, attempts to change resource use, generate alternative income-earning opportunities for fishers and relieve resource dependency will become more focused and more targeted once they are informed by rigorous qualitative and quantitative data that describe the multiplicity of women's roles in the fishing economy. 3

This article is by Sarah Gammage, an economist with the International Centre for Research on Women, a nonprofit development NGO that conducts policy-oriented research on women's productive and reproductive roles in developing countries.

Artisanal fisheries

More than just quotas

Zoning and modernization in the fisheries sector have not solved the problems of Chile's artisanal fishermen

For some years now, Chile has been following a path of modernization and opening up of its economy. Basic principles of free trade, privatization and the spirit of enterprise have been widely adopted and are now the common practice in all economic spheres. In the fisheries sector, each enterprise decides the kind of activity it engages in, according to profitability and the means available to it. This applies as much to industrial fishing fleets as to artisanal workers on their small fishing boats,

In this context, the conflict that erupted at the end of 1995 between hake (*Merluccius gayi*) fishermen in Region V, using different gears, came as no surprise. Artisanal fishermen, who, perhaps, for family reasons, inherit their boats, catch fish for the market. It is usual for a fisherman to operate the boat himself, and sometimes with the help of his relations. Perhaps after a good season, and with the help of their savings, artisanal fishermen are able to purchase larger boats for mid-water fishing.

If they want to continue as artisanal fishermen, according to the Fishery Law, their boats must be less than 18 m in length and no more than 50 gross registered tonnes (GRT). Such a boat can no longer be managed with only the help of relatives. The fishermen thus have to contract a crew. They also have to abandon their hook-and-tine and take up trawling instead. However, those other artisanal fishermen who continue to use longlines see these trawler-men as competitors.

There exists a conflict between artisanal fishermen over hake. It is a species which is fully exploited, and is regulated by an annual quota divided between the

industrial and artisanal sectors. In 1995, the former was allocated a quota of 64,000 tonnes, and the latter, 16,000 tonnes. According to statistics from the Fisheries Sub-secretariat, there are around 2,300 artisanal craft and about 20 trawlers. There are also an estimated 40 to 50 mid-water fishing boats.

Various aspects of the problem are leading to widespread violence. On 1 November 1995, the Fisheries Sub-secretariat issued Resolution No. 1557, prohibiting the use of trawls in the artisanal hake fishery, so as to control fishing effort. It provoked an immediate and violent response from the trawler fishermen. This prompted the Sub-secretariat to delay the introduction of the decree by 45 days, so as to allow time for these boats to change their target fisheries to, for example, *blanquillo*, *congró* or marlin.

In turn, the delay provoked a reaction from the Fishermen's Federation which protested against the period of grace granted to the trawlers. In the first few days of 1996, over 2,000 fishermen from Regions IV and V undertook violent protests in front of the parliament in Valparaiso.

They were led by Humberto Chamorro, president of the Artisanal Fishermen's Federation in Region V, and also treasurer of CONAPACH, an organization with members on both sides of the dispute. The artisanal fishermen demanded an immediate withdrawal of the extension. They argued that fishing with trawls caught 20 times more fish than longlines or nets, and would lead to unemployment, falling prices and resource depletion.

Intervention

Faced with such violent protests, the Finance Ministry intervened and called

for changes in the Fisheries Law, which would recognize the existence of an artisanal sub-sector that used industrial techniques such as trawling.

The Finance Minister, Alvaro Garcia, proposed that the law only needed to distinguish between industrial and artisanal fishing sectors, and that the only way to discriminate between trawling, net fishing, and longlining would be for fishermen to come to an agreement amongst themselves. They gave the members of CONAPACH a 10-day period to come up with a proposal on how the fishing quota for 1996 (16,000 tonnes) would be divided between trawlers and other artisanal craft.

However, CONAPACH was not able to come to a consensus. Chamorro described as unacceptable Minister Garcia's proposal to modify the Fisheries Law to create an 'intermediate' fishery sub-sector, comprising both trawlers and artisanal fishing boats. Chamorro argued that including trawlers in the artisanal sector "would be tantamount to legalizing overfishing and killing off the artisanal sector throughout the entire country."

For his part, the president of CONAPACH, Hugo Arancibia, argued that "the 200 trawler fishermen could fish outside the five-mile zone, but should be prohibited from fishing within it. Those trawlers over 50 tonnes, which were fishing with the consent of the authorities within the zone reserved for artisanal fishing, were having a much greater impact than all the small-scale fishermen put together, with only 21 boats."

As CONAPACH was not able to reach an agreement internally, the Ministry of Finance decided to put into force Resolution 1557, which completely banned the use of trawls in the artisanal hake fishery, both within and outside the five-mile limit.

The next step would be to change the Fisheries Law, in consultation with the National Fisheries Council, so that the fisheries authorities could allocate fishing quotas by fishing technique. Through this proposal of the Fisheries Sub-secretariat, the modification of the current law could take account of, and balance out, the

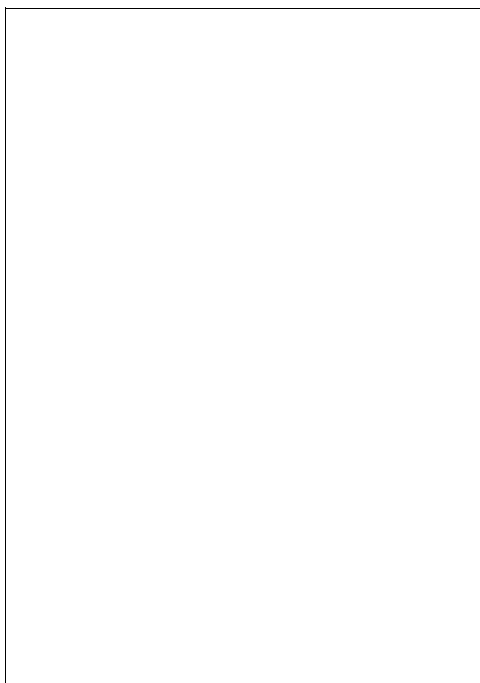
various impacts of the different fishing techniques on the fishery resource.

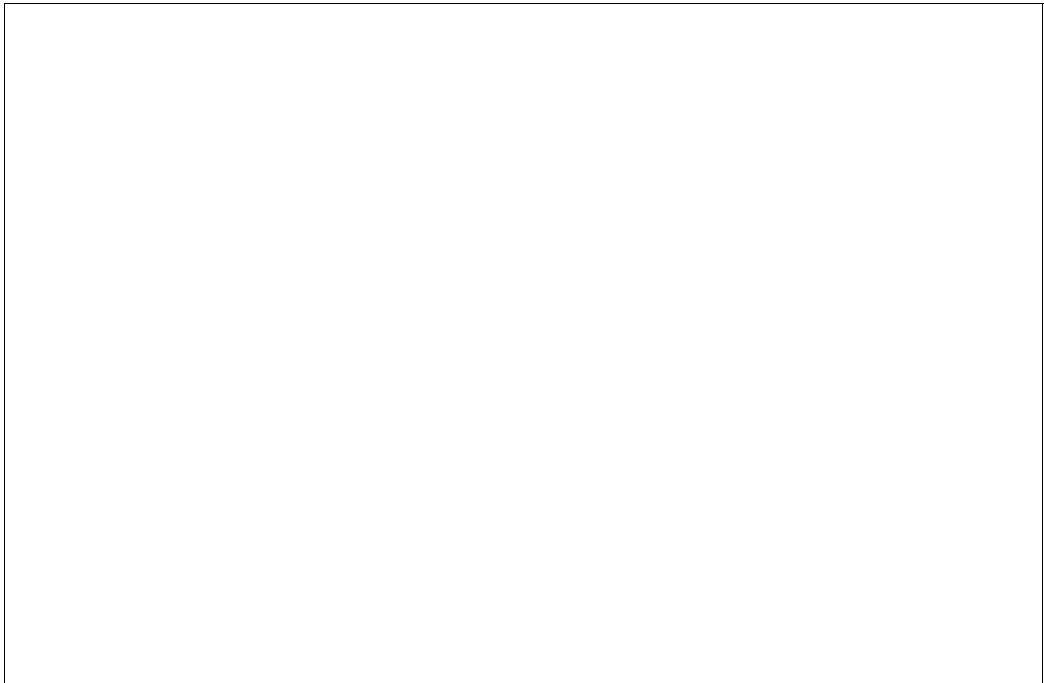
Thus, for example, it would be possible to impose greater restrictions on fishing gears and techniques being used on particular stocks that required greater protection. Furthermore, there were indications that, from a socioeconomic perspective, the new powers granted though this initiative could reduce the competition in certain fisheries where different kinds of gears were used and where each gear tried to catch the quota allotted as soon as possible.

It was not long before various sectors within the fishery began to oppose the proposed changes in the fisheries law. The National Fishing Society (SOAPESCA) expressed concern over the way that social pressures could bring about changes in the Fisheries Law. The Society argued that, as it is, the law provides a just legal framework, which could be wrecked by these changes. The law could easily be changed through different kinds of pressures, such as hunger strikes, street violence or protests, which, once made, would only encourage further pressure, eventually causing the downfall of the fisheries administration in Chile.

Change in law

In another statement, the Society argued that the law would not only have to be changed for the illegal boats to operate,





but, at the same time, other changes would be needed for a formal authorization. For instance, trawlers would have to be listed on the artisanal registry.

This would then lead to a condition of overfishing, according to the criteria defined by the Fisheries Sub-secretariat. These and other actions would undermine the key principle of restricted access, one of the pillars of the Fisheries Law.

Jan Stengel, the chairman of the Society, also said that the crisis in the hake fishery could provide an opportunity to the government to devise a policy to promote resource recovery. "To change the existing laws is a mistake, and sends out the wrong message", says Stengel.

According to hint, the problem was confined to a small group of fishermen who "were hardly artisanal fishermen, as some owned investments worth more than a million dollars." Cristian Jara, the general manager of the Society, had more to add. He said that "the technical debate had been sidetracked, without considering the consequences for the 70,000 workers who depend on resources to which, until now, the industrial sector did not have access to".

As was expected, at the end of January 1996, the Independent Union of Artisanal

Fishermen (comprising mid-water fishermen from San Antonio), led by Cosine Caracciolo, contested the trawl ban. They organized protests in Santiago and, mainly in Valparaiso, violent street demonstrations, civil disturbances and hunger strikes. Caracciolo maintained that the trawlers wanted to be allocated a fishing quota outside the five-mile limit, because this belonged to artisanal hook-and-line fishermen, but wanted the larger boats to be allocated some of the hake quota.

The Fisheries Sub-secretariat then proposed some alternative ways of solving the trawl problem. First, they announced that they would analyze the possibilities for the trawlers to catch alternative resources. Next, they would re-establish the exclusive five-mile artisanal fishing zone, where industrial fishermen could operate only until 6 March 1996. The proposal implied that once the new law had been passed, the trawlers would have no rights to fish, would not be allocated quotas, and thus they would have to go back to using longlines.

Signs of agreement

However, just before the end of February 1996, the fisheries authorities and the conflicting factions of the artisanal fishermen began to show the first signs of coming to an agreement. The solution proposed by the Finance

Ministry—subject to the approval of the Regional and National Fisheries Councils—was to increase the artisanal hake quota from 16,000 tonnes to 20,000 tonnes, and to redistribute it. The traditional craft would be allocated 75 per cent of the quota, while the trawlers would have to fish outside the five-mile limit. There was also an additional proposal to modify the Fisheries Law to establish distinctions within the artisanal sector.

The participants at this discussion included Patricio Bernal, the Finance Minister in the Fisheries Sub-secretariat; Juan Rusque, the Director of SERNAP; Carlos Carrasco, the representative of the Independent Artisanal Fishermen's Union; and Hugo Arancibia, the Chairman of CONAPACH. The agreement has yet to be ratified by the trawler fishermen, and to be approved by the national and regional Fisheries Councils.

But not everyone was pleased with the accord. Humberto Chamorro claimed that, within three years, the hake stocks would be exhausted, due to the extra 4,000 tonnes to be fished. He added that the "solution proposed by the authorities was based on the invention of fish politics", which did not exist in reality and which ran against the Constitution, which required the conservation of marine resources. Chamorro also said that his organization would never accept industrial fishing in the coastal area.

After analyzing the impact of the increased hake quotas during the first few days of March, the Regional Fisheries Council for Regions V and IX rejected the proposals "which had no technical basis to support any such increase."

After an extensive debate, the National Fisheries Council, headed by the Fisheries Subsecretariat and including the Director of DIRECTMAR, the Directors of IFOP and SERNAP, four representatives from the industrial sector, four fishworker representatives, and six members designated by the Executive, proposed the creation of a special commission.

This comprised Patricio Bernal, Juan Rusque, Pablo Alvarez, Eduardo Vio, Juan

Claro, Jose Luis del Rio, Daniel Malfanti, Ismael Fritz, Luis Almonacid, Guillermo Risco, Manuel Largo and Humberto Chamorro. Its mandate was to analyze the increased allocation in hake quotas. The Finance Ministry stated that the only solution to the problem would be by changing the Fisheries Law to differentiate among the fishermen according to the gears used. This would mean creating a new category of fishermen. Each boatowner and anyone with the right to fish would be given their own quota of fish.

SOAPESCA, for its part, argued that the resolution of the conflict could not be achieved by weakening the industrial sector, which accounted for 96 per cent of fish exports. The Society also commented that every law could be modified—all it required was sufficient time and justification to do so.

By the beginning of March, the National Fisheries Council had decided to approve the increase in hake quotas by 4,000 tonnes. According to the Council, it concerns "a special quota, which can be considered as a future entitlement. This means that the artisanal fishers (traditional craft and trawlers) can not make a further claim in 1997 for additional quotas."

The Council also pointed to the lack of legal frameworks for dealing with situations that had arisen since the Fisheries Law had been enacted. Moreover, they recommended a total ban on trawling for hake within the five-mile zone reserved for artisanal fishing. Finally, the Council proposed a ban on the use of trawls on artisanal fishing craft from 31 December 1996.

Patricio Bernal stated that these agreements did not imply a derogation on the artisanal trawl ban for hake, which would be enforced both within and outside the five-mile limit. However, the Fisheries Sub-secretariat is now looking at the possibilities for introducing the system of Individual Transferable Quotas to this fishery.

Worry over decree

In parallel with the recommendations of the National Fisheries Council, SOAPESCA

expressed the worry that the decree extending the rights for industrial fishing for another two years within the zone reserved for artisanal fishing, between Regions V and IX, had not been published in the official gazette.

However, the authorization had been extended for all the other regions of the country. In the same way, ASIPES (the Industrial Fishermen's Association of Region VIII) demanded the fisheries authorities to let them fish within the five-mile zone (between Region V and IX) in seasons when there was little or no artisanal fishing.

In summary, the basic problem with artisanal trawling would seem to be linked to the need to establish an appropriate definition for 'artisanal fishing'. Is it sufficient to limit boats to less than 18 m in length and 50 GRT? Furthermore, how will it be possible to effectively control the quotas allocated to artisanal fishermen operating within the five-mile zone? At this stage, however, there does not seem to be any reasonable solution in sight.

This article, from the journal Chile Pesquero, has been translated by Brian O'Riordan of Intermediate Technology, UK

Extensive or intensive fish farming?

The debate continues on whether to recommend intensive or extensive fish farming to farmers in sub-Saharan Africa

Extensive fish farming usually refers to fish farming conducted in medium- to large-sized ponds or water bodies; the fish production relies merely on the natural productivity of the water which is only slightly or moderately enhanced. Externally supplied inputs are limited; costs are kept low; capital investment is restricted; the quantity of fish produced per unit area is low. In brief, the control over the production factors is kept low. The return on labour is high.

Intensive fish farming, on the other hand, implies that the quantity of fish produced per unit of rearing area is great. To intensify the culture, production factors, such as feed, quality of water and quality of stocked fingerlings, are controlled to improve the production conditions. There is steady monitoring during the production cycle.

It goes without saying that all these controls entail high-tech practices and capital-intensive investments, which add to the production costs. The returns must justify increased production costs. The contribution of natural productivity into fish production is low or negligible. Besides this, intensive fish farming carries with it high costs or threats to the environment.

Apart from these two forms of fish farming, some speak about semi-intensive fish farming, referring to intermediate practices, taking elements of both forms. This is, however, ill-defined.

Before suggesting which of these forms is to be recommended, one should look at the context under which fish farming is practised. What are the farmer's objectives? The first objective is to ensure food security/livelihood for his household. This can be secured, firstly, by

growing food crops, and then by diversifying the farmer's activities over a range of agriculture and non-agriculture ventures in pursuit of his income generating strategies. The rationale behind this is to manage risk (*ex ante*) and to cope with loss (*ex post*).

The strategies devised will have to take into account his assets (resources, human capital, know-how) and his investment capacities. To carry out his strategies and best achieve his objectives, enabling market conditions need to be present. These are essentially a market system for agricultural and non-agricultural factors and products. For instance, food or labour scarcities can alter performance of the markets and prevent the farmer from achieving his objectives.

In support of his strategies, the farmer aims at optimizing the use of resources in his reach, putting to use unused or underused resources. The objective reason for going into fish farming is, therefore, the expected return to be made from fish farming. The choice of income-generating activities, amongst several options available, is made on the grounds of their expected returns and risks involved.

Farmers can be largely divided into three categories:

- those with little resources and land, no cash, short of labour, who are risk-prone and try to diversify their production in spreading risks, but who have little manoeuvring range;
- those with more resources, on-farm and off-farm; and
- the rich ones.

The first group of farmers will practise fish farming as a complementary or supplementary activity, while the two other groups can envisage fish farming as an income-generating activity on its own.

This means that, for the first group, fish farming needs to be integrated into a whole farm system, while, in the other two cases, it could stand on its own and develop into a primary economic activity.

The greater the role fish production plays in the generation of income, the larger the market needs to be to absorb the produced supply. The less fish is produced, the greater will be the home consumption of the fish produced.

Many smallholder farmers, except for the poorest ones, have off-farm incomes (trading activities, handicraft production,

basket weaving, herbalist activities, wine or beer production, and so on). These incomes are often quite important, as they are part of the risk-spreading strategy to secure a living.

In cases of failure of agricultural production due to climatic or other reasons, farmers will increasingly rely on off-farm income to tide over the critical period, though, in some cases, as in rural Mozambique, off-farm income has no discernible effect on calorie availability.

A possible explanation might be that off-farm activities are primarily accessible to men, while women are mostly responsible for the supply of food.

Non-farm income-generating activities are also important to provide means to pay for hired labour in agriculture; women will have to depend more on

mobilizing inter- and intra-household linkages to provide for extra labour.

Cash incomes are also important for the purchase of planting material or fish seed and farm inputs, as formal credit facilities from banking institutions are not available. Incomes generated through off-farm work, sales of cash and food crops contribute to the emergence of food and non-food markets with effective demands. With the monetisation of the economy, reliance on non-market relations, such as informal or exchange labour, is regressing; hired labour to be paid for in cash and kind is increasing. For instance, in Nigeria, traditional patterns of gender role in agriculture are changing, resulting in increased participation of Igbo women in agricultural production due to greater male participation in non-farm activities and in wage employment.

Alternative productive activities with little requirements for capital will be favoured. These offer a rapid return on investment, which can incorporate marginal labour force (children or the elderly).

Any move into fish farming will be supported by an assessment of the required conditions, i.e. suitable land (water-logged soil or proximity to a water stream), availability of water and inputs (agricultural by-products and manure), the anticipated returns from the available resources, and whether these are greater than those (expected or real) generated by other uses of the same resources (production of rice in marsh areas, compared to that of fish), and expected marketing facilities for the fish produced.

The benefits generated by fish farming are:

- a homestead pond has multiple purposes and contributes to increasing overall farm productivity;
- fish is an important ingredient in human nutrition, as a source of animal protein, as a tasty relish and as a prestige food;

- fish production has proved to provide excellent returns to land and labour and is, therefore, a profitable production; and
- fish is a high-value commodity.

On the negative side, several constraints restraining the adoption of fish farming must be considered. These, mainly, are:

- the ability to master the know-how of the new technology;
- the security of land tenure, which justifies the setting up of a costly investment (the construction of the pond); and
- the access to fish seed, to stock the pond, and to a market, to sell the fish.

In certain countries, access to wetland areas can be more difficult, as they are a common property resource, as in Malawi. Secure land tenure should not be understood in its formal sense since, as such, it is not a necessary condition for investments on land.

Social and cultural institutions, which assure individuals that they are part of a stable, equitable, well-adapted set of rights and duties, give the tenure arrangements meaning. Also, security of land tenure is less important if the investment pay-back period is short.

The various types of fish farming accessible to farmers in rural or pen-urban areas in developing countries are, essentially, fish farming in earthen ponds, irrigated rice fields, dams and reservoirs, and in pen or cages.

Irrigation

The ponds are either drainable, i.e. fed from an irrigation canal or rainfed, or non-drainable, dug in the water table. Existing irrigated rice fields can be used.

This is done by stocking them with fish and shrimps. Fisheries production in dams, reservoirs and natural water bodies can be enhanced by stocking fish in them. Further, pens and cages can be set up in dams, reservoirs and lakes to rear fish.

The bulk of fish produced in sub-Saharan Africa by fish farming comes from ponds and irrigated rice fields. What should be the level of intensity of fish farming? Before recommending anything, it should be remembered that fish farming can only be envisaged as an economic activity and, therefore, there is a need to investigate the prerequisites for the establishment of a healthy farmed-fish market. Amongst these, successful fish farming is one prerequisite.

To be successful, the technology should be feasible, productive and profitable. This means that fish farming should be within the capacity of the farmer—understood as the farmer's household and not as the male or female heading the farming household, i.e. compatible within his/her indigenous knowledge system; be easily accommodated within his/her time or labour availability, cash or capital availabilities, resources or resource base.

Further, fish farming should be productive; though, if the homestead pond is considered for under its pivotal role of supporting numerous on-farm activities, it can not be assessed from the mere perspective of the amount of fish produced, as the benefits include an improved overall farm performance. These multipurpose ponds provide water for domestic use, for watering vegetables, livestock, trapping wild fish, serving as bioreactors to dispose wastes, and so on.

Also, the amounts of fish harvested from a pond are differently assessed, according to expectations. For poor farmers, a few small fish harvested from a pond erratically fed can be a definite improvement to a diet; the marginal benefits of this production are substantial. 'Productive' is, therefore, a relative and not an absolute term.

Finally, the profitability of fish farming can be assessed in comparison to other productions. To be profitable, costs should be kept at bay, meaning that the inputs should be drawn, as much as possible, out of the farmer's resources base, making best use of underused by-products of farm activities. Labour requirements must be, as far as possible, accommodated within the available

labour force, and the use of hired labour must be minimized.

Once these conditions are met and fish farming is adopted by the farmers, the fish produced can be self-consumed and thus contribute to the household food security. However, sustainability of fish farming will be enhanced if there is an excess of farmed-fish production, a fair outlet for marketing the fish and the establishment of a farmed fish market.

To this effect, there must be a demand for farmed-fish; the cumulative offer of farmed-fish produced by the fish farmers must meet a certain number of criteria: the supply must be regular, the quality of supply must be adequate and the fish must fetch a fair price. The market requires that enough cash be in circulation, or at the disposal of the customers, to enable transactions to take place easily.

Intensification of fish farming can only occur if there is a discrepancy between the demand and supply. An increase in the supply of farmed fish can be met with an increase in the area under production, i.e. an increase of the number of producers or, alternatively, an increase in the average area of the fish farmer.

Another way to raise production is to resort to intensification. This can be realized by improved fish feed, by improving the size and quality of the fish, and by increasing the water quality. Compounding and pelleting feed to reduce wastage and to meet the nutritional requirements of the fish is, for instance, an improvement over the use of domestic wastes as feed

Different strains

Strains selected for faster growth, late maturity, male monosex fish, diploid and triploid fish, association with a predator, association of fish with various feeding regimes, artificial aeration of the water to improve the dissolved oxygen to enable higher stocking densities, and veterinary control to prevent health and disease problems, are all technological improvements to raise output.

Intensification will call for specialization in the various stages (feed preparation,

seed production) of production, which entails [he transfer of technology, the establishment of production units of the specialized sub-products (feed, seed) for intensified fish farming. This requires capital and investment, but also the market to sustain these operations at a large enough scale to be profitable.

Side effects, in terms of environmental damages, for instance, polluted water emissions from farms, destruction of ecological buffer zones such as marshes and mangroves, destruction of biodiversity in these habitats, release of genetically transformed fish species and the introduction of exotic species in natural waters result from fish farming. These effects tend to increase as fish farming gets intensified.

Further, preparation of commercial feed relies heavily on fishmeal, made of small pelagics fished at sea. This is not the most sensible way to make use of fish protein, nor is it the most economical way to produce fish.

In brief, intensification of fish farming tends to be an increasingly market-oriented production, often a monoculture, with poor waste management. It is oriented towards short-term economic benefit and profit, mostly at the cost of the environment. Intensification of production leads to an

autonomy of fish farming activities, since, soon, on-farm resources alone are not enough to support the increased production requirements, and inputs have to be provided from outside the farm, with all the attendant consequences.

In many sub-Saharan African countries, fish farming production is low and could potentially contribute much more to rural economies. The first priority is to promote the adoption of fish farming on a wider scale, either for home consumption or for income generation.

The technological options so far extended have not been sufficiently integrated within indigenous knowledge systems to establish a solid and consistent farmed-fish production base.

Overdependence

The reasons for this failure stem from too much dependence on inputs (fish seed, feed) provided from outside, which could not be provided reliably or which needed cash to be procured, and a lack or inadequate integration of the activities within the whole farm system.

Once locally adapted and sustainable forms of fish farming have developed and begin expanding, then the supply and, concomitantly, the demand can be expected to steadily increase. With the adoption of fish farming production as an economic activity, a factor and product

market will be established. An increase of the area under production will be followed by a move towards an increase in quantity and improvements in quality. The existing situation of many rural economies suffers from a vicious circle.

The production of smallholder farmers is low, just enough to survive but below the level where it could generate some income-enabling investments; the production is poor because inputs (fertilizers and improved seeds) are not used since there is no cash (or credit) to purchase them; due to shortage of agricultural and non-agricultural incomes, there is shortage of agricultural labour during the peak demand (for clearing, weeding, ridging), leading to low yields.

Smallholder farmers produce essentially the same range of food crops, which are all harvested at the same time, flood the local market and fetch very low prices when the seasonal demand is low. In many cases, there are no facilities to collect the goods and bring them to markets where there is a demand.

If the surplus production is collected, the bulk of the profits goes to the middlemen. There is no incentive to increase agricultural production. Goods are not available in the local markets because of insufficient effective demand; such demand will not emerge unless smallholders can generate increased cash incomes through off-farm work or greater sales of cash or food crops.

Within this environment, the production of a highly perishable commodity, such as fish, can not be advocated without due consideration for its marketing. The conditions for establishment of a market with an effective demand for food crops, including fish, are found in the vicinity of urban areas.

It is in those areas that sustainable forms of semi-artisanal fish farming have appeared in many sub-Saharan African countries. The process of intensification of fish farming has concentrated on


labour-intensive, and not capital-intensive, production factors. Fish are selected and associated with predator

species to produce uniform, large-size specimens. Feeding and maintenance of the ponds are done with bulky, cheap agricultural by-products, available locally.

Fish farming development in rural areas must find its own, domestically adapted production technology, integrated in the local context. There is no "blueprint" technology that could be recommended; the technology must be developed by farmers, possibly with the assistance of scientists. If fish farming as an economic production is expected to take off, it should be offered adequate markets.

Intensification of fish farming appears where there is a greater demand for farmed fish, i.e. in the vicinity of towns and cities. This intensification is not meant to please the promoters of fish farming nor is it the result of development efforts. It is the result of the existence of an effective market.

Effective market

The intensification carried out is mainly labour-intensive, not capital-intensive. Specialization in sub-products of the production process, such as the pegging and construction of the pond, and the production of fingerlings for stocking have also occurred. 

This article is by Guy Delince, an independent fisheries planning advisor from Belgium

Around the negotiation table

The artisanal fishworkers of Senegal yearn for genuine, not token, participation in negotiating fisheries agreements with the EU

It is not only due to the favourable coincidence of the timing of the EU-ACP Joint Assembly and the fishery agreement negotiations between the Senegalese Government and the European Commission that I am meeting with you today. Although I will represent CNPS in these negotiations. I am with you today because it is urgent that the artisanal fishworkers of Senegal share with you their fears about the next agreement.

Since the end of the 1980s, the CNPS has been pressing for the artisanal sector to be part of the negotiations. In 1994, it was with great joy that we took our first firm step: for the first time we were invited to the negotiating table. At that time, the artisanal fishworkers thought that their battle to participate in the negotiations had been won. We thought that when the 1996 negotiations started, we would be able to build on our gains. Sadly, this is not the case.

As far as the proposal on the negotiating table is concerned, we, the artisanal fishermen, do not feel that we have been properly consulted. Just because we are present at the negotiating table does not mean that we are allowed to participate. In fact, the role expected of us is to merely observe. We do not wish to observe, we want to participate.

We are fishermen. Daily we go to sea. When you discuss fisheries management, you are discussing our daily struggles. When the EU and Senegal agree to sign a fisheries accord, they are signing away our livelihoods. Would you really expect us to accept the role of passive observers, and watch you determine our fate and how our resources are used?

In June 1996, in Dakar, the first round of negotiations took place between the

European Commission and the Senegalese Directorate of Fisheries. The negotiations were to start on a Saturday. Despite our insistent demands, relayed through the local press, we were only invited the previous day. When we arrived at the meeting, they told us, "Only one person is allowed in as observer."! Since we were not allowed to participate to put across our point of view, we left.

In July 1996, in Brussels, the second round of negotiations took place. Thanks to the support of the member NGOs of the Coalition for Fair Fisheries Agreements (CFFA), we were invited not as observers, but as genuine participants. However, a number of key issues were deliberately left off the agenda of that meeting, notably, access to coastal demersal species, which is one of our main concerns.

On 15 August, we learnt through our European partners (CFFA) that Madame Emma Bonino was to visit Senegal to meet with our President and Finance Minister. We were informed that she was coming to give a helping hand to the negotiations on the next fisheries agreement.

We also learnt that the fishing possibilities would probably be increased, due to the interest of a greater number of EU member states in obtaining fishing access. We were not party to any of these discussions, as we were not invited either to participate, or even observe, what was discussed between Madame Bonino and the Senegalese authorities.

Enquiry reply

It was following this same visit that the European Commission announced, in a letter dated 11 September, replying to an enquiry from NOVIB, a member of EUROSTEP (the NGO network), that an

agreement had been reached between the Senegalese and European authorities that the zone between six and 12 miles would be reserved for the artisanal fishery.

We are very pleased that they took this decision, which is in line with our demands, although we were not consulted when it was discussed. It is for this very reason that I would like to record here today, those concerns that I have not been able to express at those meetings to which I was not invited.

We have always demanded that the zone reserved for artisanal fishing be extended from six to 12 miles to allow us to develop our fisheries' potential, and thus further contribute to the development of our country.

If the European boats accept to withdraw from this zone and to remain outside the 12-mile limit, it will be a very positive step forward. We must then continue the discussions with our own industrial fishing fleet and national authorities so that each sector is allocated its rightful place within the 12-mile zone.

In this regard, I welcome the European Parliamentary initiative to organize a workshop with the Senegalese Ministry of Fisheries on the coexistence of the artisanal and industrial fisheries. I also welcome the appointment of Madame

Pery as Co-Chair of this workshop. But I would like to ask her to clarify what our role will be in this workshop.

I only came to know about this workshop thanks to the CFFA. Although it will take place in three weeks time, professional organizations, including the CNPS, have not been formally informed about the workshop. I am, therefore, most concerned to know what kind of role you want us to play in this workshop.

If the EU really accepts to withdraw from the 12-mile zone, an area where most of our stocks of coastal demersal species live, then it is in this workshop that we need to defend our demands to reserve this zone for artisanal fishing, which would be a decisive step for our sector.

Although the European Commission has agreed to withdraw from the 12-mile zone, the artisanal fishworkers are concerned that the fishing possibilities granted to the European boats will be increased beyond the 12-mile zone.

Underutilization

A recent European Parliamentary report has pointed out that the tuna agreement aside, the rate of uptake of the fishing possibilities in the last agreement was only around 30 per cent. The European fleet has, therefore, only used around a third of the fishing possibilities granted under the last agreement.

The reason, as articulated by Madame Bonino in June, is quite simple: in agreements like those concluded with Senegal, the fish have been completely wiped out due to a lack of sufficient control. Nevertheless, in spite of that, according to the declarations made by the European Commission, the EU would like to see, in the next agreement, an increase in fishing possibilities for its fleet. The CNPS can not see how this can be justified, given the actual state of the resource.

You can, therefore, understand our concern over this unjustified increase in fishing possibilities, as well as our question: With the little control that exists in Senegal, with even more boats fishing and even less fish available beyond the 12-mile limit, who can guarantee that these boats will not come into the 12-mile zone to take more than just water?

It will completely destroy all our efforts to develop the artisanal fishing sector in Senegal, and we can not accept an agreement on these terms.

We are appealing to you of the European Parliament and ACP delegations, precisely because we have not been allowed to discuss these vital concerns of ours at the negotiating table.

By taking up our concerns and demands through parliamentary debates, you can help us to achieve genuine participation in the negotiations. We have no desire to be invited to negotiations where the decisions have already been taken.

To emphasize the importance of the contribution of the artisanal fishworkers to such debates, it is important for you to understand what has been taking place in the Senegalese artisanal fishery over the last two years, since the start of the last fisheries agreement.

As far as the resource is concerned, some species like *dorade* (bream) have reappeared in the catch. But the state of stocks is precarious and any new pressures, like those envisaged under the new agreement, will undermine both our resources and fishing communities. Thus, as we have already explained at the beginning of the year, there is no surplus

in Senegal which the Senegalese fishermen are not able to catch themselves, for the long-term benefit of Senegal.

Another positive impact of CNPS's successive campaigns on fisheries agreements has been that other organizations in the sector have become interested in the issues, and have begun to join the battle, which has been led by CNPS for several years.

Thus, since the beginning of the year, the Federation of Fishery Economic Interest Groups (FENAGIE Peche), whose fishermen members know well the economic interests of the sector, have added their voices to CNPS' in calling for change in fisheries agreements.

CNPS has also been working outside Senegal, with fishermen in the West African region. Our contacts have been intensified with artisanal fishworker communities, particularly in the Gambia, Guinea Bissau, Guinea Conakry and Mauritania. We have participated in technical exchanges, on initiatives to improve trade in processed fish, and many other areas as well.

Through these linkages with other fishworker communities, we have learned, above all else, that, in all these countries, the artisanal fishworkers are facing the negative impacts of foreign fishing fleets, particularly European, operating under fisheries agreements in their waters. We know their problems well, which are about competition for resources. They are the same as ours.

This is why we feel we have to develop a shared regional perspective on signing fishery agreements with the EU. In the same way, it is equally important that the EU and ACP states develop a regional perspective on fisheries agreements. At sea, boats know no boundaries. So why should we sign agreements on a country by country basis?

Rest period

Several months ago, an agreement was signed with Mauritania. In this agreement, allowance was made for a biological rest period so that the resource could have a good chance to reproduce.

Why are these kinds of positive features not taken account of in the agreement with Senegal? How can we guarantee that these boats will not plunder our waters during this rest period with Mauritania? In our waters, species also have to reproduce, and any additional- pressure on the fish stocks could be catastrophic.

When we asked this question, we were told that controls would be intensified at the border. It is, therefore, recognized in Senegal that this risk exists. However, who can assure us that the means of control are adequate? To that, no one has given us an answer.

I will now deal with the proposals that form part of the negotiations. CNPS' proposals are directed by the experience we have gained locally, regionally and at the international level. Of particular note has been CNPS' participation in the formulation of the FAO's Code of Conduct for Responsible Fisheries. If it is to be of any use, this Code of Conduct must be applied now. As far as the Senegalese fishworkers are concerned, one of the most important areas for its application is with regard to the signing of fisheries agreements. For this reason, we welcome the EU-ACP initiative to formulate a Code of Conduct for Responsible and Fair Fisheries Agreements.

In terms of the current negotiations on the agreement with Senegal, it would seem to us that the following measures would be appropriate in the context of applying the FAO's Code of Conduct for Responsible Fisheries, and would allow for the sustainable management of fish stocks by the artisanal fishworkers along our coast: stop all European access to coastal demersal species; and extend the zone reserved for the Senegalese artisanal fishery from six to 12 miles.


But it is imperative that this extension be accompanied by a decrease in the quotas allocated to the European boats; and a genuine reduction in the fishing effort deployed by the European fleet. We are also calling for European support to police our coastal waters. There are systems in use in Europe such as satellite surveillance of vessels. Senegal and Europe have a co-operation agreement.

So why doesn't the EU share its information with the Senegalese authorities? It would be most welcome if it was mandatory for all European boats, especially those which fish around our artisanal fishing zones, to use selective fishing methods. It would also be useful to study the possibilities for establishing measures, such as those in the agreement with Mauritania, which allow the resource a good chance of reproduction.

We would equally welcome greater attention being paid to how the financial compensation can be used to develop the artisanal fishing sector. We must insist, however, as a matter of urgency, that the financial compensation earmarked for the artisanal sector be paid into a separate account by the EU, where its management would be the responsibility of a committee comprising representatives of the EU, the Senegalese government and artisanal fishworkers.

We must insist on this technical point because, even today, two years after around 200,000 ECU were allocated to the artisanal fishing sector, the full amount has not yet been used for the development of the sector. Part of the funds which were allocated to women processors still has to be paid. The main support that we fishermen have received from the government has been a new car. Although having a means of transport was one of our demands, nothing has yet been done to meet our other demands, such as lighting on the beaches. This is why we want to be genuinely associated with the use of this financial compensation.

In summing up, I would like to emphasize that we want to participate in the management of our sector and not to have to accept what is granted to us. I hope that you parliamentarians and ACP delegates will support us in this demand.

Thank you for your attention. 

This speech was made by Dao Gaye, General Secretary of the CNPS, as a presentation to the Meeting of the EU-ACP Fisheries Agreements Monitoring Group in September 1996 in Brussels

A powerful arrow in the quiver

The MSC initiative is going ahead with its plans to harness market forces and consumer power to tackle the global crisis in fisheries

The several articles and the editorial on the Marine Stewardship Council (MSC) initiative that appeared in the last issue of *Samudra* marked the beginning of a thoughtful and important dialogue with a significant group of stakeholders in marine fisheries. The timing of this discussion could not have been better, as the MSC initiative is in the early stages of its evolution. Much of the useful feedback provided by the *Samudra* writers has proven extremely valuable to the sponsors of the initiative.

A great deal of progress has been made on the development of the MSC since the publication of the last issue of *Samudra*. A brief update might help address some of the substantive and procedural issues that were raised by the *Samudra* commentators.

In September, the MSC sponsored the first in a initiative series of international workshops and consultations to discuss the development of principles and criteria for sustainable fishing that will eventually underpin the MSC. This workshop, held in Bagshot, UK, was attended by an international panel of fisheries experts. The panel suggested that a sustainable fishery should be based upon:

- the maintenance of the integrity of ecosystems;
- the maintenance, and re-establishment of healthy, populations of targeted species;
- the development and maintenance of effective fisheries management systems, taking into account all relevant biological, technological, economic, social, environmental and commercial aspects; and

compliance with relevant international, national and local laws and standards.

The World Wide Fund for Nature (WWF) and Unilever have been carrying out an international programme of preliminary consultations with interested groups of stakeholders. Staffs have attended seafood shows and fishing expos worldwide.

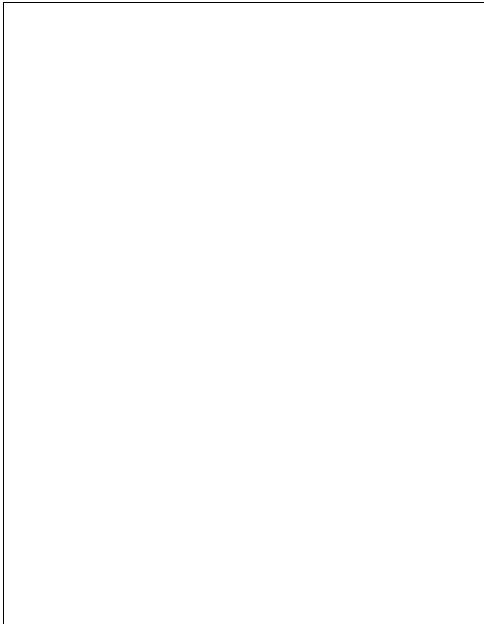
Recently, WWF and Unilever were invited to present the MSC initiative at annual meetings of the National Fisheries Institute (the largest association of seafood processors in North America) in Seattle, the International Coalition of Fisheries Associations (representing fishing industry associations from 12 countries) in Seoul, the Groundfish Forum (the major groundfish quota holders) in London, and the IUCN World Conservation Congress in Montreal.

In addition, staff briefed the Seafish Industry Authority in the UK, at a meeting in Copenhagen of industry and government officials from all Scandinavian countries, and the World Bank's Environment Division in Washington, DC. The latter is considering launching a Market Transformation Initiative based on the MSC initiative.

Other interested parties who will soon be briefed include the United Nations Development Programme and the EU Fisheries Commissioner, Emma Bonino.

Series of workshops

The sponsors of the MSC initiative are also planning a worldwide series of workshops and consultations during the remainder of 1996 and 1997. The purpose of these workshops will be to introduce the MSC initiative to diverse stakeholders around the world, seek inputs and



feedback on the emerging draft principles and criteria for sustainable fishing, and solicit the involvement of all stakeholders in marine fisheries.

Interested parties are encouraged to contact one of the sponsoring organizations in order to register their interest in this process. WWF and Unilever retained Coopers and Lybrand, the international consulting firm, to develop an organizational blueprint and implementation plan for the MSC.

Coopers and Lybrand is a world leader in organizational design, and the sponsors of the initiative sought the firm's professional advice from the outset. Its staff interviewed a wide range of stakeholders, over the past several months, from all parts of the world. They also conducted detailed comparative studies of certification organizations, such as the Forest Stewardship Council, in order to learn from their mistakes and successes. At the time of writing this, Coopers and Lybrand's report is still forthcoming.

WWF and Unilever also retained an executive recruiting firm to conduct a worldwide search for a senior project manager to lead the development of the MSC. The response was overwhelming: more than 400 applications were received from fisheries professionals around the world. That by itself was a sign that many involved in fisheries today are seeking a new approach, and looking hopefully to


the MSC initiative to provide leadership. The search is in its final stages, and an announcement of the person who will be appointed to take the MSC from idea to reality is expected before the end of the current year.

Present plans call for the MSC to be formally created as an independent entity in early 1997, when the project manager begins work. This appointment will be followed by a search for a board chair and they will begin shaping the organization, guided by the advice received from Coopers and Lybrand and the regional workshops.

The initiative will be looking for individuals of the highest calibre to serve as board members, who can bring vision and new thinking to help shape the way market forces can be harnessed to promote sustainable fishing.

Funding for the MSC initiative and the organization itself will be from independent sources such as private foundations. The World Bank and the United Nations Development Programme have indicated their preliminary interest in the initiative, and a fundraising drive is under way to capitalize on the initiative.

An important characteristic of the MSC will be its independence from both the environmental community and the industry. Finding a way to harness market forces and consumer power in appropriate ways to help resolve the crisis in marine fisheries may not be the only arrow in the quiver of marine conservation, but it could well be a powerful one.

Our challenge is to ensure that this particular arrow flies straight and true, and we hope to enlist the active participation of all *SAMUDRA* readers in this exciting effort. 

This article has been written by Michael Sutton, Director, Endangered Seas Campaign, WWF International and Caroline Whitfield, International Manager, Fish Innovation Centre, Unilever

Cut adrift

The MSC initiative can be criticised from the perspective of fishery-dependent women of the North

Women should come together as one and not leave the decision-making and planning to the men... If women made some of the decisions, there would be more employment and better programmes in place for women in rural communities.

—a Newfoundland fisherwoman

Throughout the world, the relationships of men and women to fisheries resources, work and wealth differ. Although important cultural and class differences exist, women depend on those resources for food, work, income and identity. Yet they tend to have less control than men over these resources and the associated wealth.

Despite these realities, initiatives in fisheries management and fisheries conservation are rarely scrutinized for their potential impacts on women. The proposal for a Marine Stewardship Council (MSC) developed by the environmental transnational, the World Wide Fund for Nature, and the giant corporate transnational, Unilever, shares this weakness.

The assumptions upon which it is based are flawed, and there are ways in which it might negatively impact women of the North (and South) and, indeed, the fish stocks themselves.

The proposed MSC will consist of an appointed team of 'experts' who will certify fisheries as sustainable and then encourage seafood companies to join groups of sustainable buyers, purchase fish only from these sources, and market such fish with an ecolabel. Consumer demand will presumably provide the major incentive for corporations and, ultimately, governments to participate in

the process of developing sustainable fisheries.

At first glance, the MSC proposal might be interpreted as a feminist initiative. Due to their continued responsibility for shopping, food production and service in the home, the MSC proposal appears to position women so that they could have an unprecedented impact on the fate of the world's fishery resources. Guided by expert advice and progressive corporate initiatives, women's choices could restructure the world's fisheries in the direction of sustainability.

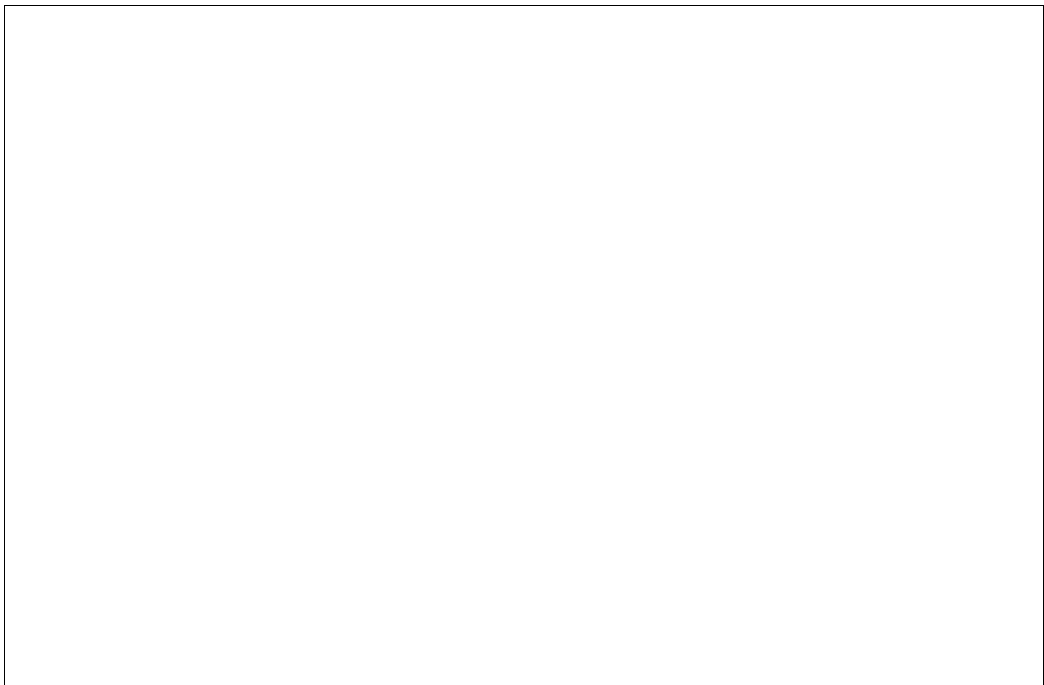
However, there are some things wrong with this picture. There is definitely a need for greater public scrutiny of fisheries management and corporate behaviour within the fisheries sector. One way to achieve such scrutiny is through consumer education. However, education is only one factor that influences consumption.

The MSC picture ignores the complex realities of women's consumption work, its diversity and the differing places they occupy in fish product markets. For example, women in different parts of the world consume different fish products, in different contexts, and they acquire these resources in different ways.

Rich women and poor women, urban women and women in fishery-dependent communities do not all consume fish in the same manner. One way to scrutinize the implications of the proposed MSC, then, is to examine its potential impacts on access to fish for consumption among these different groups of women.

Ecolabelling

It seems probable that women of the North (and in South-east Asia) will be



more likely to consume fish that is ecolabelled than women of the South. I say this because ecolabelling will do nothing to reduce the cost of fish and might actually increase its cost—already a barrier for women of the South and poor women of the North.

This will happen also because women of the North, particularly urban, wealthy women, are more likely to consume processed fish purchased in large supermarkets, where packaging and labelling exist.

If, as John Kurien has suggested (*Samudra* 15), ecolabelling actually promotes the export of fish products by fuelling consumer demand in a context of resource scarcity, women consumers in the North could unknowingly contribute to reduced food self-sufficiency and reduced economic power among women in the South as well as among women in fishery-dependent regions in the North.

In his article promoting the MSC (*Samudra* 15), Michael Sutton argues that the MSC will put the market in the lead and “where the market leads, governments will likely follow.” In the North, the emphasis on fish exports is being combined with the introduction of management initiatives like Individual Transferable Quotas. These moves are drastically limiting the access of men, and particularly women, in fishery-

dependent communities to those fish resources that remain. The combined impact of these initiatives and the increase in exports of fish seems to arise from the growing political commitment to the export markets and those who depend upon them, and the declining commitment to those in fishery regions who experience the cumulative effects of displacement from the industry and loss of access to fish for subsistence.

Women and men need to carefully scrutinize Sutton’s endorsement of the claim that “markets are replacing our democratic institutions as the key determinant in our society.” While this may be happening, it is not something that we should necessarily support.

As argued by Czerny, Swift and Clarke, in *Getting Started on Social Analysis in Canada*, if the market is a democracy, it is a democracy in which some have more votes than others, and in which, although consumers can vote, they have little control over who or what they vote for. Poor women are particularly powerless, partly because they have few votes in the marketplace.

Food conglomerates

Vertically integrated food conglomerates are increasingly the primary consumers of fish products. These conglomerates actually have the most votes in the marketplace for fish products. When we

recognize that the producers are often also the consumers, what does this tell us about the MSC initiative?

Particularly in the North, *fish* is often consumed in restaurants and fast food outlets or in the form of products whose growth has been enhanced by the use of fishmeal and fish oils. A company might commit it self to use only fish from certified harvesting sectors, but will the ecolabelling process follow this fish from the vessel through processing, manufacturing, preparation and service to the consumer?

For example, will restaurants be certified? Will meat products grown using fish oil from sustainable fisheries be labelled at the counter or at the restaurant table? If they are, how will the validity of this certification be ensured? Who will police the corporations and how will they do this? At what cost? Are there other ways to spend this money that might be more effective at promoting sustainable fisheries? Why not ask some women what they think?

If, in our proposals for sustainable fisheries, we do not include differences in voting power within the market and differences in control over products available for purchase, we could end up blaming stock collapses on consumers. The most probable target would be those increasing numbers of poor consumers, primarily women, whose purchases are dictated by low incomes and who, therefore, can not always afford to distinguish between fish products on the basis of ecolabelling.

This blame would be misplaced because it overstates the power of these women and also because it ignores the reality that the poor (both in the North and the South) consume relatively little protein compared to the rich, and the protein they consume is more likely to be a by-product of protein production for the wealthy than the primary source of demand. In a world where wild fish resources (like other natural resources) are limited, the problem is not just what fish we eat, but also how much we eat and in what form.

A full discussion of the implications of the proposed MSC for women of the North

needs to look not only at women as consumers of fish products, but also at women who depend on fishery resources for employment, culture and community. The household basis of fisheries in Atlantic Canada, Norway and many other parts of the North is well documented. Women contribute directly to these fisheries as workers, organizers and managers, in fishery households, industries and communities. They have fishery knowledge and skills, and depend on fish resources and industries for their livelihoods and, to some extent, for self-sufficiency in food,

The moratoriums on groundfish in Atlantic Canada have demonstrated the profoundly negative impacts resource degradation can have on these women. In Newfoundland and Labrador, the area of Atlantic Canada hardest hit by the collapse of the cod stocks, about 12,000 women lost jobs in the industry. The crisis also affected women doing unpaid work in their husbands' fishing enterprises, such as bookkeeping, supplying and cooking for crews.

Other women lost work in child care and the retail sector in fishery-dependent communities. In addition, out migration and government cutbacks are reducing the number of women employed in education, health and social services. As workers, wives and mothers who are rooted in their local communities, these women have a vested interest in sustainable fisheries.

When looked at from the perspective of these and other fishery-dependent women of the North, the underlying assumptions of Sutton's arguments for an MSC are extremely problematic. Sutton is correct in his argument that global fish stocks are in trouble.

Indefensible

However, his explanation for these problems is more difficult to defend. He implies that the cause of these problems, particularly in the North, is too much democracy: governments have been unwilling to take the decisions necessary to prevent overfishing, due to political pressure from a fishing industry driven to use up resources and destroy itself. Women in fishery communities do not

seem to share this perception that the roots of resource degradation lie in *too much* democracy.

In the case of Atlantic Canada and Norway, for example, they feel that decisions about the fishery, past and present, have been made by people who are not familiar with the strengths and needs of rural communities and, more specifically, with the needs of women. They also feel that without the knowledge and the support of local people, development efforts as well as initiatives to create sustainable fisheries will not succeed.

If Sutton's diagnosis of the causes of global overfishing is incorrect, so is his solution. There is no guarantee that the proposed MSC will remove politics from fisheries management. The process of defining 'expertise' has political dimensions, as does the process of defining sustainable fishing. In his book *Fishing for Truth*, for example, Finlayson has shown that data from small-scale fishers were underutilized by fisheries scientists in Newfoundland, Canada because of dissimilarities in the rules, norms and language of these fishers and those of scientists.

Elsewhere, I have shown how latent biases towards the offshore trawler fishery in the science of stock assessment in Newfoundland became evident when

this science was examined from the perspective of small-scale, inshore fishers. I have also argued that small-scale fishers' knowledge poses problems for fisheries science and management that are similar to those posed by the ecosystem itself. This is, perhaps, even more true of the knowledge of fishery-dependent women.

If the expertise of male fishers is marginalized within fisheries science and management enterprises in the countries of the North, that of female fishers and fishworkers is excluded.

Women in fishery households must bridge the growing gap between the costs of fishing and the value of landings that occur when resources are mismanaged. Women processing workers get less work.

However, when these women attempt to draw upon their knowledge and experience to influence fisheries policy, as happened in Norway during the cod moratorium, the integrative nature of that knowledge (rooted in links between ecology, household, work, markets and communities) makes it difficult for managers to grasp.

Objective knowledge?

As argued by Siri Gerrard, the perception that such knowledge represents particular interests, whereas scientific knowledge is objective, contributes to this marginalization by according science a

greater power. In Sutton's account, fisheries-dependent women are not explicitly identified among the stakeholders whom the MSC could consult in formulating its standards and principles for sustainable fishing. Shifting decisions on fisheries management from elected governments to an MSC with no clear accountability to fishery communities will augment existing limits on democracy located in the political sphere and in the market, and further erode women's power. In so doing, it will undermine the potential for sustainable fisheries.

The marginalization of women's knowledge and experience will persist despite women's continued responsibility for child care, which may enhance their commitment to ensuring that resources are managed in such a way as to protect future generations—one requirement for sustainable development.

A second requirement for sustainability that is not explicitly identified in the MSC proposal is the need to reduce inequities, including gender-related ones, within the current generation. James Boyce has outlined the "intimate ties between environmental degradation and the distribution of wealth and power. Economic inequities and not too much democracy are primarily responsible for overfishing in countries of the North and the South. The wealthy tend to benefit more than the poor from overfishing and the willingness to pay the costs associated with sustainable fishing is constrained by the ability to pay.

In politics and in the market, wealth speaks louder than poverty. In Canada, cuts to social and other programmes designed to redistribute wealth from wealthy to poorer, fishery-dependent areas of the country, and from men to women, are exacerbating economic inequities at the same time as those vulnerable to these cuts are reeling from the effects of resource degradation.

An initiative like the MSC that proposes to create sustainable fisheries without addressing these deepening economic inequities will not be effective. As women tend to be poorer than men, and exercise less control over natural resources and

within politics, it is probable that they will suffer most from this failure.

Unfortunately, there is no guarantee that the potential negative impacts of the MSC will be offset by gains in fishery sustainability. Ecolabelling could, ironically, undermine the sustainability of precisely those fisheries it identifies as adequately managed.

There are a number of reasons for believing this might be the case. The collapse of the groundfish stocks of Atlantic Canada has shown that there is enormous scientific uncertainty regarding the dynamics and status of wild fish stocks.

In addition, most commercial stocks are already overexploited; there is an arsenal of underutilized fishing vessels available to target those stocks for which there is a strong demand; and the national and international mechanisms for preventing the diversion of fishing effort from one fishery to another are extremely weak.

Defining some fisheries as sustainable and promoting the market for them will prompt increased pressure on those stocks. Not only will this be difficult to control but the effects of it will also be difficult to monitor.

Prize or death sentence?

In short, winning the ecolabel prize could be the equivalent of a death sentence for those fisheries and for the communities that depend upon them. ❧

This article is written by Barbara L. Neis of the Department of Sociology, Memorial University, St. John's, Newfoundland, Canada

Report

Building on a new concept

The recent ICSF workshop at Madras helped participants grapple with the concept of Coastal Area Management (CAM)

Organized by ICSF in Madras between 26 September and 1 October 1996, the four-day Workshop, followed by a two-day Symposium, brought together social activists, representatives of fishworker and other people's organizations from India, Bangladesh, Maldives and Sri Lanka, as well as representatives of international organizations like the FAO,

The Symposium was attended, apart from the Workshop participants, also by representatives of the governments of Sri Lanka, Maldives and India. Individual presentations and panel discussions during the meeting were followed by discussions in small groups and plenaries.

The Workshop was structured to facilitate the best possible participation and interaction. Since the group was diverse, and participants were knowledgeable on different issues, every effort was made to draw upon the resources within the group. The primary emphasis was on providing the space for participants to share their experiences, and to discuss their views on the conceptual and practical dimensions of Coastal Area Management (CAM) from the perspective of the fishery sector.

The Symposium that followed facilitated a dialogue between Workshop participants and representatives of governments in the South Asian region. It provided an opportunity to appraise policymakers about the concerns of the artisanal fisheries sector on issues related to habitat degradation and CAM.

The Workshop programme was kept flexible enough to respond to the issues raised by the participants. There were eight main sessions. At the same time, slots were also provided for participants

to meet and discuss regional linkages and strategies on issues of common concern.

In the first session, a representative from each country present provided an overview of coastal area issues within that country's context. This was followed by presentations from fishworker representatives describing problems in their specific coastal areas. This session, in a sense, set the agenda for the rest of the programme.

In the second session on fisheries-coastal zone interactions, participants split into groups to discuss and explore, among other things, the complexity and fragility of the coastal ecosystem, the threats to the coastal environment, the need for initiatives in CAM, the form of such initiatives, and the possible role fishworker organizations can play in this process. The plenary that followed tried to evolve a framework that reflected the issues raised in this session.

The third session stressed the importance of viewing natural resource issues in conjunction with those of property rights. Most countries accord greater sanctity to private property. Common property regimes are rarely recognized by the state, though they remain viable to manage natural resources.

Fourth session

The fourth session focused on fisheries management in the context of CAM. Management issues that stem from within the fishery sector have traditionally been addressed by fishery management institutions.

However, some coastal area problems affecting fishery resources are generated outside the sector, as, for instance, industrial pollution. CAM programmes

CAM in South Asia

Except for Maldives, the countries in the South Asian region face serious problems of coastal area degradation. Some attempts to deal with these have been made by countries in the region.

In India, coastal area degradation is acute, primarily due to industrial expansion, proliferation of urban settlements, growth of fertilizer and pesticide-intensive agriculture and aquaculture, as well as destruction of fragile coastal habitats. The Coastal Regulation Zone (CRZ) Notification issued by the state in 1991 makes some attempts at regulating developmental activities along a narrow, 500m strip of coastal land. Maximum controls apply to ecologically sensitive areas.

Significantly, the notification recognizes the traditional and customary rights to settlement, such as of fishing villages. States have been required, by law, to develop coastal zone management plans, and to specify and authority at the state level responsible for enforcement and monitoring of provision under this notification.

Progress has been tardy and state plans are yet to be finalized. The notification itself has several problematic areas. It completely lacks a seaward component. At the same time, by specifying a uniform strip all along the Indian coast as the coastal zone, it fails to recognize and respond to regional variation in coastal ecosystems as well as the specificities of resource management issues. It also fails to recognize linkages between activities in inland areas and degradation in coastal areas.

While it is true that India possesses other legislation which aims at, for instance, management of fishery resources in coastal areas, controlling pollution from industries, and so on, the focus of each is very specific and sectoral. There is not comprehensive legislation, which attempts to harmonize existing legislation and address environmental issues in coastal areas in a holistic manner.

In Maldives, environmental degradation has become an issue in recent years, with economic and urban development. Since the country depend for its very existence on the fragile coral reef ecosystem, any threat to its coastal resources could have serious and immediate consequences. Moreover, both

tourism and fisheries, economically the most important sectors in Maldives, depend on coastal resources and on a healthy coastal environment. In order to preserve its reef resources, a programme for the integrated management of reef resources has recently been initiated. For a country like Maldives, composed of small, scattered islands sustained by a dynamic and living base of coral, it is the concept of reef management rather than coastal management that has far more relevance.

A large part of Bangladesh is low-lying and the influence of the sea is felt even in inland areas, through tidal and wave action. The livelihood strategies of people in coastal areas have been adapted around this reality. There has been a symbiotic and complementary relationship between agriculture and fisheries.

However, the focus on the development of agriculture as a sector, without taking into consideration other environmental factors and interlinkages, has affected this relationship. To prevent saline inundation and, thereby, to increase agricultural production, construction of coastal embankments was undertaken in the period after the late 1960s. Important fish breeding and spawning grounds were destroyed.

The proposed Flood Action Plan for Bangladesh is likely to have the same effect. The rapid growth of export-oriented aquaculture has also led to significant destruction of coastal habitats, important for sustaining fisheries, and has generated tremendous social conflict among coastal communities. Bangladesh has not, however, adopted a holistic management plan.

Sri Lanka's coastal management programme now has a history of fifteen years. A specific agency, the Coast Conservation Department, has been created to handle all matters related to coastal conservation. While the programme was initially adopted in response to the serious problems of coastal erosion, efforts are now on to evolve a second-generation coastal management strategy to deal comprehensively with other coastal management issues. The focus is on the creation of Special Area Management Programmes in areas facing serious problems related to the coastal environment.

can potentially provide the space for fishery departments to play a role in their management. In the fifth session, a comparative view of coastal area degradation, and initiatives in coastal area management by countries in the South Asian region, was presented.

A panel discussion on aquaculture brought out the disastrous environmental, social and economic consequences of the spread of export-oriented aquaculture in South Asia, despite which governments of the region continue to promote it. The session also highlighted the strong links between aquaculture and industrial fisheries. In another panel discussion, representatives from among the Workshop participants presented their views on the institutional, legal and policy dimensions of CAM.

The final session of the Workshop provided information on international instruments of relevance to fisheries and CAM, such as the United Nations Convention on the Law of the Sea (UNCLOS), The FAO's Code of Conduct for Responsible Fisheries and the Convention on Biological Diversity (CBD).

The Symposium which followed was a more public affair, with participation from several local persons representing the state government and organizations within Madras. Presentations at the inaugural session brought out the

relevance of the FAO's Code of Conduct for Responsible Fisheries for CAM and fisheries management, and for fishworkers' organizations. Successes in the implementation of Integrated Coastal Area Management programmes in various parts of the world were also highlighted.

Government representatives from Sri Lanka, India and Maldives provided information on CAM initiatives in their countries. Unfortunately, the Government of Bangladesh was not represented. The report from the earlier Workshop was also presented during the Symposium. The concluding panel discussion focused on issues related to defending the interests of fishing communities in the coastal zone.

The meeting ended with a vow to continue the process of learning, campaigning, struggling, sharing and mutual support initiated and fostered by the Workshop and Symposium. ¶

This report was written by
Chandrika Sharma, Programme
Associate at ICSF's Madras Office

Learning, sharing, struggling

The South Asian Workshop on Fisheries and Coastal Area Management concluded with the following report

At the South Asian Workshop on Fisheries and Coastal Area Management, social activists, researchers, representatives of fishworkers' organisations and their supporters from Sri Lanka, Maldives, Bangladesh and India in the South Asian Region, as well as from several other countries, shared their concerns and views on fisheries and aquaculture, the livelihood struggles of the communities in the coastal regions, and on coastal area management.

Coastal regions of South Asia are extraordinarily rich in ecological diversity. This richness has been historically maintained and cared for by the women and men living by the coast. Fishing communities, through generations of interactions with the sea, rivers, lagoons and other elements in nature, have played a particularly important role in this process.

The women of these communities have always played a vital part in sustaining and nurturing fisheries and fishing communities. Unique modes of human-environment interactions have evolved in this region. These have been based on people's knowledge of the terrestrial and aquatic milieus, as well as of the highly complex and sensitive interactions between them.

People in the Asian subcontinent share common rivers and seas. Caring for fragile and interdependent coastal ecosystems is a crucial strategic concern of the people of this region. Due to this common concern, the workshop participants met to explore ways of working together, sharing experiences and providing mutual support for their particular struggles. It was felt that people's solidarity is extremely

important to resolve issues of major importance in the region. Noting the increasing struggles of coastal communities for their livelihood rights, participants came together to express their solidarity and pledge their support to this struggle. Participants also reiterated the importance of understanding mutual needs, and, where appropriate, sharing their resources equitably.

Coastal areas are not simply geographic locations proximate to the world's oceans. They are arrangements of complex, diverse and fragile ecosystems, unique in nature. These very features require special attention. Coastal ecosystems, such as mangroves, coral reefs, backwaters, estuaries, lagoons and seagrass beds, besides performing crucial coastal protection functions, provide rich spawning and breeding grounds for fish and other aquatic organisms.

Another important dimension is the vital contribution that coastal ecosystems make to sustaining livelihoods, particularly of fishing communities. From both an economic and livelihood perspective, fisheries are one of the most important of the resources available in coastal areas.

Living aquatic resources make a crucial contribution to food security, particularly in the coastal zone, as a source of high-value protein, providing the sustenance that supports livelihoods, social structures and economic development.

Protein intake

In South Asia, fish contributes more than half of the animal protein intake in the diets of coastal communities. In the Maldives and Bangladesh, for instance, fish contributes as much as 80 per cent of the animal protein intake. This has direct

nutritional implications for the fishery-dependent, poor marginalized coastal communities.

Governments in the South Asian region have, however, not sufficiently recognized the ecological, human and economic significance of coastal areas, and of the resources within them. These dimensions have not been sufficiently incorporated in environmental laws and regulations and in the macroeconomic policies pursued by governments in the region.

While the workshop specifically focused on the coastal zone, attention was drawn to the fragmented and compartmentalized view which often dominates mainstream thinking. Coastal zones are part of broader ecological horizons that include inland areas and waters. Activities in these have direct implications for the coast.

The inter-relationships between agricultural and marine activities were recognized and discussed. In Bangladesh, although agriculture is predominantly a floodplain activity, it is directly connected to the coastal ecosystem through major rivers and tributaries leading to the sea. Thus, rice and fish are produced from the same Agricultural land when flood waters enter the fields. Interconnections of a similar nature among rivers, canals, lagoons and seas are vital components in

and the fishery production cycle in parts of Sri Lanka and India. It is such relationships, within the totality of water bodies, which accounts for the high diversity of fish species in the South Asian region. Thus, Bangladesh, with around 400 fish species, has one of the richest inland fisheries in the world.

Despite the enormous significance of inland fisheries in Bangladesh and the importance of the floodplain ecology to the wider agricultural system, international donors are spending millions of dollars implementing the Flood Action Plan. This project plans to turn the floodplain ecology into dry land to promote a 'green revolution' in the rice fields, and a 'blue revolution' in the water. As a result, one-third of Bangladesh's floodplain areas, along with the complex floodplain ecosystems, will vanish in only two decades.

Coastal area issues

A major challenge for coastal area management is the maintenance and enhancement of the ecological diversity of the region. Achieving this will contribute to the general economic prosperity of the region and the livelihoods of the coastal communities, in particular. However, if this is to happen, economic activities and government policies must recognize the customary rights, especially of women, to land and other resources, as well as the vitality of traditional practices and the

indigenous knowledge of communities. The rapid development of coastal areas, fuelled largely by macroeconomic policies supporting industrialization as well as by the pressure to generate foreign currency through the mass production of goods for global export markets, is, therefore, a matter of concern. Such unplanned and unsustainable development generates huge profits for a relatively few people, at the expense of the many who are left with a degraded and polluted environment. The communities' rights to livelihoods are being overridden by the commercial rights of developers.

Thus, in Sri Lanka and India, fishing communities are under threat from their own governments which are trying to sell off their deep-sea fishery resources to joint ventures with foreign companies. In Bangladesh, national mangrove forest reserves in the Chokoria-Sunderban (a total of 8,500 hectares) have been handed over from the Ministry of Forestry to the Ministry of Fisheries (2,834 ha.) and the Ministry of Land (5,666 ha.) for leasing for shrimp aquaculture. As a consequence, large tracts of mangrove forests have already been completely destroyed.

Fishing communities have to increasingly compete with other resource users in the coastal area. Coastal shipping, construction of harbours, seabed mining, the development of industry and tourism, and urban development, are all impacting on coastal communities. Tourism in coastal areas, for instance, is displacing traditional fishing communities and disrupting their access to fishery resources and to beach space.

The effects of land-and sea-based sources of pollution on marine life and habitat, while severe, are not fully understood. The livelihoods of fisher people and women fish processors are consequently under threat. Fishing grounds and the habitats of fishing communities are being encroached upon. Displaced from their traditional activities in fish processing and marketing, women are increasingly exploited as factory workers in processing plants. They are forced to migrate in search of work. For instance, women workers from Sri Lanka form the bulk of the labour force in the fish

processing plants of Maldives. In the face of such threats, it is crucial that the rights to livelihoods be afforded a higher priority than the rights to profit from commercial activities.

Moreover, it is necessary to encourage collective and democratic initiatives at the level of the local communities. This will encourage using, caring for and managing the coastal environment and resources in ways which incorporate principles and responsibilities of common property, understood as community ownership.

Coastal area management must include in equal measure human, ecological and economic elements. The participation of the coastal communities must be ensured from the beginning in the formulation and implementation of policies regarding coastal area management. Institutions of the local government must be given proper authority and a clear role in community development as well as in conserving, maintaining and enhancing biodiversity. Local-level institutions need to be supported by, and should work in co-operation with, appropriate decision-making bodies at the state/provincial and national levels.

The workshop, therefore, highlighted the importance of participation in and decentralization of, decision-making processes and management as desirable objectives in their own right. Management needs to be oriented towards actually controlling and guiding the development process in a manner which benefits coastal communities. There is a need to recognize the advantages of allocating responsibilities at different levels.

Initiatives in CAM

Coastal area degradation particularly in Sri Lanka, Bangladesh and India, is acute. In Maldives, the problem is evident only near populated islands, such as Male. In most other atolls, the only concern is on the issue of global warming and associated climatic changes and rises in sea level.

Several initiatives in coastal area management have been taken by the governments in the South Asian region. In the context of Maldives, however, the concept of coastal area management is not

considered appropriate. The emphasis is on the integrated management of reef resources, since the country depends on these for its survival. In Sri Lanka, coastal area management has a history of 15 years.

A second-generation programme for the comprehensive management and development of coastal resources is being finalized. However, numerous loopholes in the legislation and in its implementation have provided scope for violations and for possible misuse of the coastal zone.

India has recently issued a notification for the management of coastal areas. However, the dynamic nature of the interface between land and sea is not recognized. Arbitrary boundaries drawn around the coast are inappropriate in areas where the tidal patterns vary, where the shape and structure of the beach areas are constantly changing, and where the paths and profiles of inland waters flood and recede seasonally.

A flexible approach to defining boundaries and planning development, based on unique geographical features, as well as the specific resource management issues prevalent, is required. Moreover, the impact of activities in inland and marine areas on coastal waters needs to be taken into consideration. With respect to the Indian Coastal Regulation Zone notification, the National Fishworkers'

Forum (NFF) pointed to some lacunae in the notification. The NFF will, nevertheless, press for its implementation in its present form, because it recognizes the traditional and customary rights of fishing communities to their habitations, and places checks on the anarchic expansion of large-scale coastal tourism and industrial developments.

Alert interventions by public interest groups and the positive attitude of the judiciary can play a crucial role in curbing violations. What is required in India is instilling an awareness among coastal fishing communities to utilize the notification to their advantage.

It was recognized that apart from actively campaigning to stop harmful activities in the coastal areas, fishworker and producer groups need to actively research and promote viable alternatives.

Human values

Such alternatives need to be based on human and ecological values, rather than purely motivated by the profit potential of the international global market. Polluters must be penalized for the damage.

The burden of proof should be on the developers (including government agencies) to show that their activities will not harm the coastal environment or the coastal communities. Environmental as well as social impact assessments should

be a compulsory part of the procedures in the approval process for potential development activity. Provisions for a public review process should be made mandatory.

Further, environmental impact assessments (EIAs) of *new* developments must be prepared in the context of existing activity in the area and their burden on the ecosystem. EIAs need to take traditional as well as 'modern' scientific knowledge into consideration. Where the information base is poor, or the likely adverse impact can not be predicted with any certainty, the 'precautionary approach' must be adopted, and development activities should not be undertaken.

All EIAs should account for the social and economic costs which environmental degradation causes to local communities. There must also be ways and means for accounting for the costs to be borne by future generations whose rights may be jeopardized by current developments. Once such costs are internalized, the economic rationale to pursue many 'development' policies or projects may cease to exist.

Many formal Acts pertaining to natural resource access and use in the coastal zone have been introduced in most of the countries of the region, over different periods of time. In the context of integrated coastal area management, there is a need to examine and harmonize these different Acts to ensure that there is coherence among them.

It is also necessary that national and state/provincial governments ensure that different departments are unambiguous on the allocation of responsibility and accountability.

While many characteristics and needs of fisheries are unique, there are several aspects which need to be integrated into a broader approach to coastal area management. In particular, there is a need to harmonize policy objectives between different natural resource users, and to establish mechanisms for conflict resolution. Wherever possible, different stakeholders need to be brought together. to plan and prioritize the uses to which

coastal areas are put. There are clearly many areas where harmonious development is possible, and these areas need to be identified and prioritized.

The debate on industrial shrimp aquaculture highlighted the history of its development in the region. South Asian governments have yielded to the pressures of international funding agencies, multinational companies and local industrialists. They have turned a deaf ear to the problems which this industry has already created in other Asian countries.

As a result of this, extensive land alienation, especially of agricultural land, has taken place in Bangladesh, both for intensive and extensive forms of shrimp aquaculture. In Sri Lanka, the government is implementing plans to develop shrimp aquaculture in the south of the country, despite evidence of the harmful effects of aquaculture in the north-west.

In both Bangladesh and India, there has been substantial loss of biodiversity and destruction of coastal habitats, such as mangroves. Aquaculture growth has also led to groundwater depletion and land salination. This has threatened both local food security and the livelihoods of many coastal communities, in particular of small-scale fishers, farmers and landless labourers.

The impacts of the 'predatory expansion' of aquaculture in Bangladesh and India have resulted in immense human costs in the form of physical harm and violence, especially against the women of coastal communities.

People's movements

In Bangladesh and India, people's movements opposing this type of aquaculture have sprung up. They have been met with strong resistance from the investors. Public interest litigations in India and appeals to international forums have helped focus attention on the issue. Despite this, new areas continue to be brought under aquaculture.

Aquaculture is being promoted as a major earner of foreign exchange. However, environmental assessment studies conducted in India have revealed that the

social and environmental costs associated with aquaculture far outweigh these benefits. The profits from intensive aquaculture as compared to the use values of unspoilt mangroves have also been grossly exaggerated. In this context, it is important to note the findings of a recent South-east Asian Fisheries Development Co-operation (SEAFDEC) study, which has shown that the market value of the harvested resources from a well-managed hectare of mangroves (valued in the range of around US\$ 10,000) is only a little less than the net profits from a hectare of intensive shrimp aquaculture.

In the context of falling marine fish production, aquaculture has been advocated as a viable, alternative source of fish supply. However, the feed for intensive shrimp aquaculture is primarily from the harvest of industrial fisheries converted into fishmeal. It is estimated that by the year 2000, about 570,000 tonnes of cultured shrimp will be produced in Asia. The fish feed requirement for this will be of the order of one million tonnes (dry weight). This represents a staggering three million tonnes of fish, in wet weight, more than the total marine fish harvested in India today. This is clearly unsustainable, with an unknown impact on marine biodiversity and the food chain. It also has negative implications for the livelihoods of small-scale fishers. Additionally, the diversion of fish to fishmeal manufacture not only deprives

the local population of inexpensive fish protein, it also displaces women whose livelihood was earlier derived from fish processing using traditional methods, as recently witnessed in West Bengal, India.

All this points to the link between industrial aquaculture and industrial fisheries, both of which are detrimental to the interests of artisanal fishing communities. The demands, therefore, to ban shrimp monoculture and industrial fisheries, and to strictly regulate trawl fisheries should be seen as intrinsically inter-related, if coastal management is to be oriented towards sustaining coastal communities and fishery resources.

Fisheries management

Many of the fishery resources of the countries of the region are heavily exploited, particularly in the coastal waters. As a consequence, these resources are more susceptible to adverse environmental impacts caused by degradation of fishery habitats and pollution. Further, the economic and social benefits derived from marine resources are significantly lower than could be obtained if more effective fisheries management measures were implemented.

These require stricter limits, reductions in the fishing capacities of industrial fishing vessels, expansion and effective enforcement of zoning arrangements to

International Labour Conference

84th (Maritime) Session, Geneva, October 1996
Committee on Convention No. 9

Draft Resolution on the Application of Revised Convention No. 9 to the Fisheries Sector Submitted by the Workers' Group

The General Conference of the International Labour Organization,

Having met in Geneva in its 84th Session, from 8-22 October 1996.

Recognizing the current crisis in the fishing industry, which has serious repercussions on the labour and social standards of fishermen and which has resulted in the abandonment of many crews of fishing vessels in ports worldwide without any recourse to compensation for lost earnings and assistance with repatriation, except from charitable organizations,

Recognizing also the increasing globalization of the industry which has led to the recruitment and placement of fishermen on board foreign flag vessels and the important initiatives undertaken by other international for a, with regard to the management and conservation of fish stocks,

Noting the urgent need to revise international labour standards for fishermen and to expressly extend a number of the maritime standards to the fishing sector,

Noting also the adoption of the Recruitment and Placement of Seafarers Convention (Revised), 1996,

Invites the Governing Body of the International Labour Office to:

1. Promote the application to fishermen of the Recruitment and Placement of Seafarers Convention (Revised), 1996, by Members following discussions between representative organizations of fishermen and fishing vessel owners and the competent authority,

2. Convene an early tripartite meeting for the fishing sector to assess which of the other ILO maritime instruments should be applied to the fishing sector through the adoption of appropriate protocols, and/or the adoption of new labour standards for the sector and in this regard to place the issue of new labour standards on the agenda of an early session of the International Labour Conference.

The above resolution was adopted in Geneva at ILC's 84th (Maritime) Session where ICSF was also a participant.

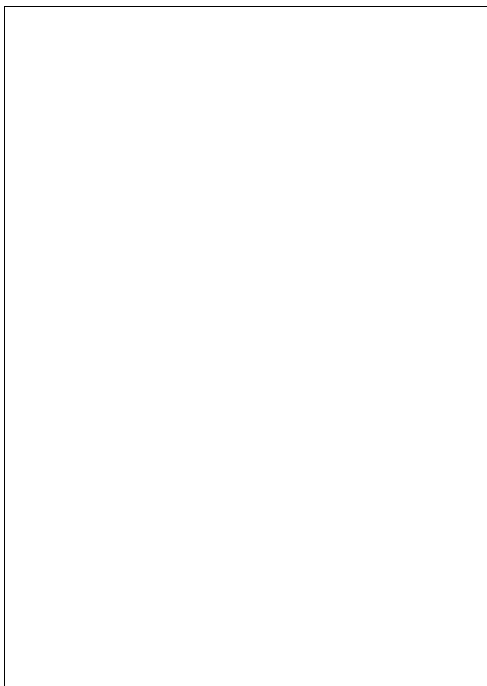
protect the fishing activities of small-scale fishers, as well as the establishment of community-based fishery management regimes for the small-scale sector. There is a need to recognize customary and cultural rights to fish resources and to revive and strengthen traditional systems of fisheries management. These are essential functions of fisheries administration.

In Maldives, for instance, the government strictly regulates the type of gear used within its waters, both by domestic and foreign fishing vessels. Only the use of pole-and-line for tuna fishery is permitted. Similarly, state legislation in India provides for zoning regulations and sometimes imposes seasonal bans on non-selective fishing activities in coastal waters.

The workshop had the opportunity to discuss the relevance of important international instruments related to fisheries, in particular the United Nations Convention on the Law of the Sea (UNCLOS) and the related UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks, the Rio Declaration and Agenda 21, the instruments of the International Maritime Organization (IMO) regarding pollution and 'safety at sea, as well as the FAO's Code of Conduct for Responsible Fisheries. The relevance of these instruments to artisanal fisheries and to coastal fishing communities was examined. All these documents take into consideration the importance of coastal communities. The FAO's Code of Conduct, for instance, recognizes the importance of coastal communities in the planning, management and development of coastal resources.

It was also indicated that there has been a misinterpretation of Articles 61 and 62 of the Law of the Sea on the possible claims by another State with regard to the use of marine resources considered as not fully utilized by the Coastal State. Under UNCLOS, Coastal States have the sovereign right and obligation for the utilization, conservation and management of the living marine resources of the EEZ for use by its present and future generations.

In conclusion, this report is the result of a conscious pedagogy of learning. It has



fused together the life experiences and struggles of coastal people with a distilled analysis of issues pertaining to natural resource use, management and related property regimes.

It has enabled participants to locate their own personal perspectives in the context of the newly emerging regimes of coastal area management. It has also provided some firm foundations to construct future partnerships and regional linkages for sustainable use of coastal zones and for promoting the livelihood rights of coastal communities. Noting all of the above, the Workshop concluded by endorsing a commitment to continue the process of learning, campaigning, struggling, sharing and mutually supporting, all processes initiated and fostered by this Workshop. ¶

This report was presented at the concluding session of the South Asian Workshop and Symposium on Fisheries and CAM, Madras, 26 September - 1 October 1996, organized by ICSF.

PECHEURS D'ESPOIR AU SENEGAL by Francois Bellec, ed. de l' Atelier (Collection Les Acteurs du Development), 12 ave Soeur Rosalie, 75013 Paris, 160p

The battle for fish

The story of the struggle of the Senegalese artisanal fishworkers is movingly narrated in this new book

A new book by Francois Bellec, *Pêcheurs d'espoir au Senegal* (Fishers of Hope in Senegal), has just been published in France. It tells the tale of the struggle of the Senegalese artisanal fishworkers. From a personal point of view, I must emphasize that, in ten years of work as an active fishworkers' supporter, it was the National Collective of Senegalese Artisanal Fishermen (CNPS) which gave me vital inspiration.

The fact that these fishermen decided to organize themselves independent of any governmental volition was crucial to my own commitment. One can work in 'development' jobs with a greater or lesser degree of conviction, but it is the combined efforts of the men and women like those who form part of the CNPS which make it worthwhile. Francois Bellec's book features these men and women, each in his or her place fulfilling a common dream, sharing the faith. Often the individual and collective achievements are far from perfect. *Pêcheurs d'espoir au Senegal* makes no secret of that.

The picture Bellec paints is full of the colours and smells of the narrow streets of St. Louis or Joal, of the humour of characters who spend their lives as part of the throng, apparently just 'getting by'; but these same passersby have time to live and teach us in the West a few lessons in humanity, if we ever get the chance to rub shoulders with them. They are people who have made friendship the basis of an international partnership with their French counterparts. They are also 'warriors', as Bellec's book emphasizes. Indeed, the struggle of the Senegalese

artisanal fishworkers often takes a more poignant collective form, as when women, for instance, are obliged to defend their right to process their fish on a secluded part of the beach, in opposition to the local hotel developers; or when the long-term negotiations on fair fisheries agreements must be sustained at international levels, despite unequal odds.

Overall, it is a historic struggle; a winning one, since time is of the essence. Here, the Muslim Senegalese are well-schooled: there is no rush, but when the job needs to get done, it does—peacefully as a rule, and philosophically.

Often, the book touches on the underlying hostility towards the CNPS in official circles. This is no doubt because the CNPS appears more and more as the real custodian of the Senegalese fishery resources. This is something that most governments can not achieve through public edict or administrative zeal.

There is usually a lack of political will, in the first place, as well as the authority to go with it, more than the mere lack of adequate material means. The trouble is that there are too many vested interests, as well as international pressures, to turn the fish stocks into easy money.

Essential pressure

When a 400,000-strong community decides to reverse this situation to safeguard its present and future livelihood, it can provide essential pressure. Its members are then considered subversive and the 'international community' is quick to close ranks.

This is what happened in 1992 when the socialist coalition in the European parliament backed the socialist president

for re-election by making sure that the grossly extravagant fisheries agreement (worth 32 million ECU at the time), which the CNPS opposed, was once more voted in. The CNPS were declared to be a 'risk to the political stability' of Senegal, and the money arrived just in time for the salaries of the long-suffering Senegalese functionaries.

The so-called 'battle for fish' is a real battle, sometimes fought put at sea, in the media, in offices, research centres and on the international stage. It is a battle which requires considerable courage on the part of the front-liners, because lives are at risk in a background of political uncertainty (not to speak of graft and corruption) extending around the world.

There is evidence that French and other European fleets fished off the coast of Senegal at least from the 16th century onwards. Subsequently, the colonial era laid the foundations of what is today a floundering Franco-Senegalese industrial fishing sector. The international Law of the Sea allows for the right of other countries to exploit and participate in the management of the fish stocks living in the waters of coastal states.

This has become referred to of late as the 'obligation to co-operate' and it is clear how the concept can be used by distant-water fishing nations to impose fishing licences on coastal states. A few years ago, a former Senegalese fisheries minister referred publicly to the "duty of co-operation", which has since become more stringent. More than ever, the international market is imposing its law.

[n our view, we are increasingly witness to a new form of colonialism, since the EU is in desperate need of fish for its market, and of jobs for its fishermen (or rather, access to fish stocks for distant-water fleets). This does not prevent the European Commission's functionaries from turning around the accusation by claiming that commercial agreements are untied aid', that is to say, governments which sign fisheries agreements can do what they like with the money the EU dishes out in exchange for the right to fish - even if this money actually harms the local fishing community.

But whose money is it, in the first place? When will we, in Europe, wake up to the realization that it is our money that is being spent in the guise of public sector subsidies for commercial agreements, as well as for development aid?

Consequently, we must claim our right to make the EU accountable for its policies and actions. Let us hope Bellec's book serves to make the CNPS' struggle better known—and thereby underlines the EU's accountability. Also better known should be the partnerships built up with their Breton and Norman counterparts, who are experiencing problems tied to the internationalization of fisheries.

One of the individuals who features prominently in Bellec's book is Dao Gaye, general secretary of the CNPS, fisherman and international negotiator. In August 1993, I accompanied Dao on a visit to England and Ireland. If there is one thing we have retained from that journey, it is the acknowledgement by representatives of the maritime sector there that the CNPS was expressing something worth emulating in Europe. We were not talking to subversives, but to all ranks in the maritime establishment (even, in one case, an admiral). This was yet another indication that the CNPS was setting the pace, not only for the French as natural historical partners, but also for seafarers as a whole, reduced more often than not to a marginal social role.

Honourable struggle

Here was further proof that the CNPS' struggle was also that of the beleaguered fishermen of Europe, if only they would fully realize it. The struggle is also for the very survival of fishery resources for future generations. ❧

This review is by James Smith, Board Member, Fishing and Development Collective, Lorent, France and a member of ICSF.

News Round-up

March zone

The National Fishworkers' Forum (NFF) organized a march through the state of Kerala in south **India** in late November to press for the implementation of new legislation designed to protect the country's coastal zones. Though several problems remain about interpretation and implementation of the law, the NFF feels that it is a good beginning.

Hawaiian restraint

Also begun around the same time was a series of public meetings by the Kahoolawe Island Reserve Commission on an ocean management plan which proposes to restrict fishing around the island of Kahoolawe

in **Hawaii**. The aim is to permit only those who live on the island- for educational or cultural purposes- to fish in adjacent waters for subsistence.

Reef grief

The US Agency for International Development has sanctioned a \$21 million Coastal Resources Management Project in

the **Philippines** to prevent the destruction of coral reefs by detonation dynamite and spraying cyanide to catch fish. The project will try to create a local coalition for sustainable management to preserve the coastal environment and fight forces earning money by destroying it.

Tuna battles

A fight of sorts also followed the meeting of the International Commission for the Conservation of Atlantic Tuna (ICCAT), held recently in San Sebastian, **Spain**. Earlier, the US indicated that it may seek ICCAT approval of sanctions against non-ICCAT members Belize, Honduras and Panama for harvesting bluefin tuna in the Mediterranean Sea without regard to ICCAT guidelines. But Panama's Commerce Minister denied any violations. He said that Panamanian vessels were told in October 1996 that their registry would be cancelled if they fished for Atlantic bluefin tuna.

Chilly reception

Rejected on 21 November by Chile's Foreign Investment Committee was an application by a local fishing company to replace three small vessels with the world's largest factory trawler, the American *Monarch*,

owned by the American Seafoods company but registered in Norway. Greenpeace had protested the proposal

to use this 96.2-m surimi ship to harvest and process as much as 1,000 tonnes of fish daily off southern **Chile**.

Net solution

In Mississippi, US, the Commission on Marine Resources adopted a regulation requiring Mississippi fishermen to use nets made of degradable material after 1 January 1997. But the fishermen protest that such nets are not made in commercial quantities, that the proposed material is difficult to distinguish from non-degradable materials, and that costs are significantly higher than non-degradable nets.

Caviar, anyone?

The new year will perhaps see less of caviar. In mid-November, fishing industry representatives from **Russia, Azerbaijan, Iran, Kazakhstan and Turkmenistan** met as an international committee on Caspian Sea biological resources

and signed a protocol banning fishing for sturgeon in the Caspian Sea beginning in 1997. Sturgeon fishing will, however, be permitted in the lower reaches of the Volga and Ural Rivers.

Grim shrimps

The National Fisheries Institute joined the US government in appealing and seeking a stay of the October order by the US Court of International Trade that expanded the embargo on shrimp imports to the US. On 8 October, the Court had ordered the US government to prohibit shrimp imports from nations not certified under P.L. 101-162. Shrimp exporting countries are required to install Turtle Excluder Devices in their trawlers.

The court ruling rejected the argument that shrimps harvested in aquaculture operations or by methods not harmful to sea turtles should not have been embargoed. It held that only an embargo on all shrimp imports would provide the incentive for nations to get certified.

At the same time, four Asian nations (**India, Malaysia, Pakistan and Thailand**) filed a case against the US with the World Trade Organization (WTO) relating to this ban.

These nations have asked the US for formal consultations on the issue. The US had 10 days to reply and 30 days from 8 October 1996 to begin consultations. If no solution is reached within 30 days of consultations, a full WTO dispute panel will convene.

Spare the fish

Excluders are also in demand elsewhere. The Gulf of Mexico Fishery Management Council in

the US has heard a hearing on proposed regulations requiring shrimpers to use fish excluder or by catch reduction devices when trawling in federal offshore waters. The aim is to minimize the capture of immature red snapper and other finfish species.

World tribunal

International disputes relating to the ocean and seabed can now be resolved in a new forum: the UN's International Tribunal for the Law of the Sea. On 18 October, 21 judges were sworn in at Hamburg, **Germany** to initiate the tribunal.

Hake take

Later that month, the Commission for the Conservation of Antarctic Marine Living Resources approved a

request by **Australia** that it be allowed to begin fishing for black hake next summer in waters near its Heard Island territory.

No cod

The Russian Fishing Committee adopted a resolution recommending that fishing companies in **Russia** suspend any commercial fishery dealing with Iceland, due to Iceland's alleged unregulated harvest of cod from international waters in the central Barents Sea. Despite protests from Norway and Russia.

And no pods too?

A fishery organization in **Morocco** has called for urgent measures to protect cephalopods (octopus, squid and cuttlefish) from extinction due to alleged overfishing in Moroccan waters by foreign fleets.

If says that average catch rates were only half of what they were a year ago.

Good read

How the alarming decline in biodiversity-agricultural, aquatic and livestock-can be. Reversed in addressed by Intermediate Technology, UK in three recently published booklets on 'dynamic diversity', reports Brian O'Riordan of Intermediate Technology.

These describe how farmers, livestock keepers and fisherfolk around the world are

working to safeguard such biodiversity.

The booklets describe conservation activities and propose policy changes needed to halt the decline of biodiversity of food species, the very basis of food security.

Another good one

The same topic is also tackled in a new publication, titled

Biodiversity in the seas: Implementing the Convention on *Biological Diversity in Marine and Coastal Habitats*.

Jointly published by the International Union for the Conservation of Nature (IUCN), the Centre for International Environmental Law (CIEL) and the World Wildlife Fund (WWF) of the US, it is written in a non-technical style.

It is meant for a variety of users, from national and international policymakers to local and regional managers of marine living resources.

Cyanide danger

Beware the waters off Manila Bay in the **Philippines**. Officials announced that cyanide appeared to be the cause of a massive 30-tonne fish kill observed early last month. The source of

the cyanide was unknown.

Opening up...

Markets in **South Korea** will now open up to imports of 31 additional fisheries and agricultural products this year, within the framework of WTO. From 1 July, products like frozen pollack, sole and hairtail have been allowed to enter South Korea. About 95.9 percent of the Korean market has thus been opened to fishery and agricultural products.

...and dwindling

Since 1990, **Sierra Leone** has seen a significant drop in the number of large-scale fishing vessels, partly due to the reluctance to sign fishing agreements with the erstwhile USSR and the EU. The number of registered fishing vessels peaked in 1987 at 309 and then dropped drastically to 74 in 1994.

But this has helped the artisanal sector which targets the same species. This sector has reported a recovery in fish stocks and a rise in the number of fishermen and outboard motors.

Oops, spilt oil!

Over 300 fishing vessels gathered near Chinese Petroleum's offshore oil port at Kaohsiung, **Taiwan** on 20 September 1996 to protest slow action to compensate them for damages from an August 1996 oil spill. Fishermen claimed that the US\$ 8.36 million compensation payment schedule was not being met.

News Roundup

Mary Hyrske lives in a tidy little house with a Christian fish symbol at the door.

She's sixty-one and she's worked for 'Bumble Bee for twenty-five years. She's been a cleaner, a skinner, a salmon slimer, a liver picker and now she takes the viscera out of the tuna.

"I tell young people when they're so tired and bored and disgusted, 'Every day gets better and better. Take it from me.'"

"Are the young people very different these days?" I asked.

"Not really. No. They want to do the best work they can. But they stick up for themselves to the bosses in a way we never would. They have their individual rights. Which is why I admire them."

— from **All the Livelong Day** by Barbara Garson



ICSF is an international NGO working on issues that concern fishworkers the world over. It is affiliated to the Economic and Social Council of the UN and is on UN's Special List of Non-Governmental International Organizations. It has also been granted Liaison Status by FAO. Registered in Geneva, ICSF has offices in Madras and Brussels. As a global network of community organizers, teachers, technicians, researchers and scientists, ICSF's activities encompass monitoring and research, exchange and training, campaigns and action programmes, and also communications. SAMUDRA REPORT invites contributions and responses. All correspondence should be addressed to ICSF's Madras office.

The opinions and positions expressed in the articles are those of the authors concerned and do not necessarily represent the official views of ICSF.

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