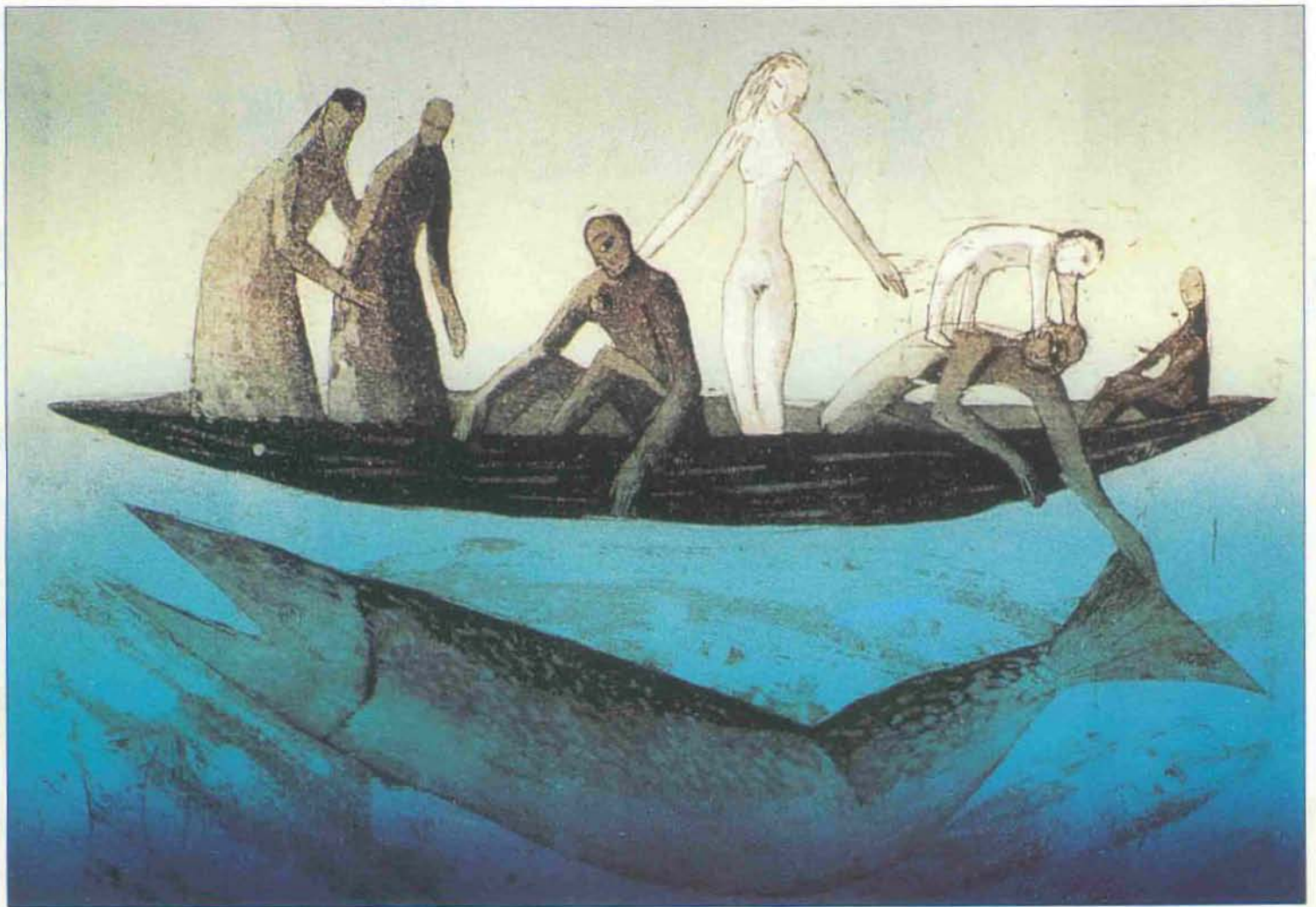


No. 15

July 1996

# SAMUDRA

INTERNATIONAL COLLECTIVE IN SUPPORT OF FISHWORKERS



FOCUS ON MARINE STEWARDSHIP COUNCIL  
ELECTRIC FISHING IN VIETNAM  
WOMEN IN FIJI'S FISHERIES  
NEW SOUTH WALES' ENVIRONMENTAL DAMAGE  
LAKE VICTORIA TRANSFORMED  
EU'S NEW GENERATION AGREEMENTS  
BLUE EUROPE  
GENDER PERSPECTIVES  
NEWS ROUND-UP

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## Comment

# Going green about the gills

It takes two hands to clap and when these belong to giants like the multinational Unilever and the high-profile World Wide Fund for Nature (WWF), the result could be a thunderclap. Precisely such a blast can be expected from the Marine Stewardship Council (MSC) planned by these two organizations.

Unilever, with global sales of US\$ 900 million in fish products and a 20 per cent share of the European and US frozen-fish market, is teaming up with an environmental NGO to 'ensure the long-term viability of global fish populations and the health of the marine ecosystems on which they depend.' The move has received great media attention in the UK. A columnist in *The Times* said that 'These last years of the century are giving birth to a new alliance: a type of ruthless, unsentimental, large-scale action which entirely bypasses governments. After years of mutual suspicion and tension, the environmentalists and the industrialists, the sandals and the suits, are working things out together...' *The Daily Telegraph* hailed the MSC as "one of the most significant initiatives to halt fish stocks decline since Iceland went to war over cod in the 1970s."

Are these claims justified? Perhaps in a situation of monopsony, with Unilever the sole buyer of fish, the MSC may help seal up the global wholesale market. Unfortunately, this is not the case in the real world. The Japanese consumer market for fish, by far the world's largest, remains totally outside the influence of the Anglo-Dutch giant. So do the retail markets of the 'Asian Tigers.' As an initiative to 'bell' the market for long an elusive link in fisheries management the MSC is welcome, especially if it complements existing fisheries regulations and instruments. Arguably, fishers who use ecofriendly gear like gill-nets, long lines, traps and pots might benefit from the MSC. If competitive conditions prevail in their domestic markets, they will realize better incomes from 'green' fishing operations.

This, however, does not mean that fish thus caught will replace those caught by non-green, 'dirty' methods. At best, a niche market for ecoconsumers will develop. Like buying organically grown vegetables, the consumer will be able to choose fish with a 'green' stamp. This implies a greater product differentiation in the market, though not the elimination of 'dirty' fish. Ultimately, both 'green' and 'dirty' fish will co-exist. Tampering with only the market mechanism, therefore, will produce only partial results.

If the real interest is the long-term sustainability of marine resources, then more needs to be done. Any measure of sustainability should also include social criteria that reflect the livelihood interests of the majority in fishing communities. Moreover, it should recognize existing fishing technologies that are selective. The principles of sustainable fisheries ought to be developed through consensus. The MSC should not unfairly penalize fishers who use 'dirty' fishing techniques. It should also give them an incentive to switch to ecofriendly methods, with perhaps some kind of income support.

The MSC initiative, however, has not won the total confidence of fishing communities, either in the South or the North, because of their great distrust of Unilever. Many consider the multinational giant to be a wolf in sheep's garb. To be sure, sustainability may make good business sense, but Unilever could just as well have waited for the sustainability criteria to ripen on its own, before exploiting it for its corporate interests. In any case, the idea would have been taken far more seriously by fish workers' organizations had WWF consulted them before plunging in.

It is too early to get overexcited about the MSC or to say if it will actually halt the decline of fish stocks, given that it may finally apply potentially to only about a quarter of global fish production. As one commentator indicates, the MSC points to the future of fisheries management. So far, such efforts have been lackadaisical. Unless the stakeholders, especially fish workers, are consulted and encouraged to participate in management programmes, the state and democratic institutions will only get more marginalized through market-led initiatives. We would like to tether the market and make it more accountable, but we can not view market intervention as the only path to sustainable fisheries. Meanwhile, given the ideologically charged and conflicting stances, it is hardly surprising that both, critics and proponents of the MSC are going green about the gills.

Tam Giang lagoon

## Shocking fishing

**The Quang Thai Commune has woken up to the problems of using electricity and dynamite for fishing**

**A**t the very centre of Vietnam, in the province of Thua Thien Hue, lies the Tam Giang lagoon, which has two openings to the sea. Actually a system of lagoons formed by three large rivers and powerful sea currents, it produces three main basins and a narrow channel separated from the sea by sand dunes.

The total surface area of the lagoon is 21,600 sq km. In the rainy season, the water is fresh and floods prevail. But, normally, the lagoon is shallow, with an average depth of 15 m, and is becoming increasingly so. Both the mouths of the lagoon are unstable. The southern mouth has been closed on and off for several years. Its closure affects the salinity and species composition in that section of the lagoon. A more permanent, carefully engineered, opening was completed in September 1995.

Aquatic resources found in the lagoon include seaweeds (used to produce agar), sea grasses (used as soil and animal feed), crustaceans (crabs and shrimp of many species), molluscs (clams and mussels), and fish, both freshwater and salt-water species—depending on the season.

A population of about 220,000 lives around the lagoon, depending on its resources, as well as on agriculture in the sandy soils around the lagoon, and from fishing in the sea. One of the biggest problems they face is the intense overexploitation of aquatic resources. According to data compiled by the Department of Fisheries, the number of fishers in the lagoon rose from 5,575 in 1982 to 9,120 in 1993, while the total production dropped from 4,042 tonnes in 1966 to 1,973 tonnes in 1994.

Although statistics on artisanal fisheries are most often unreliable, this data,

nevertheless, does give some indication of the status of the lagoon fishery. Personal observations indeed confirm the high rate of exploitation of aquatic resources from the lagoon. Cruising through a small three-hectare section of the lagoon, one could observe dozens of bottom-nets and fish corrals using mesh sizes of five to seven sq mm and even smaller, although the legal size is nine sq mm.

There were six motorized boats raking the lagoon bottom for eels (two to four rakes per boat), while a couple of dozen women and men waded in chest-deep water using strong bamboo push-nets, which can also collect sea grasses. Also observed were 12 boats engaged in 'electric fishing' using batteries and transformers to generate 220 volts of electric power which stuns all marine life within a one-metre radius. Simultaneously, seven men on foot, carrying their equipment in backpacks, were also seen using electricity to fish in a nearby marsh.

Fixed fishing gear, such as fish corrals, bottom-nets, lift-nets, fish aggregating devices (FADs) and other fish traps are scattered throughout the lagoon. Closer to the shores are net enclosures, shrimp/fish cages and shrimp/fish ponds. Approaching Hue airport and observing the lagoon from the sky, one gets the impression that not a single sq m of water surface is left unused. Mobile fishing gear operators (using gill-nets, rods, push-nets, drag-nets, etc.) are spread throughout the available surface—which is growing smaller and less accessible each year.

### **Two-year project**

Now, a two-year project aims to research the management of the biological resources of the Tam Giang Lagoon. Funded by the International Development Research Centre (IDRC), Canada and the

## *The ban appeal*

Quang Thai People's Committee Socialist  
Republic of Vietnam

No. 17 NO/QO 12 March 1996

To : The people of our commune and  
neighbouring communes

### **Regulation to Protect the Environment**

This regulation complies with Article No. 01/CTUB of Thua Thien Hue Province on the banning of dynamite and electric fishing in aquatic exploitation (dated 9 January 1996) and with the Quang Dien People's Committee programme of banning electric fishing.

Recently, in the lagoon and in the rice fields bordering the lagoon in our commune, fish and

shrimp are decreasing, while the environment and the local economy are badly affected. The main reason for this is the use of electric.

The whole commune has disapproved of this practice for a long time. Some resolutions regarding the problem have been sent to the concerned authorities. However, nothing has been done. Electric fishing continues, which makes the damage all the more serious.

Now, with the assistance of the concerned bodies and organizations, the local government has announced this announcement to ban dynamite and electric fishing. This programme aims at restoring our local aquatic resources and improving the local economy and the environment.

In the past Quang Thai Commune investigated the use of electric fishing. It was found that more than half of the people in Quang Lot Phong Chuong, Dir Hos and Dien Loc Communes use this destructive gear. Rice fields close to the lagoon are damaged, aquatic resources exhausted and not allowed to develop. If this continues, our aquatic resources will soon run out, affecting the economy of fishers. Considering these problems Quang Thai People's Committee has issued the following regulations:

1. The order No. 1 ct/ub of the Provincial People's Committee on the banning of dynamite and electric fishing applies to the local community.

II. Loudspeaker communication is used to announce the regulation to families using electric fishing. Along with this, the signatures of all electric fishers will be obtained on a letter of agreement to abandon electric fishing. This applies not only to the people of Quang Thai Communes but also to the people of neighbouring communes.

III. Every person using electric fishing must comply with this regulation and communicate to, and mobilize others to comply with this regulation.

IV. After four days of communication and encouraging people to comply with the regulation (16 to 19 March 1996), the communes will strictly impose fines on people who do not comply.

V. Anybody caught electric fishing will be taken to the Commune by the Guards of the fishing Environment.

VI. For a first offence, the transformer and electric equipment of the fisher will be confiscated, and the fine will be 70 percent of the value of the battery and the boat.

VII. For a second offence, the commune will confiscate all the equipment and each person will be fined 200,000 VND. Those refusing to pay will be sent to the District People's Court.

VIII. Every person must comply with the regulations. The commune will not tolerate any exceptions and will not be responsible for any losses.

IX. As enforcers of the programme, the heads of self-managed groups and the guards must carry out their assignment radically and correctly to ensure fairness to all.

X. This notice appeals to the people of this commune and neighbouring communes to strictly comply with the Provincial Order and the regulation of Quang Thai, in order to gradually get rid of dynamite and electric fishing gear that destroy the environment to improve the local ecology.

(Signed and approved by the Chairman of the People's Committee of Quang Thai)

Vietnam Sustainable Economic Development agency (VISED), which is an IDRC-CIDA Joint Aid Programme for Vietnam, the project is being carried out by the Hue University of Agriculture and Forestry (HUAf), Hue University of Sciences (HUS) and the Provincial Department of Fisheries (DF). Nineteen researchers from the three institutions are grappling to understand the status of resource exploitation in the lagoon.

**A**s IDRC's main objective is to introduce new research techniques—principally using interdisciplinary and participatory approaches—the researchers spend a lot of time in the villages around the lagoon, talking and discussing with fishers, farmers, aqua-culturists, traders and anyone else connected with the exploitation of biological resources. The project focuses its activities on three communes which are somewhat representative of the lagoon system. Inevitably, since the research is conducted with the participation of local people, the researchers often feel they should do more than just study.

In the village of Trung Lang in the Quang Thai Commune, the six researchers (an aquatic biologist, a farming systems researcher, a sociologist, a crop scientist and a staff member of the DF) were confronted with the fishers' plea to help protect their aquatic resources. The main

complaint was against the 'electric' fishers, who are mainly farmers looking for alternative sources of income in slack employment periods. Although this activity is illegal by government decree, the law is not enforced.

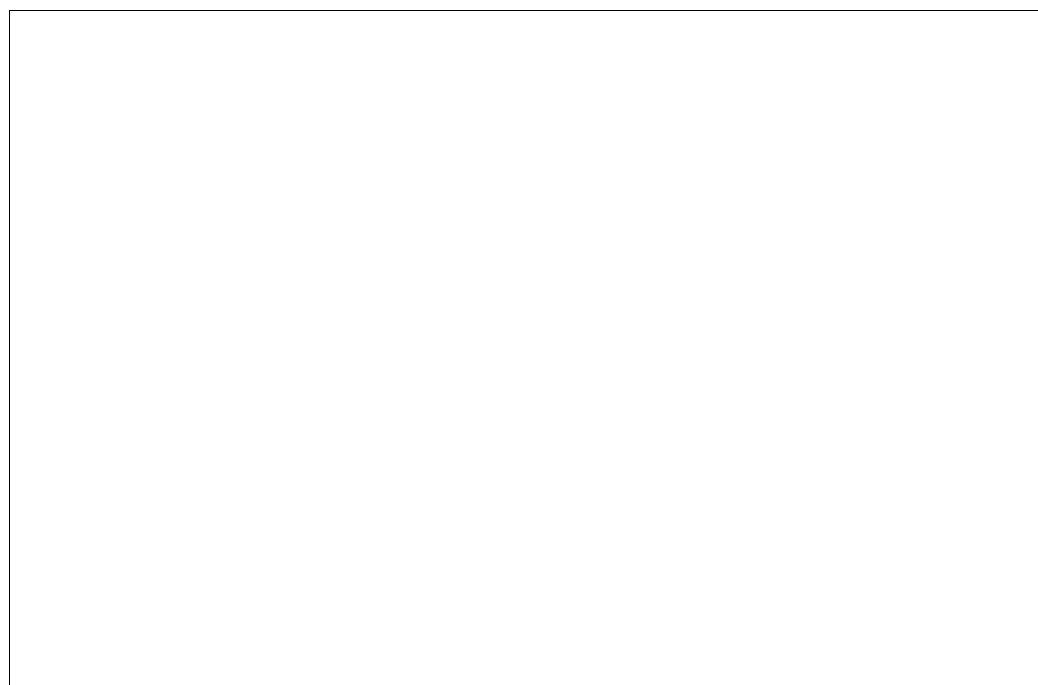
Putting aside their research agenda, the researchers began to help the villagers get organized, approach the leaders of the commune and the district, and design an effective patrolling schedule for the commune waters.

The fishers set up a committee, elected a leader, and then began discussions with the commune leaders. This process was facilitated by the researchers. The commune instituted a system of fines and penalties on all fishers disobeying the ruling. However, a four-day grace period gave the 'electric' fishers a chance to get used to the new ruling. In those four days, the committee and its leader patrolled the waters and informed fishers of the new rules.

A notice (see box), written by the commune's official guard, in collaboration with the fishers' Committee for the Protection of the Environment, was read out over a loudspeaker from the patrol boat.

#### **Current situation**

What is the current situation in the Tam Giang lagoon? 'Electric' fishing during



daylight hours has virtually stopped and it has decreased at night too.

**T**he fishers have established a system of guard duty and they patrol the area at random on boats. At night, they find it difficult to apprehend the illegal fishers, particularly those who exploit the marsh area on foot.

However, neighbouring farming villages are joining in the action. They are supporting the ban by expanding the activities of their night watchmen (who patrol the fields at night against theft of crops) to include patrolling of rice fields and marshes to drive off 'electric' fishers. Villagers throughout the commune are contributing funds for increased surveillance. Now, even neighbouring communes are showing interest and 'electric' fishing may soon become obsolete.

What about the 'electric' fishers themselves? Can they afford to give up this source of income? The researchers are trying to find ways to help them find alternative employment. Already, an international NGO working in the area has offered support by extending credit to those voluntarily abandoning 'electric' fishing.

Meanwhile, the research group is struggling with other issues. The fishing village, though wealthier than the

neighbouring farming villages, has less of infrastructure and access to schools and health clinics. They thus appear much poorer. Perhaps one reason for this could be that fishers, who compete on water, tend not to be organized on land. In contrast, the neighbouring farming community has mobilized and organized its members to get electricity connection.

The road leading from the commune headquarters to the fishing village is a single lane, with only a few planks of wood serving as a bridge. Since the establishment of the programme banning 'electric' fishing, the fishers have started contemplating other projects.

The first is for the construction of a proper road that can withstand floods. The fishers themselves have drafted a proposal, got it approved by the commune's People's Committee and delivered it to the research project office—with a kg of shrimp they had caught the previous night.

#### **Community movement**

This proposal asks for only a part of the costs, namely, for the materials to construct the bridge and two culverts. The materials for the road, as well as all the manual labour needed, would be provided by the villagers themselves.

Though this activity is not directly related to the management of aquatic resources, it is the beginning of an organized

community movement which will not only improve the social and economic lives of the fishers but will also teach them how to manage their resources.

**A**nother group of six researchers are doing similar work on another section of the lagoon, but with a different approach.

Their research goal is to collect fishery data on lagoon resources. These include catch, fishing effort, mean size of the catch, species and marketing.


Phu Tan, the centre of this activity, is located near the northern mouth of the lagoon. The research will be extremely valuable as it will identify migration patterns of aquatic species.

Although their activities are mainly centred in one commune, the fishers have enlisted the participation of five neighbouring communes to get a more comprehensive picture of the fishery.

The data of catch is recorded by the fishers themselves. To avoid imposing an impossible task on them, the fishers were made instrumental in the design of the data collection sheet and they are encouraged to modify it as they think necessary.

The monthly meeting is a venue for the fishers to discuss improvements to the data collection activity, validate the data collected and address issues related to the management of lagoon resources.

The 30 'fisher-co-researchers' (a term coined by the research group leader) are very keen participants, and discussions are often quite heated and emotional. The research activity is also used as a tool to build awareness on lagoon resources, and to bring fishers together to talk and discuss. It hopes to be a forum for the building of a future organization focused on community-based coastal resources management.

The fishers are certainly aware of the dwindling state of the resources, and most say they are participating in the research for their children's sake. This activity might just turn out to be the right catalyst for action. 

Further information can be obtained from:

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New South Wales

## Don't shoot the messenger

**Environmental damage is costing the fishing industry of New South Wales dollars and jobs**

A sustainable fishing industry depends as much, if not more, on a clean and healthy environment as it does on controls on harvesting pressure. In New South Wales (NSW), nearly two-thirds of the fish and shellfish spend some part of their life cycles in estuaries, and the bulk of fishing effort is concentrated in the nearshore zone.

Fishermen are affected by environmental damage in a number of ways. These can be categorized as follows:

1. Reduction in stock. Pollution and the loss of vital fish habitats can reduce the numbers of fish being recruited into the fishery. There are well documented cases of reductions in both the number of species and individual animals caused by industrial pollution and urban/agricultural *run-off*. Floodgates, dams and weirs prevent fish access to spawning grounds, thus also reducing stock availability. Sea grass loss in NSW is phenomenal (a 50 per cent loss in the past 40 years) and this has reduced the nursery area available for juvenile fish and prawns.
2. Contamination and disease. Fish which are contaminated or diseased are unmarketable and the industry, at times, loses hundreds of thousands of dollars due to disease. The most common disease is the fungal infection called red spot, which is related to the input of acid water from overdrained wetlands. Public concern about contamination (even though this is relatively uncommon) has cost the industry millions of dollars through lost sales.
3. Loss of access to fishing grounds. Large areas of waterways are now inaccessible to fishermen due to blockages by weirs, dams and floodgates. Indeed, some areas that were once fishable waterways are now dry land. Smaller areas near big cities have been lost due to closures arising from contamination by substances such as dioxins.
4. Increased pressure for fishery closures. Recreational or sport fishing catch on the NSW coast is at least equal to the commercial catch. In the estuaries, the recreational catch of some species is almost 100 times more than the commercial catch in some areas. As the environmental squeeze on fish increases, the pressure for resource re-allocation from the recreational sector also increases. Indeed, there are already proposals for the complete removal of all commercial fishing within three nautical miles offshore.

The costs resulting from these problems are difficult to ascertain but it is not unreasonable to estimate them in the order of millions of dollars. The trickle-down effects into the community of the loss of commercial fishing activity are also difficult to quantify, but we do know that each dollar earned by a fisherman generates at least another dollar in the community.

### Costs involved

The costs to tourism also need to be taken into consideration, as do the costs to aquaculture operations such as oyster farming.

What we are experiencing in NSW is unique to neither Australia nor many

other countries of the world. The eastern states of Australia have problems similar to many areas in the US, Europe, the Middle East and Asia. From experience in the northern hemisphere, it is clear that the costs of repairing the damage are phenomenal, and that a case for preventing further damage by protecting fish habitats and managing them with a long-term view in mind is easier and cheaper to implement. It also makes common sense.

The NSW commercial fishing industry has made a major commitment to protecting fish habitats and the broader aquatic environment throughout the state. Fishermen have done this principally through the Commercial Fishing Advisory Council and Ocean Watch, but many have become greatly involved in environmental issues personally at a local level.

The common goal is to protect and enhance the natural environment and ensure that healthy fish stocks are available for future generations of fishermen (commercial and recreational) as well as seafood consumers.

In terms of fish habitats, there is little doubt in the minds of fishermen that these have been heavily affected over the past 100 years and that we are starting from low base in trying to both protect what is

left and also restore whatever habitats we can.

Fish habitats can be broken down into four regions: inland and three coastal regions defined as the areas from the Queensland border to the Manning River, the Manning to the Shoalhaven, and the Shoalhaven to the Victorian border.

Some types of habitat losses are common to all regions. These include those arising from the impact of urban development and the construction of roads and railways. The latter facilities often have culverts which block fish passage. Inland fish habitats are in dire straits and enormous problems have been caused to the commercial fishing industry largely due to the huge impact of agricultural activities.

#### **Loss of habitats**

The loss of fish habitats has been attributed to many things, such as, too much water being removed from the rivers; blockages to fish passage by dams, weirs and river regulators; introduced species like carp, trout and redfin; wetland drainage; pollution by nutrients and pesticides; prevention of water from reaching spawning areas such as billabongs by floods and small rises in the river; and, reversal of flow seasonality (especially from melting snow into the Murrumbidgee river).

It is not surprising that the only threatened and endangered fish species in NSW, such as trout cod, are in inland waters. Some species which were once commercially valuable have almost disappeared, despite radical reduction in the numbers of commercial fishermen. Such species include silver perch and the freshwater catfish. Trout cod continue to disappear, despite being totally protected from fishing.

The region from the Manning River north to the Queensland border is characterized by the existence of large 'barrier' river estuaries, such as the Manning and Clarence Rivers. These rivers have large floodplains which once supported extensive wetlands.

Over the years, the floodplains have been heavily modified by land drainage and flood mitigation systems to enable agricultural activities like cattle grazing and sugar cane production. Losses and modifications to habitats have been extensive. Wetlands have been lost due to drainage and reclamation and many creeks have been floodgated. Unrestricted access by cattle to the banks of waterways has resulted in a loss of riparian vegetation and has accelerated bank erosion.

Flood mitigation works have reduced the frequency of wetland inundation, removed riparian vegetation and straightened waterways, as well as exposed acid sulphate soils. Dams and weirs have blocked access by fish such as mullet and bass, and have led to the decline in bass numbers in some waterways.

The drainage and lowering of wetland water tables have exposed acid sulphate soils, which leach huge quantities of acid water into creeks and waterways. This causes fish kills and loss of food organisms and sea grasses. It also leads to fish diseases such as red spot.

The quality of the water in the rivers is highly variable, but there does seem to be a problem emerging with excess nutrients and bacteria (*F. coli*). These pollutants come from both agricultural activities and sewage disposal. It is somewhat of an irony that the current opposition over

ocean outfall is actually causing more sewage pollution due to the upgrades of estuarine outfall of sewage disposal.

Excess bacteria are mainly a problem for the oyster industry but can be a problem where prawns are cooked in river water. Nutrients may benefit in small doses, but any further increases may result in blooms of toxic algae. Minor losses of habitats continue to occur via sand and gravel extraction, dredging and reclamation of wetlands for housing and urban run-off.

The region south from the Manning River to the Shoalhaven River is characterized by a mix of large, shallow estuarine lakes and several drowned river valleys, including Port Stephens and the Hawkesbury River.

This region supports the major proportion of NSW's population and its problems relate primarily to the effects of urban development. Sydney harbour demonstrates just how hardy many species of fish and shellfish can be. The fact that it still supports a small commercial fishery should be a source of pride to Sydney-siders, given the abuse of fish habitats that has occurred over the past 200 years.

The harbour has lost many wetlands, and many tributaries are nothing more than storm water drains. Major pollution problems exist in some bays, such as the Olympic Games venue of Homebush Bay, where dioxin pollution has closed the fin fish fisheries for some six years.

Direct industrial pollution of the Parramatta River has been substantially reduced (by transferring to ocean sewers), but the critical problem of urban run-off has not been properly addressed.

#### Several pollutants

Urban run-off contains a wide variety of pollutants such as nutrients, *F. coli*, heavy metals, pesticides and silt. It is a major problem in coastal lakes such as Tuggerah, Illawarra and Macquarie. Siltation rates are up to 30 times the natural rate in Lake Illawarra, and nutrient inputs have caused excessive algal growth (eutrophication) in Tuggerah and Illawarra. Catchment controls are inadequate and 'band-aid' solutions such

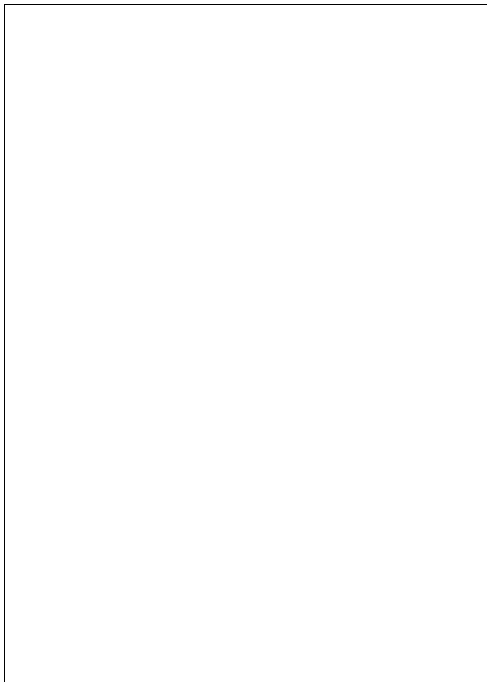
as shallow dredging have resulted in losses of sea grass. Another threat to these two lake systems is sand mining.

Although Wallis Lake does not face these problems yet, the continuing urbanization of the lake, especially on the western side, will result in these problems cropping up in the not too distant future.

The Hawkesbury and Georges Rivers have many similar problems, such as fish migration blockages, urban run-off and loss of habitats, especially by sand extraction operations. The Shoalhaven River shares many of the problems of the northern rivers. It too is a barrier river estuary with an acid soil problem and loss of wetlands due to land drainage for agriculture and flood mitigation. The Shoalhaven also has a major dam (Tallowa) which modifies flows to the river and prevents fish migration. Port Stephens is a fish producing machine that should be better looked after.

Wetland losses have been significant and continuing. There are huge pressures on the small villages in the area from tourism developments. Sea grass loss due to marina developments has already occurred.

The South Coast is characterized by small estuaries (except the Clyde) and supports many lagoons that may only occasionally open to the sea. It is sparsely populated,



but subject to enormous development pressure by tourists and retired people. With a few exceptions, most of the waterways on the south coast appear to be in relatively good shape.

Trunketabells Lagoon, just north of Bodalla, has a serious eutrophication problem, but funds have recently been allocated to assist this, if only by increasing the flushing of the area. (Eutrophication involves pollution by fertilizers, detergents and other nutrients that cause excessive growth of algae and other pest plants.) Wetland losses have also occurred, but their true extent is unknown.

The major source of concern is the expansion of urban development around the small estuaries, which have little capacity to deal with run-off. Major expansion is proposed around St. Georges Basin (which may already have nutrients in excess), Burill Lake and Wallaga Lake, amongst others. Other developments which will affect the area include an expanded canal estate at Sussex Inlet and a caravan park at Cullendulla Creek.

A major source of concern is the management of the opening of the small coastal lagoons. Prior to human intervention, these lagoons closed off during dry periods and opened up when a mix of high water levels and big sea tides removed the sand bar at the entrance.

However, due to the settlement of areas within the zone that may be flooded by rising lake levels, these lagoons are now commonly opened artificially.

Despite many representations by fishermen and the NSW Fisheries Department, the control over such openings rests with council and state government engineers, who have refused to find out which is the most appropriate time to open these Lagoons. This problem occurs along the north and central coasts.

#### **Restoration needed**

The inland waterways are in urgent need of restoration. Immediate attention to the allocation of environmental flows of water and the removal of migration blockages is needed if fish are to have any chance of recovery.

Unfortunately, it appears that the commercial fishery is to be treated as the sacrificial lamb, due to the incapacity of the government to tackle big problems: better to shoot the messenger than make the hard decisions.

Both the northern and central regions of the NSW coast have experienced substantial habitat losses. The priority has to be a focus on restoration. There are big wins to be made for habitat conservation if funds and political will are forthcoming.

Unfortunately, it seems that the government largesse has dried up. Alternative sources of funds need to be found for progress to be made.

The south coast is still in relatively good shape, but the small size of the estuaries calls for extreme caution if the problems found to the north are to be avoided. Good planning and implementation of workable catchment *run-off* controls are vital if estuaries are to be protected.

These environmental consequences can be summarized as physical impacts (wetland drainage; flood mitigation; dams and weirs; loss of riparian vegetation; dredging and mining; environmental flows, including wetland flooding) and pollution (sewage pollution; acid soil run-off; agricultural run-off)

Ocean Watch believes that an integrated program that addresses these issues will go a long way towards restoring fish habitats and fish production. ♣

This article is by Duncan Leadbitter,  
Executive Director, Ocean Watch,  
Australia

Deep-sea joint ventures

## Victory for fishworkers

**Indian fisher people have rallied round to reverse the government's policy on deep-sea joint ventures**

India has a sea coast of 7,000 km. Indian waters are tropical and therefore contain multiple species of fish, but each species occurs only in small quantities. According to one assessment, 3.7 million tonnes of fish are available annually. Of this, 2.7 million tonnes are caught by traditional crafts and around 40,000 small, mechanized crafts.

There are about two million full-time active fishermen, while the number of fisher people totals almost eight million. There are about three million part-time fishermen, whose total population is close to 12 million.

Most of them live below the poverty line in a subsistence economy. They live on the sea coast, with poor housing conditions. Illiteracy among them is about 70 per cent.

The first attempts to develop India's fisheries introduced bottom trawling in the 1960s which resulted in greater pauperization of the traditional sector. This created tensions between the small mechanized and traditional sectors.

The second stage of fisheries development introduced chartering of foreign vessels in order to exploit the deep seas. This too created havoc.

Bull trawling, which was part of the charter operations, depleted resources heavily. All these vessels were fishing in the territorial waters.

This led to open clashes between the traditional and the small, mechanized sector. Not even a single Indian entrepreneur was able to own a vessel in five years, the period stipulated by the charter policy. Thus the Government of India scrapped the policy. However, some of these vessels are still in operation.

The third stage of development was the introduction of 180 foreign trawlers owned by Indian entrepreneurs. This project was a total failure and only 20 remain in operation. Several of the companies ran up huge debts to the Shipping Credit and Investment Corporation of India.

This led to the appointment of an FAO committee to study Indian deep-sea fishing. M. Gudicelli, who conducted the study, said that only 164,000 tonnes of fish are commercially viable in the deep seas. The other varieties are of low value, and catching them would not be profitable. In 1991, the Government of India introduced the joint venture scheme. This led to more open clashes between the traditional and mechanized sectors.

Since 1976, the fisher people of India have been agitating against these destructive policies. However, their campaign took a new turn when they went on a fisheries 'bundh' (work stoppage) on 4 February 1994. Then they organized an all-India strike on 23 and 24 November 1994.

As a result, the Government of India froze the issue of licences to foreign fishing vessels and appointed a committee to review the joint venture scheme. Since there was no representation for fisher people in the committee, they went on a nationwide agitation, which included an indefinite hunger strike in Porbunder, Gujarat, the birth place of Gandhi.

### **Fishers included**

Subsequently, representatives of the fisher people and Members of Parliament representing coastal areas were included in the review committee. On 8 February 1996, this 41-member High Power Committee submitted its report to the Food Processing and Industries Minister.

It contained 21 recommendations, which included a call for the total cancellation of licences. Six months have been given to the Government of India to implement all the recommendations.

If the government fails to do so, it was decided that Thomas Kocherry, co-chairperson of the National Fishworkers' Forum (NFF), would go on an indefinite hunger strike at Sassoon Dock, Mumbai (Bombay) from 7 August 1996 onwards.

The NFF requests everyone to support and collaborate with India's fisher people to keep all foreign vessels and industrial fleets out of Indian waters. ३

This appeal has been issued by Thomas Kochery, R. K. Patil and Harekrishna Debnath of the National Fishworkers' Forum (41-1771, Veekshanam Road, Kochi 682018, India. Tel: 91-484-370617. Fax: 91-484-370914 or F10/12 Malaviya Nagar, New Delhi 110017, India. Tel: 91-11- 6426783, Fax: 91-11—6426914)

## New hope for marine fisheries

**A new initiative by Unilever and the World Wide Fund for Nature claims that market incentives will lead to sustainable fishing**

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*The market is replacing our democratic Institutions as the key determinant in our society.*

—Elizabeth Dowdeswell, Secretary-General, United Nations Environment Programme, Cambridge, Massachusetts, 27 October 1995

Two global organizations recently formed a conservation partnership to create market incentives for sustainable fishing by establishing an independent Marine Stewardship Council (MSC).

The World Wide Fund for Nature (WWF), the world's largest private, non-profit conservation organization, seeks a new approach to ensure more effective management of marine fisheries. Anglo-Dutch Unilever, a major buyer of frozen fish and manufacturer of the world's best-known frozen-fish products under such brands as Iglo, Birds Eye and Gorton's, is interested in long-term fish stock sustainability to ensure a future for its successful fish business.

Different motivations, but a shared objective: to ensure the long-term viability of global fish populations and the health of the marine ecosystems on which they depend.

World fisheries are in crisis. Fish have never been more popular as seafood, nor more threatened as marine wildlife. On the one hand, the world demand for fish products is steadily rising. On the other hand, scientists warn that fish populations and marine ecosystems are in serious trouble.

The FAO reports that 70 per cent of the world's commercially important marine fish stocks are fully fished, overexploited, depleted or slowly recovering. Nearly everywhere, fisheries that have sustained

coastal communities for generations have suffered catastrophic declines. In some areas, excessive fishing has driven staple species such as Atlantic cod commercially extinct. Clearly, we have exceeded the limits of the seas.

To make matters worse, modern fisheries are both heavily subsidized and enormously destructive. Worldwide, governments pay US\$54 billion per year in fisheries subsidies to an industry that catches only US\$ 70 billion worth of fish. These payments sustain massive fishing fleets that continue to 'hoover' up fish at an alarming rate. Sophisticated vessels, able to stay at sea for months, seek fisheries farther and farther afield, often in the waters of developing countries, where they compete with local fishers.

Contemporary fishing practices kill and waste an average of 27 million tonnes of fish, sea birds, sea turtles, marine mammals and other ocean life annually—fully a third of the global catch. Evidence is mounting that fisheries significantly affect the ocean environment and represent a serious threat to marine biological diversity.

Fishery managers have been unable to prevent the 'mining' of fishery resources. Governments have typically devised politically expedient 'solutions' and then described them as environmentally necessary. These efforts have mostly been too little, too late.

### **Short-term needs**

The short-term socioeconomic needs of a region's commercial fishing industry have rendered long-term sustainability of catches a futile management goal. The Northern fishing industry, dependent on a steady income to sustain boat mortgages and marginal businesses, has steadfastly



## ***Statement of Intent***

### **The Problem**

Fish has never been more popular, nor more threatened. Worldwide consumer demand for fish is steadily rising, but scientists warn that fish stocks are in serious decline.

In some areas, excessive fishing has driven staple species such as Atlantic cod commercially extinct. Nearly everywhere, fisheries that have sustained coastal communities for generations have suffered serious declines. Indiscriminate fishing practices kill and waste vast amounts of fish and other marine life annually.

### **A Global Solution**

Two global organizations have committed to tackling this issue. WWF (the world's largest non-profit conservation organization) wants a new approach to ensure more effective management of marine life. Unilever PLC/NV (a major buyer of frozen fish and manufacturer of many of the world's best known frozen-fish products under such brands as Iglo, Gorton's and Birds Eyes UK) is committed to long-term fish stock sustainability to ensure a future of its successful fish business.

Different motivations, but a shared objective: to ensure the long-term viability of global fish populations and the health of the marine ecosystems on which they depend.

### **How Will This Partnership Work?**

The end objective of the partnership between WWF and Unilever is to establish, through consultation, an independent Marine Stewardship Council (MSC) which will create market-led economic incentives for sustainable fishing.

The MSC will be an independent, non-profit non-government membership body. It will establish a broad set of principles for sustainable fishing and set standards for individual fisheries. Only fisheries meeting these standards will be eligible for certification by independent, accredited certifying firms.

Products from certified fisheries will eventually be marked with an on-pack logo. This will allow consumers to select those fish products which come from a sustainable source.

Once established, the MSC will be independent of both industry and conservation organizations, and be governed by a board of directors made up of experts from a variety of backgrounds/

The MSC will be modeled on the successful Forest Stewardship Council (FSC), launched by WWF, other conservation groups and timber traders in 1993 to promote a market-led solution towards more sustainable forestry practices around the world.

To create the MSC, WWF and the Unilever will contribute matching funds into an extensive scoping exercise to explore how the FSC model can be adapted to meet the specific sustainability needs of global marine fisheries. This study will be undertaken by a number of consultants, coordinated by an independent project manager. It will result in a draft set of founding principles for the MSC.

These draft principles will be generated by and circulated to a broad spectrum of experts in fisheries-including fishing and industry groups, conversationalists, regulators and academics. An open series of national and regional consultations and workshops around the world will then be held to refine and strengthen the principles and agree on a process for the international implementation.

WWF and Unilever are committed to supporting the process of agreeing to the principles and establishing the MSC within two years. They will actively seek the widest possible involvement from other organizations in achieving these goals.

(Signed by Dr. Robin Pellew, on behalf of WWF International and Antony Burgmans, Director, Unilever PLC/NV).

resisted change. All too often, political realities compel fishery managers ignore the implications of the best available

science. Politicians, often at the highest levels, frequently intervene in decisions about specific fisheries. Society has simply

lacked the political will to forestall the fishing industry's tendency to use up all its resources and thereby destroy itself.

**T**o reverse the fisheries crisis, we must develop long-term solutions that are environmentally necessary and then, through economic incentives, make them politically feasible. Fortunately, an approach is available that has succeeded in other areas: Working in partnership to design and implement market-driven incentives for sustainable fishing. In order to make this work, the conservation community and progressive members of the seafood industry must forge a strategic alliance. Past experience suggests that building such partnerships and harnessing market forces in favour of conservation can be very powerful. One thing is certain. Where industry and the market lead, governments will likely follow.

In early 1996, WWF and Unilever announced their joint commitment to establish the Marine Stewardship Council within two years. The MSC will be an independent, non-profit, nongovernmental membership body. The organization will establish a broad set of principles for sustainable fishing and set standards for individual fisheries.

Only fisheries meeting will be eligible for these standards certification by independent accredited certifying firms.

Seafood companies will be encouraged to join sustainable buyers' groups and make commitments to purchase fish products only from certified sources.

Ultimately, products from MSC-certified fisheries will be marked with an on-pack logo. This will allow seafood consumers to select fish products with the confidence that they come from sustainable, well-managed sources.

A project manager will co-ordinate a team of consultants that will work on the development of the MSC. The project team will combine expertise in certification (or ecolabelling) schemes with intimate knowledge of the commercial fishing industry. Team members will consult a broad range of experts representing all stakeholders in marine fisheries.

#### **Drafting principles**

Together, the team will draft the set of broad principles for sustainable fishing that will underpin the MSC. The team will draw on the standards and guidelines embodied in existing international agreements, such as the FAO Code of Conduct for Responsible Fisheries and the UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks. The team will also enlist new information and expertise in marine conservation biology, economics, seafood marketing, and commercial viability, to help move current thinking forward.

Both organizations, WWF and Unilever, will circulate the results of the scoping exercise and draft principles to a broad spectrum of stakeholders in fisheries: conservationists, fishers, seafood industry officials, fishery managers, lawmakers, etc.

**T**he partners will then sponsor a series of national and regional consultations and workshops around the world. The purpose of these workshops will be to refine and strengthen the principles and develop a process for international implementation. WWF and Unilever are actively seeking the widest possible involvement of other organizations in this exciting initiative. The MSC has the potential to significantly alter worldwide fishing practices in favour of more sustainable, less destructive fisheries. When Unilever and other major seafood companies make commitments to buy their fish products only from well-managed and MSC-certified fisheries, the fishing industry will be compelled to modify its current practices. Governments, laws and treaties aside, the market itself will begin to determine the means of fish production.

Unilever has pledged to source their fishery products only from sustainable, well-managed fisheries certified to MSC standards by the year 2005. As an interim step, the company recently announced that it will cease processing fish oil from European industrial fisheries by April 1997 and re-examine its use of fish oils from other sources. The massive industrial 'hoovering' of sand eels and other species for fish oil and meal accounts for over half the total North Sea fish catch and affects populations of cod, haddock and sea birds which feed on them. Sainsbury, the UK's largest retail grocery chain, quickly followed Unilever's lead and agreed to phase out the use of fish oil from European sources in 120 product lines.

We hope these initial steps will stimulate other seafood processors and retailers to join in the partnership to harness market forces and consumer power in favour of healthy, well-managed fisheries for the future. ♣

This article is written by Michael Sutton, Director, Endangered Seas Campaign, WWF International

## Whose labels? Whose benefit?

**Quality labels certainly have a future—  
but only if their *modus operandi* is sufficiently broadbased**

Under the Marine Stewardship Council (MSC), Unilever and WWF (World Wide Fund for Nature) have decided to create a quality label for fish caught under sustainable conditions and practices. This must be viewed as a major landmark for global fisheries and the future development of agricultural and agribusiness activities as a whole. It shows that multinational companies (MNCs) are increasingly aware of conservation principles. Unilever's refusal to henceforth buy oil from the fish-meal oil industry must also be hailed as a decisive step forward.

It is, however, necessary to ponder over some aspects of this new approach. For one thing, it will deal a severe blow to the Danish fleets that specialize in such activity. They have, for long, been criticized by the majority of European fishermen. Though these Danish boats primarily target fish-meal species, they can also catch juveniles of other species. When such by-catches occur on a massive scale, the delicate balance of the food chain in the oceans is upset. At first glance, therefore, the move to control fishing activities is clearly a positive measure for European fisherfolk. However, the joint WWF-Unilever approach raises several questions.

First, the agreement between the powerful MNC and the famous international environmental organization seems to have ignored the fisher people, though it is precisely their future which is at stake in this venture. It may be recalled that the Breton fishermen, who targeted tuna with drift-nets, were outraged when another environmental group, Greenpeace, campaigned for a ban on that type of gear. These fishermen were, however, able to engage with other organizations in a debate on the matter.

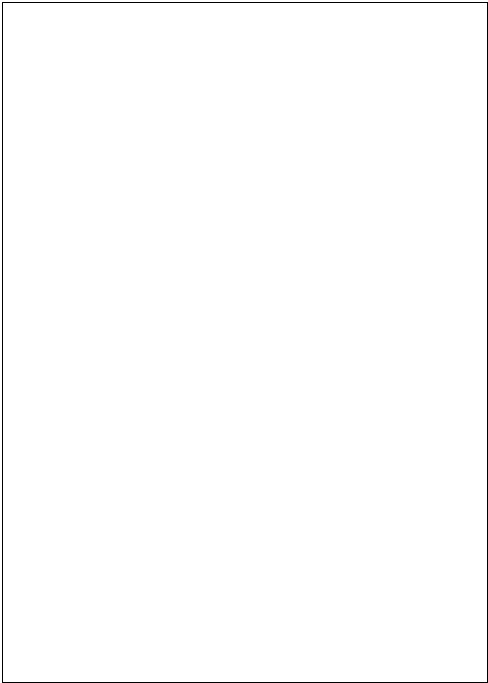
The evolution of the European market, with a bias in favour of industrial fisheries, has been a major factor in the price slump which has affected the welfare of fishermen. With initiatives like the MSC, from now on, environmental movements and MNCs may have a decisive influence not only on prices but also on the conditions that determine access to the market.

On the other hand, fishermen will find it more and more difficult to become masters of their own progress. Unilever and WWF, of course, say they will hold consultations on a broad basis and establish an independent body for the MSC. But it is most likely that certain actors will outweigh others. For instance, fishermen will find it more difficult to promote their case than environmental groups that are well established in the media and thus have an easier task to get their viewpoints across.

The second area of concern is the principles on which the MSC will draw to work out the modalities of such labelling. The joint statement of Unilever and WWF refers to relevant UN documents such as the Code of Conduct for Responsible Fisheries. These documents, however, primarily emphasize the environmental aspects of resource management, not the social aspects.

### **Welfare ignored**

Present European efforts to save resources are based on limiting the number and capacity of vessels, without due consideration for the welfare of fishermen and market conditions. In fact while the number of boats and fishermen has been decreasing, fishing effort has been increasing. The workload on board fishing vessels is becoming unbearable and accidents have also increased.



In such a context, will social aspects be included in defining ecolabels? In view of the diversity of fishery traditions and situations around the world, attempts to work out principles at a global level will, by nature, face major problems.

Resource management is a complex matter, and fisher-people must be closely and largely involved in the process. Through moves like the MSC, are we not going to replace a varied, regionalized, participatory approach with standardized principles that will apply uniformly to all the seas and oceans, without paying due attention to specific conditions? Think of the campaign for a ban on drift-nets.

Finally, trying to influence fishing practices by introducing new conditions on markets will inevitably lead to a bias in favour of financially sound consumers. The major markets are in Europe, Japan and the US. Consumers and large producers in these countries will, therefore, impose their views on responsible fisheries.

Promoting imports to countries whose food requirements are already largely met, while simultaneously refusing to address the needs of the more underprivileged countries, does not really exemplify the principles of sustainable development. Are the companies which have embarked on this

new ecolabel venture really blameless? Significantly, Unilever promoted the development of large-scale salmon farming. This was not really in tune with the principles of sustainable development.

If this policy of awarding quality labels to ecofriendly fish is to play a role in promoting responsible fisheries, then there must be wider consultation, with fishermen participating right from the onset of the process.

Such an approach is indeed becoming more and more frequent. For example, hundreds of Breton fishermen have, for the past two years, been furnishing a label for sea breams caught by liners. They have thus been able to take on the competition from farmed sea breams.

To be sure, there is most certainly a future for quality labels. But the central issue remains the decision-making process. Indeed, the whole MSC affair underscores the urgent need for an international fishworkers' organization to work to influence the policies of major environmental and industrial groups. ♣

This article is written by Alain Le Sann, a member of ICSF from France

## The mantle of 'going green'

**Fishworkers' organizations need to think hard about the merits of associating with corporate environmental ventures**

**T**he Anglo-Dutch food giant, Unilever, is going 'green'. It is committing itself to eventually purchasing only fish caught from fisheries certified to be conservation-friendly. The fisheries would be certified, or otherwise, by an 'independent' world council being spearheaded by the World Wide Fund for Nature (WWF) and Unilever.

From a Canadian point of view, the call for 'codes of conduct' and sustainable fishing practices seems to be coming from the very industry people most directly implicated in the devastation of our demersal stocks. The new-found piety and heartfelt concern for the resource is not completely credible and the 'green' mantle seems to be adopted to deflect public rage at what has already occurred, while serving to maintain the perpetrators in the future fishery.

Clearing an ecologically and conservationally sound fishery is eminently sensible and consumers may support such certification. However, I am not sure if Canada's cod fishery would have been so certified even six months before its collapse. And I am sure our herring fishery would be certified at present, even though some inshore fishermen have been virtually eliminated by intense fishing by large purse-seines.

The constituency of inshore and artisanal fishermen faces overwhelming problems, which often arise from the 'industrialized' fleets' inefficient, backward, archaic and other low-level features.

So, when the Marine Stewardship Council clears a fishery as sustainable, will it consider the co-optation of fishing grounds by 'industrial' fleets at the expense of the small-boat fishers and their communities? Hardly likely. It will be designated as a

political problem and the people at Unilever and WWF selling the 'new hope', will look on governments with disdain and label the public sector as venal, while happily embracing the market as "replacing our democratic institutions as the key determinant in our society."

Goodness knows that there is a need for resource conservation in the marine sector, but fishers in Canada might be excused if they remain sceptical of environmentalists working through the marketplace to save resources.

At present, a herd of grey seals is growing exponentially on the Eastern Scotian shelf. Scientists calculated that they consume up to 80,000 tonnes of infant and juvenile cod each year, while this area of the shelf is under a total fishing moratorium and the prognosis for this particular cod species is the bleakest among all the cod stocks in Atlantic Canada. Yet, whenever a new seal hunt is contemplated for market purposes, the WWF takes out hysterical ads in the national newspapers, decrying such hunts.

I think fishworkers' organizations have enough on their tables simply supporting the organization of inshore fishers. There seems no need to get into some sort of corporatist venture with agribusinesses and world environmentalists. ♣

This piece is written by Michael Belliveau, a member of ICSF and Executive Secretary, Maritime Fisherman's Union, Shectiac, New Brunswick, Canada

Marine Stewardship Council

## A view from the Third World

**Under the sanctuary of 'sustainable fishing', the MSC could well end up working against the interests of the poor producers of fish**

The Marine Stewardship Council (MSC), a collaboration between Unilever and the World Wide Fund for Nature (WWF), is a case of one giant riding atop another. The resulting behemoth can either make deep impressions on the path it traverses or stumble and crash for lack of balance.

There is, therefore, considerable worldwide interest to see how these two multinational organizations, which, at first sight, seem strange bedfellows, plan to work out a strategy to "ensure the long-term viability of global fish populations and the health of the marine ecosystems on which they depend."

Congruent to their objectives, both organizations are concerned primarily with the natural resource and the environment—fish and oceans—without necessarily having any intrinsic, long-term interest in either.

For Unilever, all actions must be weighed against its unfeigned pursuit of profits. The corporation is involved in the MSC because it is convinced that sustainable fishing is good business. For WWF, this is but another specific case of nature conservation taken up in its larger pursuit of mobilizing public appreciation for such issues. It feels it has a winner in the MSC initiative. For both organizations, the success of this initiative will be a major boost to the 'markets' to which they cater, that is, consumers and well-wishers in the First World.

In attempting to respond to the MSC initiative, it is necessary to examine several issues:

- How does one view, from a Third World perspective, an initiative

which places all its faith in the magic of the market?

- How should fishworkers' movements in the Third World, that have been opposing destructive fishing undertaken primarily by fleets fishing for export to the First World, relate to this initiative?
- Will the dynamics of this novel partnership intended to modulate international trade through the use of ecolabels result more in sustainable profits and assured fish consumption (for people and pets) in the First World or will it enhance incomes for fishing communities and ensure adequate protein supplies to needy consumers in the Third World?
- Will this effort be viewed by fish exporting countries in the Third World as creating technical barriers to trade, thus violating free trade rules under the World Trade Organization (WTO)?

In most Third World countries, the market is seen as one of the economic institutions embedded in society. Markets are created for society and not the other way around. One, therefore, shudders to think of the day when the prediction of Elizabeth Dowdeswell that "the market is replacing our democratic institutions as the key determinant in our society" becomes valid worldwide.

### Market no leveller

In democratic institutions, the initial endowments of the participants are the same. Everybody has one vote. Market institutions are not such levellers.

**T**hey function on votes which are expressed only in money terms (effective purchasing power), which, as we all know, is hardly distributed equally. Thus, those who recommend “free markets as the means to efficiency” forget that one of the basic premises of that theory is that economic power is fairly equally distributed among all the participants.

In the Third World, where assets, income and purchasing power are so unequally distributed, this blind faith in the almighty market’s ability to correct all economic and environmental ills is a far cry from the realities which people experience.

Consequently, an initiative which assumes that where the market leads, all else will follow in setting single, generalized standards for an activity undertaken by millions of small producers in diverse circumstances can not be welcomed without cautious circumspection.

The history of unsustainable fishing in Third World tropical waters is closely related to the expansion of the markets in the First World for fish from these waters. Fishing techniques like bottom trawling and purse-seining were imposed in preference to the more seasonal, selective and passive techniques used by artisanal fishworkers. The latter were seen to be ‘less efficient’, since their unit output from

the sea was small. Today, of course, we realize that this was because they were fishing more sustainably and at rates which were in tandem with the natural rates of regeneration of the stocks.

The struggle of fishworkers in Asian countries to ensure a future both for the fish and for themselves, has meant a unilateral opposition to destructive fishing techniques. They have achieved partial successes and, on the face of it, the MSC initiative need not initially be against their interests. In a sense, much of the talk about sustainable fishing pertains to reverting to, and restoring, this mode of fishing.

Where the contradictions will soon arise pertain to the power that those who buy the fish from these fishworkers will be able to exercise in dictating terms of harvesting and levels of prices. The nature of the trade linkages and tie-ups for supply of ‘sustainably harvested’ fish can get to be totally determined from the outside. This could create a complete loss of autonomy for small fishers, with respect to the pattern of harvest and disposal of the produce of their labour.

#### **Price premiums**

Even assuming that their harvest may be covered by MSC ecolabels, the consumer price premiums for this may not translate into higher incomes for dispersed producers. Ecolabelling of marine fish



must be undertaken with the tacit co-operation of the fishworkers or organizations which represent their interests, and not through the lower-level functionaries of the international marketing chain.

**T**he MSC initiative, by virtue of the fact that it is initiated and funded by Unilever, one of the largest fish buyers in the world, will obviously be anathema to such links and concerns. The corporation's influence (invisible control) over the MSC initiative will give it a new channel of access to the producers over whom it has had no control until now.

This possibility to make the crucial connection between the realm of production and the realm of sales can also lead to the wiping out of all small-scale commerce which does not fall in line with the product differentiation process sought to be achieved by Unilever in the name of ecolabels for 'sustainable fishing.' With this achieved, Unilever will retain a quasi-monopoly control over a large segment of the market and can then set the environmental standards it likes and dictate the prices it wants, both at the consumer and the producer end.

Additionally, through the MSC initiative, Unilever will have enormous control over information on fish harvesting processes and effects on ocean environment which it can command and disseminate to its

advantage in a wide variety of ways. This will further sully the minds of First World consumers because they have been led to believe by the MSC initiative that buying Unilever brands is the sure way to save the fish and oceans.

In such a market context dominated by one multinational merchant wielding enormous influence on economic and non-economic factors, prices will be set to achieve a high rate of profit. They can not be treated as revealing the 'true' economic significance of goods or reflect the preferences of 'end consumers.'

The only way for fishworkers' movements to stall this dynamic will be to take the initiative of sustainable harvesting methods on to their own turf, at their own pace and terms. They also need to link with consumer movements in the major consumption countries to foster greater direct trade between organized groups of fishworkers from the Third World and consumer-based institutions in the First World which are not merely concerned with consumption per se but also with reassessing lifestyles as well as their own patterns of consumption.

#### **Governmental involvement**

Pressure must be exerted to ensure governmental involvement in fostering this nexus, on the premise that sustainable harvesting and sustainable consumption are necessary prerequisites for sustainable

trade in which all governments have a high stake. Making the MSC initiative recognize this would be an important criteria for fishworkers' organizations to extend selective support to it.

**O**n the question of the MSC's role in supplying protein for the poor, we are confronted with the classic chicken-and-egg dilemma. Which came first—unsustainable fishing or unsustainable fish consumption? And which do we tackle first? Behind all boom-and-bust fishery histories of the Third World (and the First World too) lie the attraction and power of strong and usually distant consumption centres to which fish flow after they are harvested.

The consumers are not necessarily people. They may be pets or animals. The point, however, is that they have greater purchasing power than needy people closer to the centres of harvesting, for example, a fact rarely highlighted in the boom-and-bust story of the Peruvian anchovy fishery is that children in coastal Peru suffer malnutrition and blindness due to lack of proteins and vitamin A, while the anchovy is fed to pigs and cattle in the us and Europe. Will introducing passive fishing techniques and providing ecolabels to fish-meal made from fish so harvested, address this issue?

As consumers, First World citizens need to be convinced and educated that the answer to the above question is in the negative. If they really wish to play a crucial role in halting natural resource depletion and environmental destruction around the world, it will necessarily have to be through less consumption and a greater emphasis on consumption closer to the point of production.

The easy option of buying products ecolabelled by multinationals, without the participation and sanction of the distant producer, is but a sophisticated technique of product and market differentiation masquerading as sustainability.

Since marine fish form an important component in the basket of easily exportable commodities, Third World governments are unlikely to take to this MSC initiative with open hands. The recent efforts by the us to unilaterally impose

turtle excluding devices (TEDs) on trawls as a prerequisite for import of shrimp from India created a furore which prompted the government and the industry to consider appealing to the Wit's provisions on technical barriers to trade. Though many environmentalists and academics in India—myself included—are against trawling, they saw the US initiative as another case of *us* environmental imperialism, which, to them, was a greater enemy.

Clearly, efforts to impose environmental standards of the First World using 'non-market' methods, which then provide obvious advantages to the trade and consumers of the First World alone, will be resisted, however strong and sensible the environmental logic of the initiative may be.

A global initiative to achieve sustainable fishing needs to be far more broadbased, with the participatory support of fish producers, the processing industry, governments and the consumers. Such initiatives cannot be "left to the market", nor do they "just happen." They have to be carefully crafted. To the extent that the MSC attempts to make a beginning in this direction, it merits the careful attention of all the fisheries' stakeholders not involved in it.

Given Unilever's economic power and the opinion mobilizing skills of WWF, it would be naive to brush aside this initiative as a non-starter. It is often said with confidence that "where industry and the market lead, governments will likely follow." What is still not sure, however, is whether the people—the millions all over the world who, on sea and land, toil to harvest and process fish—will obey. Herein lies the weakness of the MSC initiative and, ironically, the strength of the millions, whose food and livelihood depend on fish and the oceans, to reject the initiative or shape it to their priorities. ❧

This article is written by John Kurien, a member of ICSF, and Associate Fellow of the Centre for Development Studies, Trivandrum, India

## Up against several barriers

**The women of Fiji still remain critically disadvantaged in the country's fisheries development process**

**A**s in other Pacific islands, women in Fiji dominate subsistence fishing and are also increasingly involved in the local commercial fishing sector. The importance of women's fishing activities is evident in the vital contribution of the subsistence and small-scale commercial fisheries in Fiji. The women's involvement in other fisheries sectors is diverse

Their involvement has increased significantly with the emergence of fish processing as a growth area within the manufacturing sector in the post-coup years in Fiji. The expansion in the industry during this time have largely been attributed to the contribution of women workers.

Total employment (staff, workers and management) for the Pacific Fishing and Canning Company (PAFCO) in 1993 was reportedly over 1,000, with the majority being female production workers paid hourly.

In addition, women's inclusion in the production process—they make up about 90 per cent of the total workforce in the cannery—is said to be a replication of the practice of assembly lines, which utilize women's manual skills, speed and efficiency.

Women form the core of the industrial fisheries labour force through their involvement in post-harvest or processing activities. This mode of involvement conforms to perceived gender biases in development, where women are largely employed in areas pertaining to traditional labour divisions.

Given the increasing emphasis on the exploitation of the migratory tuna and the attempt by Pacific Island countries to

process their own catches, there will most probably be greater involvement of women in commercial fishing in the near future.

Women contribute significantly to the artisanal fisheries sector, especially through small-scale village-based commercial activities. This increased participation can be attributed to the growing commercialization of non-fin fish species, especially shellfish. According to the Fisheries Division Report for 1993, for the past three years, sales of non-fin fish (shellfish, crustaceans, octopus, bech-de-mer, seaweed, etc.) have totalled an average of 2,000 tonnes, worth US\$ 4.5 million. *Kai* or freshwater mussels, which are exclusively harvested and marketed by women, comprise about 48 per cent of this volume.

The main sales outlets for artisanal fishers are municipal markets, hotels, restaurants and cafes, butchers and fish merchants, retail shops, supermarkets and roadside stalls, with women dominating selling activities. The past years have witnessed a decrease in fin fish sales at municipal markets, with non-fin fish becoming more popular.

Despite the women's contributions, their participation in the artisanal sector is hardly acknowledged. Except for the mention of the 22 non-fish gleaning licences issued to fisherwomen in the Northern Division, most women fish without licences and are thus largely categorized in the subsistence sector.

### Post-harvest activity

In addition to their own fishing activities, women also provide the necessary post-harvest activities for men's catches. Although formal production has, in most cases, doubled in intensity and volume,

processing and preservation activities remain unchanged. Hence, major processing activities like smoking, drying and salting are still traditionally practised by women.

**I**n addition, the preservation, distribution and marketing of catches remain the responsibility of women. Therefore, artisanal fishing could be described as being principally dependent on women's support. Increased modernization and associated commercialization in the rural areas of Fiji will eventually make women get more involved in the future development of the artisanal fisheries sector.

Subsistence fishing is an essential component of the fishing industry in Fiji. For the substantial rural coastal populations and communities situated alongside inland waters, this fishing sector is a major source of food. In addition, increasing urban populations are also dependent on marine food sold in local markets.

Fishing methods employed by the women on the coastal flats are generally very simple, with tools and technologies primarily traditional. Methods utilized are diverse, with specific methods employed for different species. These are usually simple, on most occasions involving the use of hands and simple tools. These revolve around a few

principles or basic methodologies. For freshwater locations, these include netting activities and trapping or stupefying fish.

To exploit sea resources, the women net, set up barriers and traps, use hand-lines and glean or collect on the dry reef flats.

Such fishing activities usually require keen eyesight and skill with the use of hands and feet. In addition, the intimate knowledge and understanding that women have of their immediate environment enable them to easily identify and catch prey.

So, even if the methods used sound and look simple, they are, in reality, complicated and require extremely adroit use of the senses, and skilful utilization of fisheries knowledge.

Net fishing, using small hand-nets and larger nets, is common in inland areas. The hand-nets are used for fishing in groups along rivers, lakes and ponds. The nets are firmly lodged in mud or sand, while the women feel into holes, under grass or weeds, with their bare hands.

#### **Amazing ability**

The women have the amazing ability to grip and pull fish or eels out of small crevices, holes or from under weeds. Those that escape are trapped in waiting nets. Larger nets are used to block off creek or stream openings.

**F**ish are then chased into these nets by splashing on the surface of the water. Another variation of net fishing is when a group of about 10 to 16 women wade around in a lake, in waist-deep water, removing weeds and grass. The activity is continued until the water becomes muddy, thus stupefying fish and eels.

Consequently, fish swim either to the surface to get clearer water, try to escape along the dry banks or lie still at the bottom of the lake. When a woman steps on a fish, she keeps her feet on it, dives down, and grips it by the gills, before killing it. Fish that escape to the surface of the water are caught in nets, while those that escape to the banks are caught barehanded.

In recent years, large gill-nets are increasingly used in inland locations. Although the use of large nets in rivers for commercial purposes is not allowed legally, the introduction of species such as the grass carp and the availability of freshwater fin fish in major rivers have motivated the use of nets,

More recently, the women have moved away from netting to fishing with lines. Just like their counterparts in coastal locations, the women are familiar with the best times, winds and weather for fishing. Line fishing is used during, and after, major flooding, when the fish leave

their abodes and feed in calmer areas of ponds and rivers.

The women often identify fish by how they bite or nibble on the lines. For example, when the women use kneaded dough as bait for mullets (*kanace*), spotted scat (*vetakau*), mangrove jack (*damn*) and tilapia (*maleya*), they can tell the differences in feeding patterns. For instance, mullets nibble on the dough, spotted scat touch lightly on the bait, while the mangrove jack and tilapia pull strongly on the bait.

Sometimes, when the women identify the fish feeding on the line, they immediately change their hooks, bait and lines to suit the particular fish. Thus, when line fishing, the women are armed with a range of lines and hooks.

Another major resource for inland areas is the freshwater mussel (*kai*), which is usually caught by diving to depths of two or three meters, using goggles and small wire-mesh baskets or pieces of cloth. Once the *kai* are sighted, the women dig them out with their fingers and fill their baskets.

#### **Storage method**

More common for storing *kai* is the use of a piece of cloth, called *sulu* or *lavalava*, with one end tied around the women's waist and the other around the neck. The *sulu* will then form a sort of space where

the *kai* is stored while the women fish. If full, the weight of the *sulu* could drag the wearer down. In the course of my research, a young mother died in Nadali village from this practice.

**T**he women's commercial exploitation of *kai* has become very organized. For instance, some villages along the Rewa River, the largest river in Fiji, are entirely dependent on *kai* as a commercial resource. The villages of Nakini, Naganivatu, Natoalka, Deladamanu, Nacokaika and Kasavu have, over the years, organized a fishing programme whereby villages do not fish at the same time.

The villages are divided into two groups, which take alternate turns at fishing and selling in the market. In this manner, an oversupply in markets is avoided, and the women are also free to attend to other duties during their week off from fishing.

For coastal locations, gleaning and collecting on the sand flats are the women's major fishing activities. Other specific fishing activities differ, depending on the location and accessibility to urban markets. In fact, there is a marked difference in the use of time between areas participating in the commercial economy and those fishing basically for subsistence.

For example, in Totoya, the women's activities are very flexible and selective in nature. The species targeted depend principally on the season and the weather. For instance, during the south-east trade winds, the women exploit octopus on the dry reef flats. When it is the season for seaweeds, their collection is the women's main activity.

Apart from the sporadic nature of fishing, the technology used also differs from that used in urban areas. For example, netting is still widely practised in rural isolated areas, while in urban locations, where there is a higher emphasis on selling, the women do not net regularly. Surprisingly, netting is still significantly used by the women who reside on the coastal fringes of the main towns.

Line fishing is a popular women's activity in Fiji. It has many variations, depending

on the location and target species. Line fishing can be done from boats, on feet or while swimming. In inland areas, short rods are sometimes used. Baits include worms, fish pieces, octopus, shellfish such as *kaikoso* or hermit crabs (*kasikasi*).

There are many variations in the methods used. Some exceptional ones include *siwa nunu*, which is practised in areas such as Cicia and Totoya in the Lau group of islands. In this case, the women hold fishing lines and dive along the reef slopes. When the fish is sighted, the bait is thrown at it, and, as soon as the fish bites, the line is suddenly pulled in. *Basikeli* (bicycle fishing), which is practised in Totoya, is where the women swim in deeper lagoon areas and fish with lines. Since the water is deep, they stay afloat by treading water while fishing. This is why the fishing style is likened to bicycle riding.

The women also have unique ways of adapting methods and gear to suit the occasion. In Totoya, during moonless nights, I saw the huge bay adjacent to the village covered with lights. The women have recently discovered that certain mackerel species have a taste for flour dough. Coupled with this is a weakness for bright lights.

Thus, on such nights, the women are out in punts in the bay, with their pressure lamps suspended from sticks firmly lodged in the boat. The light attracts these fish and they congregate around the boat. Using kneaded dough as bait, the women drop their lines over the side of the boat and the fish snap them up. The villagers call this type of fishing 'Korea', because it is likened to the method of Chinese or Korean fishermen who used lights to catch bait fish in Fiji's lagoons.

Other methods used include the setting up of barriers, fish fences and traps. Stone weirs or *moka* are usually erected within the coastal area to catch fish that feed with the tide. Fish fences are still used, especially along estuarine locations.

#### **Net fishing**

Net fishing is commonly used in isolated rural locations and is only occasionally used near urban areas. The use of large gill-nets has greatly increased with the

## Pacific invisibility

In documenting women's participation in development, the status and roles of Pacific women have commonly been evaluated using Western models and perceptions. When I started on this project, I spent substantial time with women from my village, in Nadali, near Nausori town – women who spent endless hours diving for freshwater clams (*ka*) or line fishing for grass carp (*ika droka*) or flagrail (*Kuhlia pepstris*), maleya or tilapia (*Oreochromis mossambica*) and duna or eels (*Anquilla*).

I used these opportunities to engage women in informal discussions. During one of these, I was surprised that many of the women, including my mother, who was a regular fisher, seemed taken aback when I suggested that the fishing activities they engage in were an added responsibility to standard domestic chores.

The majority of the women did not see fishing as work, and in response, asked what they would do for leisure if there was no fishing. Going to the films, visiting relatives, or other such social activities were, in most cases, regarded unbecoming in our society. Hence, fishing was the opportune time to spin yarns and catch up with the news, while also doing something useful.

Obviously, from this experience, it is clear that the case of women in Pacific has to be addressed differently, keeping in mind the roles assigned them within social concepts prevalent in the Pacific Islands.

This is not to say that Pacific societies do not customarily recognize women's rights. In Polynesia, for example, female are not considered intrinsically inferior to males. In Samoa, even though women are largely dependent on their husbands for social status, those who are unmarried, divorced or widowed and continue to reside in the village are known as the 'ladies of the village'. Such women hold high ceremonial status which is independent of male rank and which grants important decision-making powers within their families. In Fiji, women of chiefly birth also hold special status and can ascend to chiefly positions if they were the first-born ones in their families.

Thus, there is a need for a better understanding of what women actually do and how they are regarded socially within the context of Pacific societies today.

Traditional fishing activities are normally segregated, with men's fishing activities focusing on deep-sea areas and women's activities confined to shallower, inshore areas. Women, however, generally support men's fishing activities through preparing and repairing fishing equipment, cooking food and taking part in required rituals. Recently, women have started to participate in more traditionally male-dominated activities like offshore fishing in Tonga, Marianas and Fiji.

Such increased women's workload, resulting from the expanded fishing activity, is a removal from 'distinct traditional gender roles existent in Polynesia and Melanesia.'

Women's fishing activities are generally referred to as gleaning and collecting on reef flat. This definition does not accurately portray the immense knowledge and skills that women's fishing activities entail. Nor does it reflect the importance of women's fishing activities, especially to the total household production.

Early Pacific societies were self-sufficient in food, much of which was acquired through family fishing, foraging and collecting efforts. Women's subsistence fishing activities were a major component of these activities. Even in current times, women fishers are portrayed as basic providers of family protein through their fishing ventures.

The advent of commercialization in rural communities has resulted in a greater emphasis on economically viable products. This has motivated the evident shift from the consumption of local food to less nutritious, imported food. These trends have also been intensified by the change in emphasis in women's fishing efforts, from subsistence to commercial.

Women are also the major informal traders throughout the region, dominating municipal markets and other roadside and street outlets. If the 'self-employed' category is used as an indicator of informal sector activity, then almost a quarter of Pacific women are engaged in informal trade. In Fiji, women operate from homes, roadside stalls and streets, selling a diverse range of foodstuff. However, another explanation holds that women's immense involvement in the informal sector was a

response to poverty. This significant informal participation reinforces women's undervalued roles because the formal sector is usually rated higher than the informal.

Women also possess an extensive knowledge of traditional post-harvest activities, which is not recognized enough. This is because current fisheries development emphasizes production, with the post-harvest sector being given low priority.

As a result, women's dominant participation in post-harvest and processing activities is regarded as secondary in fisheries development. It has been argued that post-harvest activities performed by the women of Vanuatu contribute very significantly to the nutritional and income levels of households. Modern fisheries development, therefore, need to blend traditional processing knowledge with new strategies.

The concept of access to resources has been addressed only minimally in the literature on the Pacific. In the majority of the Pacific Island countries, resources are clan-owned and mostly through patrilineal descent. When women marry, they become a part of their husbands' clan but can not own or have legal control over resources in their new home area. At the same time, they lose resource rights in their places of origin. Thus, in the modern context, women are usually landless.

Exceptions occur where there are traditionally matrilineal descent systems, such as in Bougainville in Papua New Guinea and Nauru. These two societies have been affected by mining, which has eroded the control of resources by women. For example, female landowners in Nauru do not have much influence over negotiations for compensations or for the management of phosphate. Thus, even where women have resource access, they lack economic, political and social authority to control it, especially as resources take on increasing commercial importance.

In spite of Pacific women's increased participation in the market economy, they are generally regarded as basically involved in subsistence fishing, with minimal defined participation in commercial fishing activities. Commercial fishing, in this context, does not regard essential post-harvest activities as active commercial participation. Neither is

women's domestic work viewed as necessary for the success of men's commercial fishing.

Another major obstacle in the documentation of women's economic participation in the fisheries sector is how their fishing activities are not seen as economically productive. The failure to recognize the mixed subsistence nature of the village fishery results in an undervaluation of their participation.

Apart from this, the involvement of women in fisheries is usually not well documented. For example, female participation in the fisheries sector in 1993 for Fiji, Samoa and Tonga were recorded as only 13-17 per cent of the total workforce. This low statistical measure of the women's economic participation is due to the subsistence sector not being enumerated. The obvious indifference to women's fishing activities and the non-recognition of their work in the subsistence sector prompted the description of them as "invisible fisherfolk".

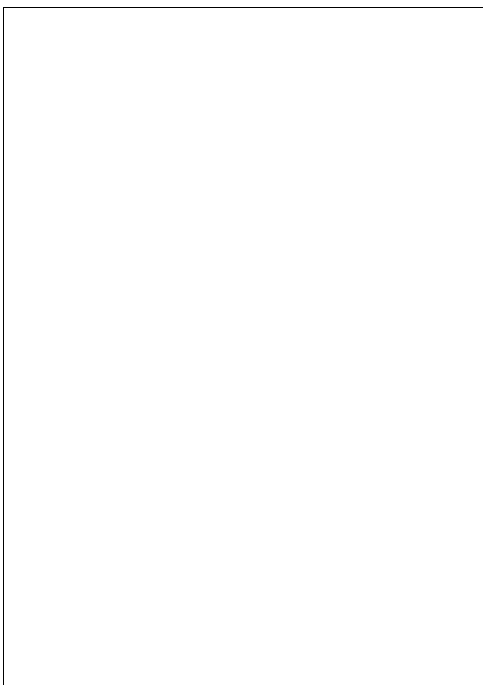
The current industry-oriented fisheries development leaves women's small-scale commercial and subsistence activities unmonitored and undeveloped. Wherever women have been incorporated into the industrial sector, this has been in gender-related types of employment, such as fish processing. Among major constraints to women's fisheries development are the lack of access to technology and the absence of fisheries extension assistance.

This trend is not surprising, considering that it was only during the past decade that women's contribution to fisheries began to be recognized. Recent literature has begun to record the substantial involvement of women in processing and marketing, especially in Papua New Guinea and Vanuatu.

Women continue to be largely responsible for post-harvest activities in all the different sectors of the fishing industry. This has been increasingly so with the establishment of tuna canneries in Fiji, the Solomon Islands and Western Samoa.

Various international and regional organizations specifically address women's issues throughout regional co-operation and with assistance from bodies such as the UNDP and the FAO, research and awareness into women's concerns are being highlighted.





availability of faster and bigger boats, but it is an activity restricted to male fishers.

**I**n areas such as Nukui, where net fishing is an important activity, there exists a wide range of practices. For example, *qoli rai* is when a school of fish is sighted and the nets are put out to encircle the catch. This is usually done within the outer reefs.

At other times, large nets are used to catch fish hiding under rocks. For this method, rocks are usually surrounded by nets while *duva*, or fish poison, is crushed and squeezed in to the water around the rocks. Since this is practised on the outer reefs, the larger species get trapped in the net when they try to escape.

The *yavi ran*, or leaf drag, is widely practised in Fiji, with variations, depending on the location. Both men and women participate in this activity which, in most cases, is for communal purposes. Customarily, men and women swim towards the shoreline, a few of them holding the drag-net. When they near the shore, those with the drag then close in towards one another. When the shallower areas are reached, the fish are harvested using both hands and scoop-nets.

Gleaning and collecting are the major fishing activities of women in the subsistence and small-scale artisanal sector. Surprisingly, these activities are

not confined to women in rural areas, as women residing in semi-urban areas also extensively gather or collect from urban foreshore areas.

Gleaning includes collection of a wide range of non-fin fish along the inshore coastal areas. Bivalves, crustaceans, octopus, seaweeds and other miscellaneous items are usually the target of these gleaning activities. Recently, some previously caught species are being neglected. This decline in harvest is because such species now hold little economical value. Examples are *ibo* and *vetuna* (both sea worms), *dio* (oysters) and *woce* (a small edible brachiopod). Once, most of these species were coastal delicacies and were usually eaten raw.

Traditionally, there has been a complementarity in the organization of Fijian labour, with women being engaged in domestic duties and nearshore fishing or foraging activities, while men farmed and were responsible for deep-sea fishing.

At least in Totoya and Nasau, men worked in gardens and only occasionally fished. Recent developments have led to a transformation of such roles with the emphasis in production getting focused primarily on economically productive activities and men engaging more in fishing activities. The argument here is that the traditional context of labour division can no longer be casually applied to all rural situations.

Generally, it can be argued that women have been largely disadvantaged in institutionalized fisheries development in the Pacific Islands. Apart from traditional and social constraints, they are hindered by technological innovations, which principally target male fishing activities and marginalize the participation of women in fishing.

#### **Increased participation**

Although there has been increased participation of women in formal employment, this has, unfortunately, predominantly been in menial, underpaid jobs. An overview of the Asia-Pacific region shows that Asia has been more advanced in addressing the issue of women in fisheries. This has come about through government support and the

accomplishment of programmes which targeted small-scale fishing enterprises.

**T**radition is not static, and thus the ideologies which revolve around its usage are not static either. Due to women's dominant role in the subsistence fishing economy, and their contribution to the family diet, any shift in their fishing patterns will have several kinds of impact on local village societies and practices.

Despite women's increased participation in the fisheries sector in the Pacific and in Fiji, in particular, their activities remain officially overshadowed by those of male fishers. 3

This article is based on the draft of a Thesis by Aliti Vunisea of the University of South Pacific. Suva, Fiji

## Lake Victoria

# In the balance

**Environmental degradation and human handiwork have combined to destroy the fisheries of Lake Victoria**

**I**n Lake Victoria, a combination of human impact and environmental changes has transformed fishery biodiversity beyond all recognition, destabilizing the fishery and degrading aquatic ecosystem.

This has grave implications for the millions of people in the three riparian countries, namely, Uganda, Tanzania and Kenya, who depend on the lake's fishery. A fishery that once drew on hundreds of species, now depends on just three: the endemic pelagic *Rastrineobola argentea*, the introduced Nile Perch (*Lates niloticus*) and the introduced Nile tilapia (*Oreochromis niloticus*).

Until the 1970s, the Lake Victoria fishery was dominated by more than 400 varieties of haplochromine fish, estimated to comprise over 80 per cent of the lake's total fish biomass. The combined influences of environmental changes and human impact have led to the disappearance and possible extinction of 200 to 300 of these endemic fish varieties. The disappearance of this huge and varied biomass is the likely cause of cascading changes in the ecosystem.

Overfishing of endemic species in the 1950s stimulated the introduction of exotic tilapias, and Nile perch, the latter despite scientific advice against such action. The introduced tilapias have now effectively replaced the lake's two endemic tilapia species.

The haplochromines, many of which feed on bottom sediments and phytoplankton, have been replaced by fish which are essentially secondary and tertiary consumers (the endemic pelagic cyprinid *Rastrineobola argentea* and the carnivorous Nile perch, respectively). This has grave

implications for the sustainability of the lake's fishery. Nile perch now makes up more than 90 per cent of the demersal fish biomass, and 60 per cent of the catch.

There are many who argue that the introduction of the Nile perch to Lake Victoria has generated enormous socioeconomic benefits. The value of fish production and fisheries-related employment has greatly increased for communities around the lake, as has the supply of protein. Due to the Nile perch, more people are eating more fish in more places than was ever the case under the previous fishery regime. Between 1970 and 1990, fish landings have increased fivefold, from 106,500 tonnes to over 500,000 tonnes.

However, a multi-species fishery has been converted into one dominated by three species. At the same time, the lake is becoming increasingly eutrophic, with associated deoxygenation of bottom waters, thereby reducing fish habitats. The removal of endemic haplochromines, which formerly turned over the bottom deposits, have contributed to the eutrophication and deoxygenation of bottom waters. Likewise, the disappearance of phytoplankton-eating fish has contributed to increasing algal blooms, and 'algal mats', which sink to the bottom, where their decomposition further adds to deoxygenation.

**Species exploited**

In the beginning, the main species exploited were *Orcoebrornis esculenta* and *O. variabilis*. These fisheries collapsed, probably due to overfishing, which led to a switch to the smaller and less valuable *Haplochromis* and *Rastrineobola*. Until the 1970s, the resource base was characterized by the predominance of *Haplochromis* stocks.

**A**lthough of great scientific interest, it is claimed that this resource had very little socioeconomic value and remained the food of last resort all round the lake. The fish biomass of the lake also consisted of more valuable species groups: *Oreochromis/Tilapia*, *Bagrus*, *Synodontis*, *Clarias*, *Protopterus*, and *Barbus*.

Until the creation of the Nyanza Fishing and Processing Company, which started with four trawlers in the mid-1970s, the fisheries remained solely exploited by small-scale fishermen.

The Nile perch was introduced, possibly clandestinely, around 1954, and then deliberately in 1962 in Entebbe, mainly from Lake Mubutu, but also from Lake Turkana.

For the first 20 years, it remained relatively unnoticed. In the early 1980s, a huge expansion was observed (although there was a sudden 'eruption' in the Winam (Nyanza) Gulf, Kenya in the mid-1970s).

Fish landings under the current regime of three dominant species would seem to be much higher than under the previous multi-species regime. However, it is questionable whether this can be sustained, and whether the benefits of the current regime accrue to local communities

Can the current regime be sustained or will the lake's fishery collapse under the strain of eutrophication and impoverished biodiversity? What evidence is there for decreasing biomass and increasing yields since the boom of the Nile perch?

It is possible to hypothesize that the fishery is headed for collapse due to a combination of environmental or natural factors (predator-prey relationships and changing biological and chemical balances in the lake), and human-induced factors (pollution and overfishing). It can also be hypothesized that the catch composition is changing or has changed.

What are the economic or nutritional benefits accruing to processors and traders, who are sending fish out of the area, or to local communities which are eating more fish? It may be conjectured that the main economic benefits go to the middlemen and processing companies. Fishermen may derive some benefits, but the local diet has deteriorated as a consequence.

#### **Fewer choices**

Consumer choices have been diminished. Instead of being able to choose among several species, there are now effectively only three choices. Has this had any impact on the local people's fish-eating habits and diets? The local people do not

eat Nile perch, while the omenta is also of limited use.

The availability of fishery inputs is limited and equipment is costly. Only the more well-off people are able to purchase equipment. The Nile perch market is controlled by large processing companies, which pay the highest prices and monopolize ice.

Eutrophication occurs due to the intensified use of land, human population growth and increased run-off of nutrients into the lake. Also, urban sewage and industrial pollution from the main population centres contribute to eutrophication.

Between the 1960s and the 1990s, a threefold increase has been detected in the nutrient content of rain falling on the lake. This could be the result of increased burning of grass and bushes around the lake. Further, climatic cycles leading to high lake levels, particularly between 1961 and 1964, which drowned riparian bushes and swamps may have accelerated eutrophication.

Clearing of riparian vegetation has removed plants which once acted as natural filters for nutrients draining into the lake. There has also been a reduction in silica and sulphate levels. Also seen is a shift in phytoplankton towards nitrogen fixation, and an increase in chlorophyll and primary productivity. Tree felling for timber, particularly in Uganda, has increased siltation.

Effluents enter the lake from paper mills, particularly the Pan African Paper Mills (PANPAPER) at Webuye in Bugoma, along the River Nzoia, and sugar factories, particularly in Busia district, and also fish processing factories.

The water hyacinth (*Eichornia crassipes*) has probably been in Lake Victoria for no more than ten years. It most likely entered through the Kagera River, from Rwanda and through Uganda. In 1989, it was noticed in Ugandan waters. It was introduced to the African continent at the beginning of the century, first in Egypt and then in South Africa. It consequently spread to other countries in southern Africa and appeared in the Zaire River

and upper Nile swamps in Sudan in the 1950s. About 15 African countries are known to have problems with water hyacinth.

The water hyacinth has an impact on fisheries production—by invading spawning, nursery and feeding areas, and by inhibiting light penetration and thus photosynthesis and oxygen levels in the water. By invading and blocking beach areas and harbours, it hinders transportation. By blocking intakes, dams and pumps, it affects hydroelectric power generation and irrigation.

The long-term socioeconomic costs of wastage in post-harvest fisheries involve more than the loss of income and nutritional benefits (to the fisherfolk communities and their dependent consumer populations). These are serious losses, but traditional methods of fish processing place great pressure on valuable and increasingly scarce timber resources. This too represents a kind of post-harvest loss. The 'Nile Perch Effect' also includes a shifting of channels of product distribution and marketing, and the resultant impact on infrastructure and technology development.

#### Future at stake

The future of the lake now hangs in the balance. The clock can not now be reversed, and the Nile perch can not be eradicated. The collapse of the Nile perch fishery—a distinct possibility—will have very serious socioeconomic consequences for the communities and the economies of the three riparian countries. The rehabilitation of the lake's biodiversity and the institution of a management and regulatory framework must now become the main priorities for the development of Lake Victoria. 3

This piece comes from the Kenya office of the intermediate Technology Development Group Rugby, UK

## On to the next generation

**The new set of fisheries agreements with developing countries should be sharply defined and implemented democratically**

**T**he classical fisheries agreements negotiated by the European Union (EU) with developing countries have involved the payment of financial compensation in exchange for access to fish resources. The primary objectives of the EU in these arrangements have focused on supplying the domestic market. Little, if any, attention has been paid to the impact of fishing upon either the environment or the needs and rights of local populations.

The fisheries agreement with Senegal is a very good illustration of the effect of these classical agreements. Since 1979, the EU fishing industry has benefited from a profitable access to the once-rich Senegalese waters, with few restrictions imposed by either the EU or the Senegalese government. After over 15 years of EU-Senegalese 'co-operation', the assessment is clearly negative, from both a social and environmental point of view: fish stocks are depleted and the Senegalese artisanal fishery disrupted. As there were fewer fish for the European fleets to catch, in 1994, the EU reduced its financial compensation—from 32 million ECU (US\$40 million) to 18 million ECU (US\$ 22 million).

The EU has an increasingly long list of agreements to be negotiated with countries from different regions of Latin America, Africa, the Caribbean and South Asia. There is also the possibility of an agreement with New Zealand. This would be the first step towards the South Pacific, a region to which the EU has long sought access.

The EU Council has even issued negotiation directives for an agreement with Somalia, despite the fact that this country is clearly not in a state to negotiate a fisheries agreement, considering all that

such an act involves in terms of stock assessment, etc. But that does not seem to be a problem for the EU, especially with all the tuna and other high-value fish species swimming in Somali waters. The fact is that EU vessels have not waited for an agreement, but have been poaching in these rich waters for some time.

As the EU Fisheries Commissioner has declared on several occasions, the days of the classical agreements of the 'pay, fish and scoot' type are over. Indeed, a new type of agreement, the so-called second-generation' agreement, is now being proposed to various countries, but not to all. It seems that the EU has certain criteria to determine who is 'worthy' of a second-generation agreement.

The first of this type was signed in 1993 with Argentina. It is still early to fully evaluate the social and environmental impact of this agreement, but certain aspects should cause concern, as the agreement involves much more than a simple exchange of access to fish for money or markets.

The agreement is based on the creation of joint enterprises (a permanent association) and joint ventures (a temporary association) between EU vessel owners and fisheries interests in Argentina. In order to transfer their activities permanently or temporarily, whether under the EU-Argentina agreement or under joint enterprises/ventures in general, vessel owners receive subsidies from both the EU and the Member State where the boat is registered.

### **Budget allocation**

The EU has allocated an important budget for this agreement: 162.5 million ECU (US\$ 203 million) for the five-year period

1993-1999, most of which is allocated for the creation of joint enterprises and ventures. The main EU beneficiary of the agreement is Spain, but other Member States (Portugal, Italy, Greece, France and Germany) are also involved.

**M**any EU fishing vessels are permanently transferred and re-flagged to Argentina. These vessels will, therefore, disappear from EU registers. EU authorities will no longer bear the responsibility of managing the activities of these vessels. Neither will the EU Council of Ministers, the European Commission and Member States be accountable any more to other EU institutions such as the European Parliament and the EU Court of Auditors for the financial, social and environmental implications of those fishing activities.

At a time when the EU is obliged to dramatically reduce its fishing capacity, this constitutes a painless and even profitable way to meet fishing capacity reduction targets and to rid itself of the responsibilities and financial burden associated with these fleets, while still continuing to supply the European market.

Indeed, as the vessels no longer fly an EU flag, vessel owners will not be subject to EU regulations. The whole responsibility for managing the activities of these

vessels falls on the recipient country, in this case, Argentina. While Argentina has appropriate means to ensure control and enforcement in its waters, many developing countries are not so fortunate and will probably not possess sufficient means to ensure that ex-EU vessels abide by the relevant fisheries management regulations.

On the other hand, Miguel Arias Canete, Spanish Conservative Euro-MP and Chairman of the European Parliament's Fisheries Committee, has declared that the EU-Argentina fisheries agreement represents a model to be copied. He stated that to demonstrate its importance "it only needs to be pointed out that, in 1994, 141,186 tonnes of fish, with a value of approximately ECU 248.7 million (US\$ 311 million), were exported to the European Union, the catch comprising high economic value species such as hake, for which there is abundant demand within the Union,"

#### **Not truly joint**

Nonetheless, this new type of agreement is presented as an opportunity for the recipient country to develop its fishing industry through the EU's capacity and know-how.

But, it should be noted that, in many cases, the 'joint' enterprises and ventures under the agreement are totally owned by EU interests: Europeans form agreements

with Europeans. Further, much of the fish caught is destined for the EU market.

**T**he social impact will not only be felt in Argentina. The Spanish crews working on board these re-flagged vessels were not pleased to discover recently that, after a certain period, they would be covered by the local Argentinean social security system, rather than that of Spain. Their salaries will also be based on local scales.

The EU has recently signed general co-operation agreements with Morocco, Chile and other member countries of the Southern Cone Common Market (Mercosur: Argentina, Brazil, Paraguay and Uruguay).

These agreements have, as their primary objectives, the liberalization of trade in goods, services and capital through the establishment of a free trade area, the promotion of trade and co-operation between the parties and an increase of international competitiveness.

Last year, when Chile refused access to its waters to more EU fishing vessels, a delegation of the European Commission warned Chilean authorities that the conditions of access to the EU market for Chilean products might have to be reviewed.

The economic co-operation agreement that Chile has just signed with the EU is likely to make it even easier for the EU to use the economic stick to win access to fishery resources.

The agreement contains provisions through which parties agree to intensify co-operation in the fishery sector and in the management of 'common' resources. Some Spanish Euro-MPs have already referred to the agreement as a means to force Chile to be more lenient on landings by Spanish vessels in Chilean harbours. On the other hand, the economic co-operation agreement with Mercosur did not contain any section on fisheries. This triggered a strong reaction from Arias Canete.

He declared that the Committee of Fisheries is concerned about this lack, and added that "international agreements

with third countries are one of the key aspects of the Common Fisheries Policy and their purpose is to help the Community fleet to adjust in size, thus enabling the excess capacity thereof to be gradually reduced and guaranteeing that the Community market will continue to be supplied with the fisheries products for which there is consumer demand". It is difficult to be more blunt than that!

The trend is clearly toward privatization of the agreements and liberalization of trade. It is foreseeable that this process will ultimately lead to totally private agreements between multinationals such as Pescanova, Unilever, Resource Group International, etc. and theft local partners, in which governments will have done away with their role as stewards of what many still regard as common resources.

Already, groups such as Pescanova are using their local presence to influence national policies. For instance, Namibia has resisted EU pressure to sign a bilateral agreement and, instead, has negotiated fisheries access rights directly with Pescanova. Namibia has also put in place a very strict fisheries management regime.

Apparently, though, the government has recently negotiated with trade unions a five-year moratorium on strikes, in order not to frighten off foreign investors.

Will the next step be a loosening of fisheries regulations and increase of quotas under the threat that Pescanova will take its money and jobs and go where rules are less stringent?

It is clear that the objective of the EU has remained constant: supply the market at the lowest possible cost. Only the strategy has varied on the part of the EU: to decrease or eliminate management responsibility, financial burden, accountability and democratic control. The trend appears to be to depart from 'classical' bilateral fisheries agreements, which have their faults, but which at least have been subject to some—although very limited—form of democratic control and public supervision.

#### **Problems remain**

Major problems remain in the new-generation agreements. These



include lack of control and enforcement, leading to overexploitation and a neglect of regulations.

**T**hey also include the lack of attention to the needs of local small-scale fishing communities and their food requirements. Unfortunately, whatever limited transparency, public scrutiny and participation that already existed seem set to disappear.

The EU is a major fishing power in distant waters and thus contributes to the dwindling of fish stocks in many areas around the world. These trends in fisheries agreements could be viewed, not only as an abrogation of the EU's responsibility, but also as a manifestation of the EU's determination to continue to supply its market—one of the biggest in the world and keep most of its fleets active, despite the environmental and social costs incurred.

Third-generation agreements are now being mentioned, but no consensus has yet emerged as to what their objectives should be or how they will differ from the older generation agreements.

Some contend that they should integrate EU development policy objectives into the current types of fisheries agreements, which are of a purely commercial nature.

However, without clearly defined and agreed objectives, such agreements might just end up like their predecessors—only with a different label.

#### **Future context**

Future agreements must be placed in the context of North-South co-operation, where the development needs of coastal fishing communities and the long-term sustainability of fisheries are not subordinated to private interests.

They must be based on management regimes, which ensure that fish stocks are not depleted, but remain productive and able to support local fisheries.

The whole process—from negotiation of the agreement through all aspects of its implementation and evaluation—needs to be transparent and democratic. ♣

This article is by Helene Bours, who currently works for Greenpeace International on EU fisheries. It has been written in her personal capacity

## How blue will my Europe be?

**The grand dream of a 'Blue Europe' may mean that fisher people will be forced to relocate to shore-based activities**

**T**he European Fishery Commission, headed by Emma Bonino, waged a two-day charm offensive in Brittany to gain acceptance for its development policy for the 'Blue Europe of the Future.' Meeting in Quimper, France, on 13 and 14 May 1996, the Directorate General for Fisheries (DG XIV) of the European Union (EU), hosted a two-day seminar on 'Fisheries Agreements and the Organization of the European Market.'

Hosting the seminar in Brittany was a particularly brave and significant gesture - brave because, in 1994, rioting French fishworkers in Brittany laid waste to the Brittany Parliament as they vented their anger against what they regarded as oppressive rules from Brussels.

It was doubly brave because, under the EU's latest Multi-Annual Guidance Programme (MAGP IV), the French fishing sector is required to reduce its capacity by 20 per cent. There is, therefore, no love lost between the fish-catching sector and the Brussels 'fishocrats.'

The venue of Brittany was also significant because Brittany produces 40 per cent of the national fish catch, has a fishing population of around 7,000 fishermen and their families, and a sector which directly employs 30,000 fishworkers.

The topics chosen for the seminar were central elements of a fisheries policy geared towards securing future fish supplies for Europe's processing industries and consumers. In Europe's fishery, fisheries agreements and fish marketing are increasingly important. Between 1987 and 1992, the total costs of fisheries agreements rose from ECU 88 million to ECU 208 million, amounting to over half the budget of the Common

Fisheries Policy (CFP). In this five-year period, the total amount came close to 940 million ECU.

The current CFP budget is for around ECU 822 million. About ECU 290 million have been allocated to nearly 30 fisheries agreements. Most of this amount is spent on three agreements: ECU 38.7 million on an agreement with Greenland, ECU 32.5 million on Argentina and ECU 125 million on Morocco.

While 40 per cent of Europe's fish supplies come from its own waters, 60 per cent are imported. Almost a quarter of fish supplies are obtained through fisheries agreements.

However, the logic of fisheries agreements is essentially flawed. Their cost effectiveness is questionable, with European taxpayers paying hundreds of millions of ECUs annually. Thus, the agreement with Morocco, which allows access to 600 Spanish boats employing 8,000 fishermen, works out to a cost of around ECU 210,000 per boat and ECU 15,500 per fisherman.

The negotiations for fisheries agreements are far from transparent, come under no serious scrutiny and get virtually no media attention. According to EU procedure, all fisheries agreements need to be approved by the European Parliament (EP). The EP is generally consulted only after the agreements are signed.

### **No coherence**

There is a complete lack between the practice agreements co-operation agreements development of coherence of fisheries and development policy. Examples of contradicting the EU's co-operation policy include those with

## 'My goal is not the death of the fishery'

Emma Bonino described her vision for the future of Blue Europe in an interview with the French Paper Le Telegramme. The following is a translation:

**Why is the Commission adopting such draconian measures for resource conservation, yet being so liberal about regulating the market?**

Sixty per cent of today's market is based on imports, while 40 per cent is fish caught in our own waters. If we take no action to reduce catches to allow the fish to reproduce, this amount will become even less. Also, quite simply, I don not know how to make more fish. This is not blind liberalism, this is the reality. Although I try to stop abuses, (on its own) our commercial policy is not an effective screen. I have a team of only 18 fishery inspectors for the entire Blue Europe. It is up to the Member States and the customs services to look out for fraud.

**Apart from imports from third countries, our fishermen have to suffer unfair competition**

**from the British, who do not respect the withdrawal price. Why does the Commission do nothing to stop this?**

Because I have no legal basis to do so. The Council of European Fisheries Ministers agreed on a non-binding withdrawal price system. Every time the Commission, my predecessor or I, asked them to take action on it, a majority of Ministers rejected our proposal.

**The Multi-Annual Guidance Programme (MAGP-IV) that you are preparing will further reduce the number of fishing boats. What do you have to say to the professional Brittany fishermen who do not want this to happen?**

I can very well understand how a region such as yours, which implemented MAGP III very well, is unhappy with a plan for further fleet reductions. I am very much in favour of a regional approach to MAGP IV, and I am going to propose a modification of the rules to this end. But for the moment, it is not up to me to decide. It is easy to say that Brussels is all-powerful,

Madagascar and Senegal. The raw material for fish *processing* obtained through fisheries agreements can undermine the price of fish caught in Europe, and adversely affect European fishermen.

**A** policy which accords greater priority to extraction of fish from the waters of developing countries than supporting the development of the local fish processing sector, undermines the social and economic development of the local fishery. The considerable amounts spent on fisheries agreements would be better spent on rationalizing the management and restructuring of the EU's own fisheries.

It was clear from the start that this so-called decentralized seminar—the third organized on the same subject—was more about winning hearts and minds, and informing and influencing, than about negotiation and debate. The first day set the tone, with most of the morning session given over to presentations from DG XIV on fisheries

agreements. The time allotted for questions and discussions was barely sufficient for the industry representatives to pose their queries, let alone enter into any exchange of views.

Another clue to the seminar's purpose was an invited 'audience' composed almost entirely of fishing industry interests, with very few fishworker representatives.

Commissioner Bonino's riposte to fishworker delegates barred from the proceedings was: "The exclusion of fishworkers from this meeting has nothing to do with me. You have your enemies, go and find them! On the contrary, I have accepted to come Le Guilvinec to meet you."

She also denied any responsibility for deciding fishing policy: "I don't get up every morning, thinking that I am going to decide on this or that. You must understand that every decision and directive that arrives from Brussels is agreed by the European Fishery Ministers. I am responsible for certain proposals, but

but the French government must own up to its responsibilities for a priority targeting to reduce areas that are over capacity, and reallocate new efforts to other areas, including Brittany.

**In Le Guilvinec and in Concarneau, the fishing sector sees Europe as a machine which contributes nothing to the upkeep of the fishery, but only to the desertification of the coastal zone. What is your view?**

My goal is not the death of the fishery, but the restructuring of the fishery sector, which can no longer rely on fishing. This will be achieved by adding value to fish, that is, through the manufacture of frozen, canned, cooked and all manner of processed products.

Le Guilvinec provided us with this perspective through their most interesting PESCA proposal, a proposal which Paris turned down. However, with the PESCA budget, and above all, with the Structural Funds of IFOP, there is the means available to undertake a fundamental restructuring of the industry-with the understanding that every job lost at sea will become a job on land, on the docks and on the quays.

This region established a precedent with the Common Agricultural Policy. Today, the Breton agrofood industry is high competitive.

To assure a future for its fishery, Brittany must undertake a painful structural adjustment. However, I am certain that Brittany can establish itself as a leader in the processing industry, where consumer demand is the most important factor.

**Blue Europe is therefore only a Europe of processors?**

I am fully aware that there must be a cultural revolution for fishermen to accept that their future is onshore. They can refuse, saying that the Eurocrats in Brussels are mad, and continue as they are, without changing. In this case, the processing sector will move elsewhere, and Brittany will eventually lose its seas-based work, without having first prepared jobs ashore. There is one country in Europe, Norway, where fishing is a vibrant, traditional activity, based on fish catching. Today the Norwegian fleet is considerably reduced, but even in Tibet, one can eat fish processed in Norway by Norwegians.

the Council of Ministers amends, rejects or accepts them. It is easy to find scapegoats: they will give you some satisfaction, but they will not lead you far. Do not forget who your enemies are!"

The afternoon session was almost a complete farce, as the sumptuous lunch hosted by DG XIV lasted for nearly three hours. This left delegates with only an hour to discuss the second topic on the agenda: the organization of fish marketing in Europe.

Despite being billed as a 'European Parliament Fisheries Seminar,' the role of the European Parliamentarians was also interesting. Invited at the last minute, they were kept in the dark about the complete agenda.

In a speech following a dinner given in her honour by the fishing community of Le Guilvinec, Commissioner Emma Bonino outlined her vision for the 'Blue Europe' of the future. It is a future where both fisheries agreements and the artisanal fisheries sector have roles to play. The so-called first-generation agreements

(cash for access) will become obsolete. Instead, Europe will access its fish supplies and deploy its distant-water fishing fleets through joint venture arrangements, negotiated through second or third generation fisheries agreements.

The fisheries sector in Europe will continue to be cut back and modernized. This means fewer but more efficient fishing vessels. People formerly employed in the artisanal fishing sector (namely, the owner-operators) will be redeployed ashore, working in the shore-based processing and marketing sectors.

Although she denies being a decision maker, and lays the blame for the current policy muddle on the Council of Fisheries Ministers, it is clear that Commissioner Bonino is laying down two very fundamental policy objectives, which will provide the main planks to support the new Blue Europe:

- conservation of resources to be achieved by ruthlessly reducing fishing fleet capacity; and,

- liberalization of fish marketing, and securing fish supplies for Europe's fish processing industry and consumers.

According to Commissioner Bonino's vision, if these two objectives are fulfilled, and fishermen are not intent on merely protecting the harvesting aspect of the industry, there is a future for the entire fisheries sector.

For all her considerable fervour, charm and rhetoric, Emma Bonino's vision of a future Blue Europe is inherently flawed. It is a future in which the people whose livelihoods depend on the fishery are disempowered, and where Blue Europe will be dominated by a few large processing companies.

Under the guise of decommissioning and conservation, the Commission is undertaking a programme of social engineering, where fishing communities will become the shore-based workforce for vertically integrated fishing industries.

It is a process geared towards the centralization of ownership and management of fishery resources, and the elimination of small-scale inshore fisheries and associated fishing communities.

It is also a policy aimed at making the European fisheries easier to manage for the Commission. A sector dominated by a few multinational companies, deploying an essentially distant-water fleet, will eliminate the difficulties of having to control many small fishing units.

A French group, called 'Peche et Developpement' (Fisheries and Development), which represents both local Brittany fishworkers and development NGO interests, met in Quimper, just prior to Emma Bonino's visit. This was an open meeting, in which around 70 people participated, including representatives from industry, the fishworker sector, NGOs and the media. The meeting focused on the links between fishworkers and issues of mutual concern in the North and South.

There are some issues of particular concern to fisheries agreements and the organization of fish markets in Europe. Fisheries agreements amount to huge subsidies, which benefit a relatively few large fishing companies, to the disadvantage of many artisanal fishworkers.

**Low-cost access**

Rather than promoting progressive social and economic development of the fisheries sectors in Europe and partner countries, the issue is actually about





accessing low-cost raw material for the European processing industry.

In this way, the EU's fishery agreements are actually a substitute for social policies in European fisheries, and counteract the EU's development co-operation policy objectives. The globalization of the fish market is effectively undermining the position of small-scale producers World wide.

The alternative vision proposed by the meeting was of a process which prioritizes the development of fishworkers and their communities.

It is a vision based on an understanding of fisheries from a community perspective, where social and humanistic considerations are held to be as important as technical and economic ones.

It is a vision which holds that the local knowledge and customary practices of fishing communities are needed to ensure the sustainability of fishery resources. Unless such alternative visions are translated into development actions, Commissioner Bonino's rose-tinted vision of the future will become the bleakly stark reality of tomorrow. 3

This report has been prepared by Brian O'Riordan of the Intermediate Technology Development Group, Rugby, UK

Women in fisheries

## Different voices, similar concerns

**Sharing a vision, women from several countries agree to fight to retain their spaces within the world's fisheries**

A workshop on Gender Perspectives in Fisheries was held in Senegal in West Africa, between 10 and 18 June 1996, bringing to an 'official' end ICSF's Women in Fisheries (WIF) programme in India, Senegal, the Philippines and Thailand. The workshop brought together representatives of fishworker organizations, academics and activists from 13 countries in Asia, Europe, Canada, Africa, South Pacific and Latin America.

The participants shared reports detailing the role of women in fisheries in their respective countries, as well as the role of women in fishworkers' organizations. Participants from countries where the WIF programme had already been under way, namely, Senegal, India, the Philippines and Thailand, reported on the work done under the programme and the processes that had been initiated as a consequence. The programme has been instrumental in 'visibilizing' women's roles in fisheries, in facilitating the organization of women fishworkers and in increasing their representation in fishworker organizations.

It was observed that various strategies and organizational forms have been adopted by women fishworkers to address their concerns in different countries, each appropriate to the particular context and situation of the country concerned.

In India, for instance, women fishworkers, rather than forming separate women's organizations, are fighting for spaces within mainstream fishworker organizations to address issues that concern them. Their basic contention is that women married to fishermen automatically qualify for union membership by virtue of the fact

that they look after the household and sustain future generations, even if they are not directly involved in economically remunerative fishery-related activities.

In Canada, on the other hand, different strategies have been employed by women in fishing communities. Wives of fishermen organize as autonomous groups, join with fishermen's unions, and get together at the community level to protect the interests of coastal communities.

The discussion on women's participation in fishworker organizations revealed that, even though women have succeeded in finding a place within mainstream fishworker organizations in some countries, as in Senegal and India, they rarely occupy decision-making positions.

As a consequence, issues specifically concerning women are rarely addressed by these organizations. These include, for example, the problems women face at work in fisheries, such as the lack of adequate marketing, transport, storage and processing facilities, or the problems that they encounter within the household and community, such as violence directed at them.

Country reports at the workshop also revealed that the extent and form of women's participation in fishworker organizations and movements differ in the North and South. In the North, women of fishing communities are organized primarily as 'associations of wives of fishermen.

### **Southern women**

In the South, women participate in organizations as fishworkers themselves, indicating that women still retain their spaces in fishing operations, primarily in

the processing and marketing of fish. This is also because women and men from the South involved in fisheries operations, on a part-time or full-time basis, do not generally require licenses to be regarded as fishworkers, unlike in the North.

**T**he issues taken up by women's organizations in the North and South differ too. In the North, the artisanal sector and way of life are under threat, as more and more artisanal fishers are being pushed out of the sector as a result of state-sponsored policies to reduce fishing capacity and to limit resource exploitation. State policies tend to be geared towards protecting the interests of large industry.

Under the Individual Transferable Quota (ITQ) system, for instance, licences to fish are often cornered by the more powerful economic interests, while smaller owner-operators are either eased out of the sector or forced into jobs on larger industrial vessels. Working conditions aboard these vessels are often poor and social security benefits inadequate, especially on distant-water fishing vessels operating under bilateral fishery agreements.

Associations of wives of fishermen in Europe, as in Spain and France, are demanding better working conditions aboard such vessels. They are also demanding better state support for

unemployed fishers or fishers displaced from the sector, especially during crisis periods.

As coastal communities in the North lose traditional access rights to fishery resources, the very culture and future of these communities are under threat. In Norway, the associations of wives of fishermen are demanding that coastal communities be given back their rights to fish freely in coastal waters, and that the state recognize the value of coastal communities and artisanal fisheries.

In Southern countries, on the other hand, women fishworkers are struggling to retain their spaces within the fisheries sector, in the face of the larger forces of globalization and liberalization. They are demanding access to better facilities for marketing, transport, storage and processing of fish. At the same time, they are joining forces with men in the artisanal sector to fight against the proliferation of destructive, super-efficient technologies such as trawling, within their waters. In Senegal, for instance, women are playing a prominent role in challenging inequitable agreements between their country and the EU, and in securing a better deal for artisanal fishworkers under such agreements.

#### **Areas of convergence**

Despite these differences, many areas of convergence between the women of the





**Gender**



North and the South emerged during the course of the workshop.

Participants from several countries perceived women as being more concerned with a broader gamut of issues, relating to fisheries as well as to the community. Participants from Canada stressed that, while men are in the forefront of struggles on fishery-related issues, women take the lead on issues that are central to maintaining the viability of artisanal fisheries and their communities.

Several other questions were debated and discussed during the workshop. What sort of alliances need to be formed, and with whom, to defend artisanal fisheries and the artisanal way of life, as well as the spaces of women within these? What sort of *programme politique* is required to address these issues?

The participants explored these questions in the context of the realities within their own countries. There was a broad consensus that cross-sectoral alliances of people's movements need to be formed with specific objectives, and a positive *programme politique* needs to emerge, if the artisanal fisheries and their way of life have to be sustained.

In Brazil, for instance, the artisanal fishery sector has made alliances with other marginalized groups such as farmers, landless peasants and indigenous peoples, to struggle for a recognition of their rights and for the espousal of an indigenous lifestyle. The necessity for regional alliances, as, for instance, among associations of wives of fishermen in Europe, was highlighted.

Southern country participants stressed the need to question the current development paradigm based on colonial and patriarchal values, and production for profit rather than production for sustenance of life and livelihood.

The impact of globalization on fisheries, on artisanal fishworkers and on women fishworkers was also debated. Globalization trends are eating into women's spaces in fisheries, often converting them from self-employed entrepreneurs involved in fish marketing and processing into inadequately

renumerated wage labourers in factories controlled by large industrial groups or multinational companies, trends very much in evidence in Thailand, the Philippines and India.

The workshop ended with a commitment to continue efforts towards defending and expanding women's spaces in fisheries and in fishworkers' organizations, in further developing an understanding of gender issues in fisheries with a focus on nurture, rather than on 'extraction' and 'exploitation', and in resolutely working towards a sustainable fishery and an artisanal way of life.

This report has been written by Chandrika Sharma of ICSF's Madras office

## Rethinking aquaculture

**In a statement to the UN Commission on Sustainable Development several NGOs urged for responsible aquaculture development**

In recent years, aquaculture development has been repeatedly promoted as a solution to meet growing world food needs from fish. Traditional forms of aquaculture can, and have, made substantial contributions to food supplies in areas of the world where food needs are most acute.

However, recent patterns of aquaculture development have emphasized the production of high-value species for export markets. In particular, the rapid development and expansion of intensive aquaculture for shrimp has resulted in widespread degradation of the environment, displacement of coastal fishing and farming communities, and a negative impact on local food supplies and food security.

The FAO Code of Conduct for Responsible Fisheries, under Article 9, urges responsible aquaculture development. National and regional implementation of the FAO Code, the Convention on Biological Diversity and other existing laws and policies, must be pursued in a manner which ensures that unsustainable aquaculture is prohibited, before there is more irreversible damage, loss of biodiversity, or harm to coastal communities.

The undersigned Non-governmental Organizations (NGOs) urge governments to:

- ensure that artisanal fisheries and dependent coastal communities, as well as their access to community resources, are not adversely affected by aquaculture development or operations, including extensive, semi-intensive and intensive aquaculture methods;
- ensure the use of environmental and social impact assessments prior to aquaculture development, and regular, continuous monitoring of the environmental and social impacts of aquaculture operations;
- ensure the protection of mangrove forests, wetlands and other ecologically sensitive coastal areas;
- prohibit the use of toxic and bio-accumulative compounds in aquaculture operations;
- apply the precautionary approach to aquaculture development;
- prohibit the pollution of surrounding areas resulting from the excessive discharge of organic wastes;
- prohibit the development and use of genetically modified organisms;
- prohibit the use of exotic or alien species;
- prohibit the use or salinization of freshwater supplies, including groundwater, important for drinking or agriculture;
- prohibit the use in aquaculture operations of feeds consisting of fish that is, or could be, used as food for people;
- prohibit the wholesale conversion of agricultural or cultivable land to aquaculture use;
- ensure that abandoned or degraded aquaculture sites are

ecologically rehabilitated and that the companies or industry responsible bear the *cost* of rehabilitation;

- ensure that the collection of larvae does not adversely affect species biodiversity;
- ensure that aquaculture and other coastal developments are addressed in integrated coastal management planning, which should include the meaningful participation of all coastal user groups;
- ensure the development of aquaculture in a manner which is compatible with the social, cultural and economic interests of coastal communities, as well as ensure that such developments are sustainable, socially equitable and ecologically sound; and,
- ensure that multilateral development banks, bilateral aid agencies, the UN Food and Agriculture Organization, and other relevant national and international organizations or institutions do not fund or otherwise promote aquaculture development inconsistent with the above criteria. 3

This statement has been endorsed by the following NGOs:

- Accion Ecologica (Ecuador)
- Christian Aid (UK)
- Coalition of Environmental NGOs in Bangladesh
- Consumers Association of Penang (Malaysia)
- CODDEFFAGOLF (Honduras)
- Desarrollo Ambiente y Sociedad (Mexico)
- Earth Island Institute (USA)
- Environmental Defense Fund (USA)
- Greenpeace International
- Indigenous and Community Rights Advocacy Forum (Papua New Guinea)
- International Collective in Support of Fishworkers
- International Network Against Unsustainable Aquaculture
- Mangrove Action Project
- Movimiento Nacional de Pescadores Riberenos (Mexico)
- Nijero Kori (Bangladesh)
- Ocean Advocates (USA)
- Orissa Krushak Mahasangh (India)
- People's Action Against Shrimp Industry (India)
- PREPARE (India)
- Sahabat Alam Malaysia
- Sierra Club Canada
- Sea Turtle Restoration Project (USA)
- Swedish Society for Nature Conservation
- Third World Network

Review

This statement was presented on behalf of the above mentioned NGOs by Sebastian Mathew of ICSF at the UN on 1 May 1996

FISHING FOR TRUTH: A Sociological Analysis of Northern Cod Stock Assessments from 1977-1990. Alan Christopher Finlayson. Institute of Social and Economic Research Publications. Newfoundland. 1994. Pages 186.

## Beyond scientific gospels

**Fisheries science needs to be situated in a social context, if fisheries management is to work**

In the 1980s, while they struggled to ban shrimp trawling during the fish breeding season of June, July and August, artisanal fishworkers in Kerala State, India used to ask rhetorically: "What is the most politically vexing question in Kerala during the monsoon?" The answer was another question: "Where do the fishes lay their eggs?"

Whatever be the scientific 'truth' to this question, any scientist who dared to venture an answer would risk stirring up a major confrontation between the militant artisanal fishworkers' unions and the trawler owner lobby, much to the dislike of the politicians in the state who had to please both groups to stay in power. The result was that the question never got answered, although many scientists working in government-funded research organizations had worked for their Ph.Ds on this subject. This stoic silence of the scientific community provoked the artisanal fishworkers to demonstrate before the country's largest state-supported fisheries research institution with the chant:

You white-elephant scientists and researchers  
 You servants of capitalism  
 The research you conduct:  
 Is it to save the workers  
 Or to serve the capitalists?

*Chorus:*

We are the children of the sea  
 We know the secrets of the sea  
 We don't need to be taught by anyone

Another country, another culture, another time. Yet Finlayson's book is about a similar context and similar confrontation set in Canada. It is a

complex story of the role of science in the decline of the Northern cod stocks. The main claim of this brilliant work of 'forensic sociology' is that all knowledge, including scientific knowledge, is influenced by social processes, making 'truth' an elusive concept.

In eight dense but readable chapters, the author examines how presumably objective observations about the marine biomass are mediated by what he calls 'interpretative flexibility'—the possibility of reading different but, a priori, equally plausible conclusions into a single data set—because of the degree of uncertainty about the estimates of physical reality.

Through a wide range of searching questions during interviews, the author is able to elicit almost a collective confession from fishery scientists that social and political compulsions played a big role in their interpretations. The author points out that one important reason for this is that when big science is paid for by the state, certain irrational social forces act strongly on the scientists. They are not sure on whose side they are on, nor can they act independently.

### **Views disregarded**

The chapter I liked most is titled 'Is There a Place for Fishermen in Fisheries Science?' In it, the author explains how Canadian scientists totally disregarded the views of the inshore fishermen about the state of the fish stocks because they felt that "the inshore fishermen have very little to contribute to the solutions of the fundamental problems of stock assessment", but considered the data from the offshore fishery to be "plentiful, dense and efficiently and inexpensively collected (and) easily quantified."

**T**he author says that this attitude is not because the individual scientists wanted to “wilfully disregard” the views of the inshore fishermen as a “litany of mumbo-jumbo which they bring forth each time they talk to you.” It was rather because the very cognitive structure of their modern science did not permit them to incorporate such knowledge into their framework. It is this epistemological superiority which alienated the vast majority of the active participants in the fishery from the institution which presumably had the power to predict the future state of the fishery resources.

With the collapse of the Canadian cod fishery in 1992, the warnings and predictions of the inshore fishermen had come true. For scientists, this current impasse is more a “crisis of their own expectations (of their science), not a crisis in the state of the stocks.” For the inshore fishermen, it was a validation of their more holistic understanding of the ecosystem and their prey-in-context.

Finlayson’s methodology of research and, more importantly, the way the material collected has been written up also deserve a special word of praise. Finlayson has very ably used lengthy quotations from the persons he interviewed in the course of his study.

Particularly noteworthy is the adroit manner in which he has incorporated the words of fishery scientist Jake Rice, who provided an extensive and challenging critique of Finlayson in defence of the work and motivations of the Canadian fishery scientists. By appropriately reproducing transcripts of interviews, Finlayson preserves the context, flavour and nuances of arguments. Critics are thus given ample occasion to ‘talk’ to the reader and present their side of the story.

An important point which Finlayson brings out in the conclusion of his study merits careful consideration. He feels that a complex social structure such as a fishery has uncertainty writ large in every aspect—be it stock predictions; the ecological soundness of technologies; or the way politicians talk and act. For such a system to function effectively, there must either be coercive authority or

substantial agreement among its members about both the policy and parameters within which issues will be resolved. Neither of these situations exists in most of the crisis- and conflict-ridden fisheries in the world today.

Moving towards a context of consensus should be the aim. Fishery scientists may never be able to know enough about fish and their ecosystems to make ‘correct’ estimates and predictions. It would follow from this that fisheries management can not be based on biological sciences alone and should be acknowledged as a social process, where the essential problems are sociological and political.

It will not be necessary to recommend this book as essential reading for fishworkers. They have said all this in their own language several ‘times over in coastal communities worldwide—in Canada, Senegal, Norway, India and the Philippines, to name a few countries.

But every fishery scientist would do well to read this book because it does not debunk fisheries science, but emphasizes the need to place it within its social context.

#### **New understanding**

Such an understanding will go miles in creating the basis for an essential and renewed co-operation between those who labour to catch the fish and those who make a living studying the fruits of this labour. ❧

This review by John Kurien, a member of ICSF, and Associate Fellow of the Centre for Development Studies, Trivandrum, India

# News Round-up

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## ***Dying out***

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Optimists, stop smiling. If any confirmation is needed that the world's marine resources are still threatened, in early May, the World Wide Fund for Nature announced the findings of a workshop of 32 scientists in **London**.

According to them, 131 of the 152 fish species discussed faced possible extinction, with 15 considered critically endangered.

The workshop results will go into the 1996 Red List of Threatened Animals, to be issued later this year by the International Union for the Conservation of Nature and Natural Resources.

## ***Dwindling***

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As worried are officials of the Ministry of Agriculture, Forestry, and Fisheries of Japan.

They have just announced that the country's fishery production declined in 1995 for the seventh consecutive year.

The total production in 1995 was 7.47 million tonnes, about 8 per cent less than in 1994. Most

of this drop sprung from huge declines in sardine and mackerel catch.

## ***Bye-bye, catch***

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No wonder resources are being fast depleted. According to preliminary data leaked from a report on trawlers, being prepared under contract for the Canadian Department of Fisheries and Oceans, the **British Columbia** trawl fleet has been responsible for excessive by-catch.

Activists of the environmental group, Greenpeace, used this piece of information to criticize the Canadian government.

## ***Illiquidity***

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Overfishing alone is clearly not the problem. In a recent report titled 'Liquid Assets', the US Environmental Protection Agency (EPA) stated that 40 per cent of American rivers, lakes and streams are too polluted for fishing or swimming and that one-third of all shellfish beds are closed due to contamination.

## ***Recouping elsewhere***

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To let fish stocks recover, the Egyptian government announced a ban on all fishing within the 12-mile territorial waters of the Mediterranean Sea in **Egypt** during May.

And, to make sure Egyptian fishermen do

not suffer too much, the government proposed to compensate for any loss of fishing time.

According to officials, the government offered to buy fish from these fishermen at higher prices, once fishing resumed in June.

## ***Rush! Free Salmon!***

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The poor prices offered by processors were enough to make salmon

fishers in **California** protest.

Rather than sell at low prices, they stopped fishing and even gave salmon away free to the public. Processors say that the price slump is because of too much salmon in the world market.

## ***Cut down***

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Too many cooks spoil the broth. Equally, too many agencies spoil supervision. That seems to be the thinking of the Government of **South Korea**.

If recently announced that it will merge three existing bodies- the Maritime and Port Administration, the Fisheries Administration, and the Maritime Police

Administration-to form a new Ministry of Maritime Affairs.

## ***Turtles, come home***

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The **Philippines** and **Malaysia** have concluded an agreement on a new international sanctuary for sea turtles in the Turtle Islands on the Malaysia-Philippine border, 25 miles northwest of Sandakan in Malaysia's Sabah State. This area is an important nesting site for green and hawksbill turtles.

## ***Russian rights***

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Last month, **Russia** signed a bilateral agreement with the US which recognizes that all fishing within the international waters ('peanut hole') in the central Sea of Okhotsk, completely surrounded by the Russian EEZ, should be conducted in line with Russian Federation rights, duties and interests,

The US also agreed to observe all Russian efforts to preserve fishery resources in the area and co-operate with Russia in actions against fishing vessels of third countries.

## ***Scallop follow-up***

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To accommodate user conflicts at the originally proposed site, the **New England** fishery Management Council has approved

an alternative location for the Westport Sea Scallop Project of the Massachusetts Institute Grant Program.

Final regulations on the nine sq.mile site in the offshore EEZ are expected soon. The approval process for the project spanned more than two years.

### **Chinese checker**

Don't even think about fishing in areas of the southern Yellow and China Seas. The Chinese Ministry of Agriculture has clamped a moratorium on all offshore fishing in these parts during July and August. The aim is to protect fish stocks, especially hairtail. A similar ban was imposed last year too.

#### **Sharing herring**

The negotiations did not include quota claimed unilaterally by the European Union (EU).

**Norway, Russia, Iceland and the Faroe Islands** have signed an agreement on this year's harvest quotas for fishing in international waters.

These quotas relate to stocks of herring which spawn in Norwegian waters. Under this agreement, a total of 1.1 million tones will be harvested.

### **Drifting into trouble**

The EU Fisheries Commissioner, Emma Bonino, has asked Italy to respect international regulations on large-scale drift-nets or face possible US trade sanctions on Italian fishery products. Bonino reported that,

during June, EU fishery enforcement patrols found that 15 of 16 Italian vessels inspected were using drift-nets averaging twice the permissible length.

### **Reclaiming the sea**

Off the tiny island of Mer in the Torres Strait off northern **Australia**, the islanders have started to reclaim their rights to the sea surrounding their home.

Commercial fishermen from Australia who come seeking coral trout in the reefs around Mer are chased away by Mer inhabitants, members of the powerful Malo-Bomai cult.

Other parts of the Torres Strait have been overfished and so, the Mer islanders are keen to protect what is left. Only then will they be able to sustain a commercial fishing venture and hope for self-sufficiency.

### **A Conference that Was...**

The beautiful island of Vega in **Norway** was the setting for a conference late last month on Local, Regional and Global Management and Distribution of Marine Resources.

Organized by EUROSTEP, a coalition of secular NGOs of Europe, and Norwegian People's Aid, it attracted around 50 participants

representing countries like India, Nicaragua, Senegal, South Africa, Chile, Iceland, Netherlands, Ireland and Norway, as well as the FAO.

Their discussions focused on the EU's Common Fisheries Policy and the role of NGOs in ensuring changes in world fisheries, apart from general overviews of the global fisheries crisis and development programmes.

### **...a workshop to come**

ICSF plans to hold a South Asian Workshop on Coastal Area Management in Madras, **India** between 26 September and 1 October to focus on the institutional, legal and policy dimensions of the subject.

Apart from documentation, the workshop will review legislation and institutions relevant to coastal resources management, from the perspective of small-scale fisheries.

The six-day programme will be split into two parts. The first will comprise a four-day interactive session.

The second will be a two-day symposium, which will attempt to help start a dialogue between policymakers and fishworkers.

The workshop will try to conclude with a common statement of concern.

### **...and yet another one**

The World Aquaculture Society (WAS) is

organizing a special session on sustainability as part of the World Aqua.'97 Conference in Seattle, Washington, US.

The two-day conference will concentrate on four topics of interest: integrated coastal zone management; policy guidelines, regulations and environmental impact statements; sustainability indices and the quantification of sustainability; and best management practices.

In conducting this conference, WAS hopes to bring together the broadest possible spectrum of perspectives and interests on the subject.

### **Giant moves**

Growing into a fishing giant is Resource Group International (RGI), based in Norway and steered by partners Kjell Inge Rokke and Bjorn Rune Gjelsten, who took the company to a turnover of US\$ one billion last year.

On the heels of a spate of acquisitions, RGI's recent US\$ 28.5 million issue of shares was heavily oversubscribed.

Especially strong in the surimi market, RGI has vessels operating from the Russian Far East to the South Atlantic.

Rokke believes that the seafood business is a cyclical one and RGI's strength lies in its diversified product range.



## News Round-up

*The boys go to sea as soon as they can be of any service to their fathers... At 18 years of age, they become men and, whenever they acquire the share of a boat, they marry, as it is a maxim with them 'that no man can be a fisher, and want a wife.' They marry, therefore, at an early age, and the object of their choice is always a fisherman's daughter, who is generally from 18 to 22 years of age. These women lead a most laborious life, and frequently go from 10 to 25 miles into the country, with a heavy load of fish... They assist in all the labour connected with the boats on shore, and show great dexterity in baiting the hooks and arranging the lines.*

— from an account from Rathven in Banffshire, in 1842,  
quoted in **Fishing and Whaling** by Angus Martin



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.

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