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SAMUDRA

REPORT

INTERNATIONAL COLLECTIVE IN SUPPORT OF FISHWORKERS



BUSHMEAT AND FISH IN GHANA
ITOs IN CANADA
Jellyfish EXPORTS FROM INDIA
PERU'S FIVE MILE ZONE
LEGAL BATTLE IN CANADA
BEACH MANAGEMENT UNITS IN UGANDA
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Comment

Towards artisanal fishing zones

The struggle by artisanal fishers in Peru has been in the news of late. They are demanding that the integrity of the five-mile artisanal fishing zone be maintained, in the face of recent moves to open up 'windows of penetration' to allow large-scale industrial fishing in the southern part of the country (see *The Holy Grail*, pg. 21).

Starting in the 1970s, several countries around the world have established artisanal fishing zones. In many cases, the declaration of such zones was a response by States to the growing conflicts between the large-scale and the artisanal sectors, as in India and Indonesia. Faced with increasing and unequal competition from the technologically efficient large-scale sector, artisanal fishworkers in many countries expressly demanded the establishment of these zones.

That such zones can play an important role from a social perspective is undeniable. Millions of people in the developing world depend on fisheries for a livelihood, and a majority of them fish in coastal and nearshore waters. Their livelihoods, as well as the fisheries resource base, are known to be directly and indirectly jeopardized by the activities of industrial and large-scale fleets using destructive gear, such as bottom trawls, in coastal waters.

From a fisheries management perspective too, the logic for the establishment of artisanal zones, where only selective fishing gear and techniques are permitted, is incontestable. Coastal and inter-tidal areas are known to be highly fragile, productive and important as spawning and breeding grounds. As such, a regulation that allows only selective and responsible fishing in such zones, in combination with other management measures, could be very effective.

These issues are to be discussed at a workshop that the International Collective in Support of Fishworkers (ICSF) is organizing early next year, titled *Sustaining Fisheries and Livelihoods in Latin America: The Imperative of Secure Access Rights for Artisanal Fishworkers*.

In deciding on measures that could support the small-scale and artisanal sector, the changing context and the dynamism within this sector must also be kept in mind. It would be inappropriate to see the artisanal zone as a 'box within which the small-scale sector is confined. The small-scale sector, in many parts of the world, as in the Philippines, Senegal, India, Sri Lanka, Peru and Chile, has convincingly demonstrated its ability to harvest highly migratory resources, such as tuna and shark, in a sustainable manner, in deeper waters within the exclusive economic zones (EEZs). To the extent that small-scale fisheries for such species is technologically and environmentally efficient, and leads to socially desirable outcomes such as greater employment and equitable distribution of income, it must be supported through specific policy measures.

Recognizing the artisanal zone is an important first step towards recognizing and supporting the artisanal and small-scale sector. The struggles of artisanal and small-scale fishworkers for maintaining the integrity of the artisanal zone, as in Peru, cannot but be backed. By demonstrating enough political will, States can design and implement fisheries management measures that meet the goals of both equity and sustainability.

Wild food from sea and forest

There are some parallels between overfishing and the bushmeat crisis in west Africa, especially in terms of livelihoods and food security

Most readers will be well versed with the crisis affecting the world's fisheries, and the role of the United Nations (UN) in addressing the resultant problems. But they may not know that the UN has also warned of an impending 'bushmeat crisis', which threatens both the food security of forest communities and the survival of the species hunted. The high level of hunting in the tropics for bushmeat—the meat obtained from animals caught in the wild—is of increasing international concern. In significant parts of the tropics, especially in Africa, there is now a massive and completely unmanaged harvest of wild meat for consumption purposes. In these areas, the levels of offtake may well represent a greater threat to the sustainability of wildlife than habitat conversion.

The London-based Overseas Development Institute (ODI) is implementing a project to research the human and social dimensions of hunting wild meat for consumption in tropical forests. In contrast to most research previously carried out that has focused on the ecological and biodiversity impacts of bushmeat hunting, the ODI project aims to greatly expand understanding of bushmeat as an important dimension of livelihoods security for poor people, often in underdeveloped States. It is anticipated that through a better understanding of the human and social dimensions of hunting, new approaches to solving the bushmeat crisis can be crafted.

This article is based on the author's contribution to the ODI project and his own experience of the crises affecting both fisheries and bushmeat. Information has also been drawn from the ODI website (http://www.odi-bushmeat.org/wildlife_policy_briefs.htm).

The important contribution made by fish to household food security in west Africa is well documented. Fish is widely consumed as a staple source of protein, often providing the only affordable source of this and other essential nutrients for low-income families. Fishing also provides livelihoods for millions of people who catch, process, transport and trade fish. There are also many fishery-dependent sources of livelihoods in such ancillary industries as boatbuilding, net making, engine services and repair, and so on.

The contribution of bushmeat to food security is less well known. There are few well-documented case studies and statistics. However, indications are that, as in the case of fisheries, bushmeat does make an important contribution to food security at the household level—both as a source of food and as a source of income.

Bushmeat has long played a role in the livelihoods of people living in tropical forest and savannah areas. For many rural people, bushmeat is not only an important source of animal protein in their diets, but it may also increasingly be a key component of their livelihoods in providing flexible cash incomes from its sale to traders and local consumers. Large proportions of communities can be involved in hunting. For example, in Congo's forested areas, one study found that approximately 50 per cent of households earned income from bushmeat sales. Bushmeat may be consumed as food by a substantial proportion of households, both close to forest areas and elsewhere.

Safety net

Like fisheries, bushmeat may also provide a safety net for the poor in times of hardship, when the resource can be relied

Table 1: The relative importance of fish and bushmeat in west African food supply

Country	Bushmeat supply ¹	Meat supply ²	Fish supply ²
Cameroon	233 963	225 000	125 000
Central African Republic	48 821	96 000	15 000
Congo DR ¹	665 972	238 000	298 000
Rep .Congo	189 234	45 000	50 000
Equatorial Guinea ¹	2 937	n/a	7 007
Gabon	49 069	55 122	59 405

All data in tonnes per annum.

Supply=Total Production + Imports - Exports

¹ Source: Fa et al. 2003

² Source: FAOSTAT <http://apps.fao.org/> Taken from food balance and fisheries databases for 2001

n/a Not available

on for improved food security. It is also often traded along a 'commodity chain', and a range of other people, apart from hunters and their families, may depend on bushmeat for their livelihoods. For example, traders who journey to areas where bushmeat is hunted, may also be urban market vendors (frequently, women) who sell the dried bushmeat to consumers.

A further parallel with fisheries is the distinction often drawn between bushmeat hunting for subsistence and hunting that is commercial. In reality, hunters may often hunt simultaneously for subsistence and commercial purposes—depending on what species they are able to successfully hunt on each occasion. Large, high-value species may be sold, while smaller species may be kept for household consumption.

While studies on the harvesting of bushmeat tend to highlight the use of endangered species such as gorillas, much bushmeat is from small, common mammals and birds, some of which are crop pests. Also, like fish, bushmeat can be smoke-dried, enabling it to be stored for a limited period for household use or to enable trading over a wider area. A great deal of bushmeat is eaten in 'chop bars', which are restaurants specializing in dishes containing bushmeat. Although accurate data on consumption of bushmeat is limited, some idea of its

importance in comparison to fish and conventional meat supplies can be seen in Table 1.

The negative impacts of fishing activities off west Africa on fish stocks are well established, as are its knock-on effects onshore, such as in the artisanal processing and trading sectors. Similarly, bushmeat harvesting is known to have had a considerable impact on the populations of some animals. However, fisheries studies tend to concentrate exclusively on fisheries matters, and bushmeat studies, on bushmeat matters, which tells us little about the possible interactions. For example, there have been many studies on the effects of overfishing on fish stocks and on the implications of overharvesting of some mammals for bushmeat on their conservation status, but studies that look at the wider impacts are relatively scarce. Even the impact of overfishing on the wider issue of food security in west Africa, and the influence of fish supply on the demand for competing proteins are underexamined. So, when a link was proposed between overfishing by European Union (EU) vessels and increased demand for bushmeat, one of the big problems was to find evidence.

Food security

Since fish and bushmeat are so important in food security, it may be reasonable to suggest that a reduction in the supply of

one will have an influence on the demand for the other. But how might such a mechanism operate and what might be the causes of reduced supply, in the first place?

Overfishing and its impacts are well documented in west Africa. Artisanal fishing plays a major role in the region, both in supplying low-cost fish (often small pelagic species) to local markets, and catching higher-value demersal species for export. With stocks in decline, competition with larger-scale fleets—both national and foreign—for fishing space, resources and markets (local and export) has intensified. Also, as the artisanal catch is increasingly providing fish for exports, availability of fish for local consumers may be further reduced.

Both small-scale and large-scale fishing activities have been implicated in overfishing and stock depletion. But the lion's share of the blame often goes to foreign fleets. These are reported to take more than 60 per cent of the west African fish catch. The EU fleet, in particular, operating under fishing licence agreements (FLAS) and other arrangements, has come in for criticism for exceeding quotas, and illegal fishing; but proving this is quite another thing. Vessels fishing under FLAS may even make a positive contribution to food security by landing by-catch or marketing their catch of small pelagics locally.

In fact, the west African countries are major importers of small pelagic species from the EU. In both value and volume terms, the import is considerable, with annual amounts reaching several hundred thousand tonnes. A significant part of this is caught in west African waters by EU supertrawlers.

Unfortunately, the actual catch data for any distant-water fleet (DWF) fishing in west African waters is subject to speculation. Whether it is by the artisanal fishers who may migrate up and down the coast or by industrial fleets fishing under FLAS or other arrangements (joint ventures, chartering, and so on), accurate, verified catch data is hard to come by. In the case of artisanal fishers, who tend to land their catches in remote and isolated

locations, trying to keep a tally is near impossible. In the case of some DWF, much doubt has been expressed as to whether their declared catches in any way reflect the actual catch. In the worst case—that of illegal fishing by vessels operating under flags of convenience—we have almost no idea of what they are actually catching, or where they are catching it.

It is often convenient to blame EU vessels for the worst excesses of DWF, but this may not be justified. Undoubtedly, the EU fleet has contributed to the decrease in fish stocks off west Africa, but for all their faults, at least there is some degree of transparency in what they do, even if reported catches are sometimes treated with some scepticism. As far as bushmeat is concerned, they may even do some good, as fish caught by EU vessels off west Africa contributes some 700,000 tonnes per annum to supplies in central Africa. Of course, it can be argued that it would be better, for many reasons, if this were to be supplied by the coastal States' fishing fleets.

Taking the Gulf of Guinea as an example, EU FLAS account for a relatively small proportion of the reported catch. While they target demersal fishes, cephalopods and crustaceans, which are not consumed widely in west Africa due to their high cost, large quantities of fish of low economic value are caught as by-catch. The impact of this remains unmeasured, although it is reported that an ever-greater proportion of this is supplied to local markets, both directly and indirectly. On the other hand, west African States make large catches of pelagics to supply the local market. But the relative impact and significance of these activities, and those undertaken by the EU supertrawler fleet, on the key pelagic stocks, are unknown.

Pirate fishing

What really throws the whole issue into confusion is the problem of pirate fishing by unregulated vessels fishing under flags of convenience. These are the real unknowns in the equation as, by their very nature, they do not report catches, so it is very difficult to assess their impact on fish stocks and food security. A recent report by Greenpeace highlighted the problem of pirate vessels fishing off west Africa. What

is beyond doubt is that some fish stocks in the Gulf of Guinea have been fished beyond the point of sustainability, but quite who is to blame is difficult to say.

The effect that overfishing has on food security and, more importantly, the paths through which it acts are not well known beyond the fisheries sector. We have information on the impact of overfishing on the supply of fish to artisanal processors and to petty traders, but not much information on the subsequent wider impact on food security. What will fishers do if there is not enough fish to be caught? If artisanal fish processors do not have enough fish, or fish is too expensive, what alternative incomes might be available? Last, but not least, if consumers cannot find fish in the markets, or it is too expensive, what alternative food sources might they turn to? There is no single answer to this question, as food preferences vary so much even within a single country, let alone in the region.

When people go to buy food, they may go out with something specific in mind or they may go out just to see what is available before making a choice. There will be times when only bushmeat will do, and there will be times when only fish will do—or, indeed, chicken, goat, beef or beans. The trouble is we just do not have enough information about why consumers choose a particular food on each occasion. We can suppose that availability, price and quality are all important in determining choice, but quite how, and how important each of them is, is very poorly known. Even with this lack of knowledge, it is quite reasonable to suppose that if fish is not available or is too expensive, consumers will turn to another protein source instead.

Evidence for this is scarce, but it is currently being researched in Nigeria and Ghana, so we should get some idea of the interaction and competition between various protein sources in due course. The main interaction is likely to be in the marketplace. It is very common to see dried, smoked marine fish for sale in remote, inland markets, alongside bushmeat. Improving infrastructure in west Africa now means that frozen fish is

now more widely available, and this too may be trucked inland to areas where fish supplies have previously been limited. In this case, it might be that improving fish supplies inland could have a beneficial effect on bushmeat animals by providing an alternative, readily available protein source. That of course, all depends on why consumers choose fish, bushmeat or other meats and until we know that, we cannot be sure what interactions there might be between fish supply and bushmeat demand. However, it seems inconceivable that there is no interaction or competition between two such important protein sources, but how it works is very much open to question.

Studies in Ghana have shown a strong relationship over time between per capita fish supply and bushmeat species biomass. In years when per capita fish supply was low, bushmeat species biomass also tended to be low, suggesting increased offtake. Further, it was also noted that bushmeat supplies in some markets tended to be higher when fish supply was limited. It would be wrong to suggest a direct cause-and-effect between the two, but it does at least indicate that a relationship does exist, even if fish supply and bushmeat demand are both responding to some other factor.

There is also data indicating that in years when the fish stocks in the Gulf of Guinea are low, bushmeat offtake tends to increase. This may not be a simple supply-related effect, with bushmeat replacing fish as it appears to be due, at least in part, to the reduced employment opportunities available in the fisheries catching and post-harvest sectors in years when fish stocks are low. If they cannot obtain work in the fisheries industry, fishworkers seem to turn to bushmeat harvesting and trading as an alternative source of livelihood. It has also been reported that there is an increasing tendency to rear bushmeat animals at the household level both for food and income.


Fishing agreements

It has been suggested that one solution to overfishing in west Africa is to repatriate all EU fishing vessels and to cancel all fishing agreements with the EU. But this alone is unlikely to solve the problems

facing west African fisheries, let alone to contribute to bushmeat conservation. One problem is that removal of EU fishing effort would not necessarily reduce the overall fishing effort.

Under the United Nations Convention on the Law of the Sea (UNCLOS), there is a requirement for coastal States to make any surplus stocks available to other nations. So fishing opportunities provided by the EU fleets' departure might simply be reallocated to others. If these were west African fleets, it could have a beneficial effect on regional food security and might generate greater economic activity than catches removed from the region by DWF, assuming the catches were not simply diverted to exports. Given that the demand for export markets remains high, it is very likely that fishing agreements would be replaced by joint ventures or other agreements designed to ensure continued supply for importing countries. If the fishing opportunities were reallocated to other, less accountable DWF, the effect could be detrimental for the region.

Of these options, the one that may have the greatest benefit for bushmeat animal conservation is for coastal States to use as much of their fishing opportunities themselves as possible, with the fish being landed and traded regionally. If infrastructure continues to develop in

west Africa, then it can be expected that fish will continue to find new markets in remote inland areas, and that supplies to these markets will continue to increase. Whether this would help ease demand for bushmeat remains to be seen, but it might well be that those with an interest in bushmeat conservation might do well to look to the seas as well as the forest. As to the question of what role other meats such as frozen chicken might play, that is an area that needs to be studied. 

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Fishing for a pension or peanuts?

Individual transferable quotas favour armchair fishers, not active fishermen, in the halibut fishery of British Columbia

The west coast halibut fishery of North America has a long history of regulation. Under the auspices of the International Pacific Halibut Commission, from its southern limits in California to its northern bounds in Alaska, the fishery has been regulated and researched since 1923.

However, the management of the 'derby-style' fishery came under scrutiny in British Columbia (BC), Canada, during the late 1980s. Open for very brief periods (six days in 1990), the fishery operated with no quota or gear restrictions, and stayed open until the total allowable catch (TAC) was reached.

The 'race for fish' during these brief fisheries seasons raised many questions, particularly with regard to safety, efficiency and sustainability. In 1991, the Canadian Department of Fisheries and Oceans (DFO) initiated a programme for quota-based management of the fishery. After the first two years, the quotas became transferable. The creation and implementation of an individual transferable quota (ITQ) programme in the halibut fishery of BC by the DFO was subsequently analyzed by two papers published in 1995: "The Effects of Individual Vessel Quotas in the British Columbia Halibut Fishery," by Keith Casey et.al. *Marine Resource Economics* 10: 211-230; and "Canada's Pacific Halibut Fishery: A Case Study of an Individual Quota Fishery," by Bruce Turris in *Limiting Access to Marine Fisheries: Keeping the Focus on Conservation*. Karen Gimbel ed. Center for Marine Conservation, Washington DC.

These two studies characterized the transformation of the derby-style fishery to a quota-based harvest as a success story, and focused on the positive

implications for fishery management. These analyses were made, however, before the development of the current system of transferability within the fishery. Transferability was prohibited during the first two years of the pilot programme (1991 and 1992), and was limited during the next several years by a block-system (see below). The system of quota leasing that currently dominates the fishery has resulted in several negative impacts, especially to younger fishers and those who were allocated relatively small quotas in 1991. There are also indications of negative ecological impacts to stocks caught as by-catch in the halibut fishery.

This article seeks to update the findings of the two reports and to indicate the impacts of transferability within this quota-based fishery. The data is drawn from DFO statistics on the halibut fishery, and three years of ethnographic fieldwork with halibut fishers in Prince Rupert, BC.

The pre-quota fishery has been characterized as "unsafe, overcapitalized, wasteful and difficult to manage". In 1990 the BC halibut fishery lasted a total of six days, compared to a 60-day season in 1982. Since licence limitation in 1979 (to 435 vessels), fishing capacity had been steadily increased by larger crews, electronic gear, circle hooks and automatic baiters.

Low prices

The 'derby' fishery of the 1980s was described as "frantic", resulting in lost gear and lost lives. The majority of the fish was frozen upon delivery, and ex-vessel prices were relatively low (1988-1990 BC average ex-vessel price was Can\$1.72/lb). The TAC for halibut was exceeded in eight of the 10 years of fishing in the 1980s. It has been suggested that the DFO was concerned about the discard of by-catch

species during the halibut openings—rockfish were discarded to save room in the fish-hold for halibut.

However, rockfish were not discarded by all boats during the derby fishery, and the current restrictions on rockfish landings do result in the discarding of rockfish by-catch during the halibut fishery.

A 1989 survey of vessel owners suggested that 77 per cent of the respondents (which represented 82 per cent of licence owners) were interested in discussing the potential of quota-based management for the halibut fishery. The final proposal for quota-based management was supported by 70 per cent of vessel owners and opposed by the Deep Sea Fishermen's Union (crew union) and large processing companies.

The halibut TAC for BC was divided between the 435 licensed vessels, 70 per cent based on their best annual catch in the years between 1986 and 1989 and 30 per cent based on vessel length. The season was lengthened to eight months, during which the vessels could fish at any time.

The harvest of each vessel was validated by dockside counts, which the fishers paid for through a per-pound levy. The fishery became the only one in North America where the costs of management were

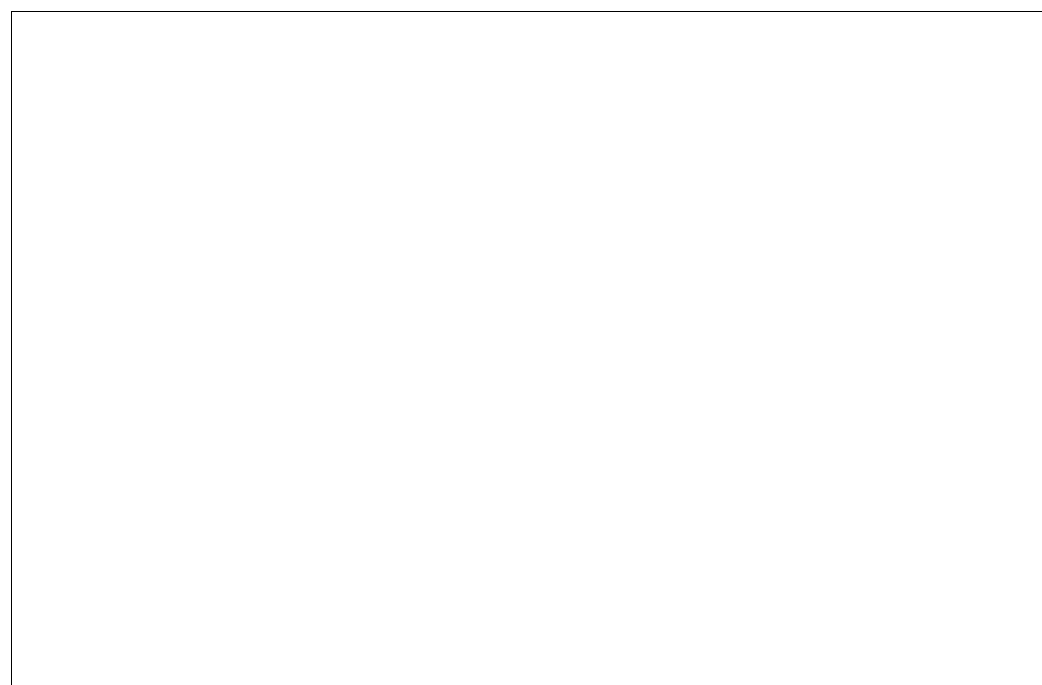
totally recovered from participants. There was no transferability for the first two years. After two years, temporary and permanent transfers began.

The longer season spread out deliveries and resulted in 94 per cent of the harvest arriving at the market fresh. This reportedly increased ex-vessel prices by 55 per cent in the first two years of the programme. The shift to a fresh product allowed smaller processing firms to increase their involvement in halibut processing, as the capital requirements of participation were drastically reduced. The percentage of Canadian fish landed at US ports decreased.

The longer season also allowed fishers to avoid bad weather, and fish at a reduced pace, presumably increasing the safety of the fishery. The DFO was satisfied that discarding was not a major problem and that reductions in lost gear resulted in lower mortality rates through 'ghost fishing'.

Transferable quota

A survey of licence holders in early 1994 received 135 responses (31 per cent). During the first year of transferability, 70 per cent had fished their entire quota in 1993, 17 per cent fished their own and leased more, eight per cent had leased out all of their quota, and five per cent had leased half of their quota.



It was also found that 44 per cent of vessels reduced their crew during the two years after quota, reducing crew employment by 32 per cent. Eighteen per cent of this was attributed to crew size reductions, and 14 per cent to crew displacement from non-active vessels. At the time, 59 per cent of crew shares increased on vessels operating with fewer crew. Shifts in the arrangement of shares to accommodate the value now inherent in quota itself have also been noted in the two 1995 reports referred to above.

While crew employment decreased by 25 per cent in the first year of the programme, it has been suggested that the total number of man-hours in the fishery has increased. However, this cannot be understood as a positive shift, as halibut crew do not receive an hourly wage. In fact, this suggests a further deterioration of crew income.

At the time of the licence holder survey, transferability was limited by a block system. The initial allocation was divided into two equal shares. Two could be leased out, or two additional leased to harvest. There were 74 licensed vessels no longer participating in the fishery. Those vessels with larger allocations were more likely to lease additional quota, suggesting a movement towards consolidation.

The changes in the halibut fishery have been described as positive by one source. But this was based on a survey that was both extremely early in the development of the new fishery, and only dealt with the attitudes of vessel owners to the regulatory shift. It did not take into account the experiences of crew, remaining and displaced, and was unable to anticipate the extremely significant impact of the quota leasing arrangements that have come to dominate the fishery.

In the years subsequent to this early survey, some of the limits on transferability were lifted. Quota transfers between boats can be of any size, and reflect any percentage of the total allocation, and are not limited in number. The maximum amount of the TAC that can be held by, or fished by, any license is one per cent. At a TAC that floats around the 10 mn lbs mark, as it has for the BC halibut

fishery for the past several years, a full 'tab' of halibut is in the vicinity of 100,000 lbs.

The lifting of the transferability limits has resulted in considerable changes to fishery participation rates. The number of active vessels has decreased considerably during the decade since quota transferability was implemented. In 2002, there were only 214 active licences, out of the 435 licensed vessels, that made halibut landings, with 221 licence owners leasing out their quota to another vessel. Compared to 196 in 1998, 422 licences were involved in quota transfers, with approximately 65 per cent of the TAC involved in temporary transfers. While the DFO statistics do not allow for accurate isolation of the lessee/lessor ratios, it appears that there are approximately equal numbers of licences leasing out and leasing in.

The quota leasing structure negatively impacts lessee vessel owners, and almost all crew on halibut vessels. Halibut quota is usually leased for a specific price per pound before the fish is harvested, with the processing company acting as a middleman and financier. Active fishers lease various units of quota (up to one per cent of the TAC), and quota owners are usually paid upfront by the fishing company. The cumulative lease prices then become a debt of the active fisher to the processing company, obligating them to sell their harvest to that company. When an active vessel delivers halibut, the lease price is deducted from the ex-vessel price of the fish, in addition to the management fees that are part of the mandatory enforcement and validation system. Whatever is left over is the true price paid to the skipper and crew for their labour and risk.

Averaged example for 2002 halibut season, derived from interviews with halibut fishers.

Ex-vessel price /lb	Can\$3.83
Quota lease price /lb	Can\$2.35
Management fees /lb	Can\$0.28

Can\$1.20/lb balance for expenses,
crew and boat shares

This examples shows that in 2002 the return to those involved in harvesting the resource was approximately half of the

amount paid to the 'armchair' fisherman who was allocated quota in 1991 or bought quota in the succeeding years.

The per-pound lease price for halibut quota fluctuates depending on a number of factors, but it is difficult to identify a determining factor, with individual fishers explaining the price relationship differently. Lease prices are tied to quota purchase prices, and to ex-vessel prices, which are, in turn, related to purchase prices, resulting in reciprocal and circular relationships. The following factors appear to influence, or have influenced, lease prices at different moments during the period of transferability:

1. The lease price appears to be tied to ex-vessel prices for halibut, and has a reciprocal relationship with the per-pound purchase price for halibut quota. Higher ex-vessel prices can raise the price of halibut leases during any given fishing season. The purchase price of quota is increased by rising lease prices, but can also influence pre-season lease prices based on a percentage relationship between quota price and lease price (see point 3).
2. Some quota investors seek a 10 per cent return on their investment. A quota-owner who paid Can\$25/lb for quota often wants to see a

Can\$2.50/lb lease price for his fish. This 10 per cent return reflects the way in which quota has come to be understood as an investment, similar to playing the stockmarket.

3. There appears to be a control factor on the lease prices that leaves a target of Can\$1.00/lb available to the lessee for expenses, crew and boat share. This is an arbitrary amount that has developed as a baseline 'wage'.
4. The upfront financing of halibut quota leases by the processing companies has had an inflationary effect on the lease price. The companies' ability to pay lease prices before the opening of the halibut season has weakened the relationship between ex-vessel price and lease price. Furthermore, the competition between companies for access to halibut landings encourages the companies to pay high lease prices in order guarantee that fish will be sold to them. This cost is then transferred to lessee fishers.

Standard price

During the first few years after the introduction of individual vessel-based quotas (IVQs), the size-based price split in ex-vessel halibut prices was not common. Most processors reportedly paid a

standard price for all sizes of halibut. However, the price differential for three size categories of halibut has become standard once more. Halibut are graded by size: up to 40 lbs, 40-60 lbs, and 60 lbs plus, with the larger fish being worth more. The price differential can reach 40 cents per lb.

The quota leasing system generally encourages the active fishermen to achieve the highest prices and profit margin possible, by conducting longer trips, and catching large fish that will receive the greatest price. However, there is very little indication of high-grading for size in the fishery due to the effort required to catch the fish, time restrictions due to other fisheries (that is, salmon), and weather concerns.

However, the Can\$1/lb target tends to impact on the price and pay structure during periods of high ex-vessel prices. The 2003 season saw extremely high ex-vessel prices for halibut, reaching above the Can\$5 mark. Some quota owners put their quota on the market at a fixed price per pound for the lessee, rather than at a fixed lease price. This fixed crew remuneration at relatively low levels, whilst allowing for windfall profits for the quota owners.

For example, a Prince Rupert fisherman fished halibut quota for Can\$1.10/lb, which left the increasing value from high

ex-vessel prices available to the quota owner. While this has not become the standard agreement, it suggests the potential for a shift towards fishing for wages. Some quota owners who structure their agreements this way stipulate that the quota be fished during the autumn months when the prices are relatively higher. This can force lessees to fish in more inclement weather, reducing the assumed safety impacts of quota-based management.

Price differentials and 'inverted' lease agreements (based on a fixed per lb rate) encourage some quota owners to refrain from leasing their quota out during the early part of the season, leading to lease price speculation. Owners can speculate on different ex-vessel prices throughout the season, and on the lease prices paid by various companies.

The competition between processing companies for access to halibut has increased the power of the quota owners to set lease prices. Processing companies, acting as the middlemen for most leasing agreements, may acquiesce to high lease prices to secure access to halibut.

Low value

Crew shares have generally been reduced to less than 10 per cent of the after-lease value of the fish, which can be as low as three per cent of the ex-vessel price of the fish. This is the case for most boats,

whether fishing owned or leased quotas. Previously, approximately 10 per cent of the ex-vessel price was more or less the crew-share norm, depending on the share agreements and crew size.

During the second half of the 1990s, most quota owners started to lease their quota to themselves, thereby removing a lease price from the gross earnings on owned quota. Crew on many boats, regardless of the relative percentages of owned or leased quota fished by the vessels, receive a crew share drawn from less than a dollar per pound. Thus many crew appear to be no better off if they fish on a boat with a large owned allocation of quota or on a boat for which the majority of the quota is leased. Family operations and vessels with long-term and steady crew provide the exception to this general tendency.

During the first two years of the ITQ programme, the value of halibut licences reportedly nearly doubled. More significantly, the purchase price of halibut quota has risen dramatically due to the steady income provided by leasing quota. Retired fishers can lease their quota holdings in perpetuity, often making more per pound leasing out their quota than they were paid for halibut in the late 1980s and early 1990s. In fact, the leasing system has encouraged many fishers to stay at home, as many suggest that the return for their labour, their risk, the wear on their boat and so on is not worthwhile. Leasing out their quota makes more economic sense than fishing it themselves.

The leasing option also encourages older fishers to transfer their other fishing investments into halibut quota. Fishers nearing retirement might sell a salmon licence and buy halibut quota, reflecting the leasing option and the current tax restrictions on liquidation of fishing assets. Fishers can sell another licence and buy halibut quota without a tax impact, whereas selling out of the fishing industry completely involves considerable tax losses. Halibut quota thus has become a retirement savings plan for older fishers. There is little economic incentive to sell their holdings to younger fishers.

Quota allocations and the leasing system have created a significant generation gap

in the fishing industry. Those who were fishing in 1991 received allocations based on previous participation in the fishery. The price of halibut quota has risen from 0 in 1991, to highs of Can\$35/lb in 2004. The estimation of the increased value of the initial windfall allocations is difficult as individual quotas fluctuate with the annual TAC, as they are a percentage of that total. The 1991 allocations, ranged from 4,000 lbs to 70,000 lbs, created a mean of 33,000 lbs. This mean allocation would now be worth Can\$1,155,000, at a Can\$35/lb quota price. At a current lease price of Can\$2.80/lb, this quota could provide the owner with an annual income of Can\$92,400.

Younger fishers, who were not participating in the fishery prior to 1991 must lease or purchase quota to fish, at these high prices. They thus face significantly higher debt-loads than previous generations of fishers. In order to own the means of production, they must not only purchase a vessel and gear, but also make even larger investments in licences and quota. Their ability to purchase quota is limited by the refusal of banks and other lending institutions to accept quota or licences as collateral. Generally, fishers can only borrow against the value of their vessel. Fishers who received an initial allocation in 1991 are better able to purchase quota and increase their holdings than younger fishers are able to buy into the fishery. Consolidation of quota ownership is an increasing concern.

The shift to quota-based management has resulted in some very positive changes in the BC halibut fishery including a longer season, ease of enforcement, catches below the TAC, and higher ex-vessel prices due to the shift to a fresh market. However, these gains might have been effected through other management tools rather than individual quotas.

Interviews with crew and young vessel owners in the BC halibut fishery suggest that the system of transferability has resulted in significant negative impacts to these groups.

Increased value

Fishers who were allocated quota in 1991 have seen the value of their allocation

increase substantially. The current system allows them to lease their quota for more than 50 per cent of the ex-vessel price of the fish. The system has resulted in high levels of quota owner control of lease prices, incentives not to fish, and not to sell their quota.

Participation in the fishery has dropped to approximately 50 per cent, with half the fleet leasing their quota out and becoming 'armchair fishermen'. Crew employment and crew wages have been significantly reduced both by decreased rates of vessel participation, and by the leasing structure.

Vessel owners who were not allocated quota in 1991 must lease or buy quota in order to participate in the fishery. Many complain that the returns from fishing leased quota are so low that they cannot afford to invest in halibut quota. Thus, those who lease quota cannot easily accumulate enough capital to purchase the means of production, thereby perpetuating the leasing system. With the inversion of the lease structure, from flat rates for the lessor to flat rates for the lessee, during periods of high ex-vessel prices for halibut, there is a suggestion of shift towards something closer to a wage structure.

Thus, the benefits of IVQs to fishers have been concentrated on the 435 licence owners who participated in the fishery during the shift to quota-based management and who benefited from the initial allocations. Crew members and subsequent generations have been impacted negatively by the shift and the subsequent development of the leasing system.

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Bloom or bust?

Jellyfish is a new fish export industry in the south Indian State of Tamil Nadu, with effects on local fishing communities

Rumours of the destroyed huts were rife in the air as the businessmen hustled all morning, frantic to negotiate and strike a deal with village leaders in an attempt to stop the upsurge of violent protest against the jellyfish industry. Some villagers were angry, some were pleased; all were talking about the 'jellyfish men' and, in the background, a lady complained bitterly that despite yielding an ample prawn catch that morning, nobody was interested.

This is a description of the scene in Pulicat, a small fishing town at the southern border of Pulicat Lake, Tamil Nadu, India on 21 July 2003, the morning after fishermen from several villages destroyed the processing huts of the newly established jellyfish industry. These villages, like many throughout India, have existed for generations in their entirety upon the precious and fragile livelihood of fishing. Often neither much changed by India's economic advance nor touched by the political storms of the wider world, the villages in Pulicat remain, at a glance, very much as they have always been: colourful arrays of houses dotted amongst coconut palms, bordered by long rows of resting wooden *kattumarams*. These traditional boats, long surviving the modernity of today's fishing fleet, remain lined up on beaches throughout the State, defiant against the onslaught of the Bay of Bengal, and calmly awaiting fishermen to again embrace the perilous sea for a daily wage.

To understand the impact of the jellyfish industry on the lives of fishermen and their families and on the structure of traditional fishing society, one must look back to the industry's arrival in the state of Tamil Nadu, less than a year before these disturbances occurred. The observant visitor to the Tamil Nadu coast may have noticed over the last year that,

amongst these familiar clusters of village homes and temple squares, has arrived a new type of building, which can now be seen in almost all coastal villages from Pondicherry in the south up to the Andhra Pradesh border in the north and beyond. The large open-thatched structures that have appeared in coastal villages throughout Tamil Nadu are not the result of some new craze of housing style; they are, in fact, the now empty processing units of the rapidly spreading jellyfish industry, lying in wait for the season to begin again this spring.

Many have generally welcomed the industry as a thankful alternative to their dwindling fish and prawn catches. Others have been angered that, for numerous reasons, they have been unable to benefit from the new export and also by the pollution that processing units have sometimes been under suspicion of causing in local surroundings. Little is known about the jellyfish industry, although what can be sure is that the industry stirs up a storm of its own within communities and between villages, as trade agreements are set up, and seaworthy boat sales soar as access to the jellyfish becomes everyone's first priority. Perhaps the questions the fishermen must ask are "How can I benefit from the trade?" and, more importantly, "Is this new industry sustainable?", before rushing out to acquire a new boat and the subsequent debts.

Major export

According to Tamil fishermen, the summer of 2003 was the first time that the jellyfish industry significantly hit Tamil Nadu. Major export industries, based predominantly in the far east, with outlets in Pondicherry and Chennai, started the impressively quick and extensive appropriation of village space, boats and

fishermen and even entire fishing villages in the haste to make profit from last year's particularly large jellyfish swarms. The mass exodus of fishermen to benefit from this trade meant that, in some areas, the jellyfish export trade usurped even prawn exports, and became the number one exportable product for several months.

The industry did not only provide alternative income through buying jellyfish, but also through developing onsite jellyfish processing units, required due to the highly perishable nature of jellyfish, which needs treatment within only a few hours of capture. Jellyfish are landed directly at the processing huts, and immediately dehydrated using a traditional step-wise reduction of water content with a 10 per cent salt-and-alum mix, although, in some instances, more potent chemicals are involved, including bleach products, used to whiten the jellyfish and, in doing so, increasing its commercial value. This operation is low-cost, requiring little capital, but it is labour-intensive, and thus provides welcome extra income to workers in the processing huts, who are usually locally employed men and women.

In the case of Pulicat, discontent grew further over concerns about the potential for pollution from the jellyfish processing huts, creating a good case for village

feuding, in an already fragile social and ecological environment.

This article attempts to answer some of the questions demanded by the upsurge of this new export interest in Tamil Nadu and India, by removing, in part, some of the mystery behind the jellyfish export industry. To begin, the global perspective of the industry is tackled: Will we all be eating jellyfish in the years to come, as fish becomes a rare delicacy, and if so, what do we understand about the jellyfish industry in terms of longer-term sustainability?

Fishing for edible jellyfish has been operational in countries like China and Japan for many centuries, providing a traditional and important component of Far Eastern cuisine, and even has its mention in writings from the Tsin Dynasty 300 AD. In spite of this, edible jellyfish became an important export commodity in Southeast Asia only in the 1970s, largely as a direct result of increased demand from the Japanese market.

Falling production

In the Japanese jellyfish industry, falling domestic production has been increasingly unable to meet rising consumer demand, partially fuelled by the introduction of shredded RTU (ready-to-use) jellyfish products. Such products have alleviated the traditional

but lengthy procedure of desalting jellyfish before cooking, a requirement that, for many, was inappropriate for today's modern busy lifestyle.

The jellyfish industry began its expansion to Southeast Asian countries such as Thailand, Indonesia and Malaysia, not only due to changes in demand and supply, but also due to the instability of production and price rises in the 1970s in China, Japan's main and traditional exporter. The result is that today, Japan's import market for jellyfish alone is valued at US\$ 25.5 mn per annum.

The main global capture production of jellyfish (in metric tonnes as recorded by the FAO Fisheries Department Statistics and Monitoring since 1995), is dominated by the northwest Pacific (Area C-61), and seconded by the West- Central Pacific (C-71). Captures in the Eastern Indian Ocean, which includes the Bay of Bengal, in comparison, are small. The only other notable jellyfish capture is in the Mediterranean and Black Sea, which harvest small amounts annually.

The interaction of jellyfish with existing fish species within an ecosystem can be quite complex, and determined by many factors. Jellyfish can be detrimental to fish populations in two ways: firstly, by those species of jellyfish that directly predate on fish eggs and larvae; and, secondly, by those species that act in competition with other predatory fish for this food source, bearing in mind that usually the top predatory fish claim the highest commercial value.

Interactions can be positive to a fishery, in that jellyfish can also provide a source of food for adult and sub-adult fish. What is interesting, in terms of maintaining the balance of the fishery ecosystem, is the potential impact that *large* numbers of jellyfish, or 'jellyfish blooms' can have on fish populations and the wider-scale impact on a commercial fishery.

Diets of many species of jellyfish overlap with the diets of zooplanktivorous fish such as anchovies, herrings and sardines. When overfishing includes these species, there could be significant unconsumed zooplankton, and jellyfish populations

might expand, because of the alleviated competition for food.

Additionally, the commercial removal of jellyfish predators, such as salmon, mackerel and butterfish, could further spur jellyfish population expansion.

However, this outcome is less clear as many jellyfish populations can be controlled by predation from other jellyfish and gelatinous species. One study points to a more sinister outlook for what jellyfish blooms might mean to a fishery.

Not only may jellyfish blooms indicate overfishing of larger top predator marine species, but also large jellyfish populations, once established, may suppress fish production in a recovering fishery, through competition and predation on fish larvae.

Once an ecological system has reached a point of stability as in this case, which is the jellyfish succeeding at the top of the food chain, the removal of its dominance may prove difficult, potentially preventing the recovery of the fishery, even if fishing effort of the fish was reduced: "The jellyfish state might be an alternative stable state which is difficult to revert," according to "Pelagic food web configurations at different levels of nutrient richness and their implications for the ratio fish production: primary production", by V. Sommer, H. Stibor, A. Katechakis, F. Sommer and T. Hanson, *Hydrobiologia* 484 (1-3), 2002.

Distributions of jellyfish populations are notoriously sporadic and unpredictable, and little is known about why or when they may occur in large numbers or 'jellyfish blooms'. Meteorological conditions, currents, water temperature, salinity and predation may play a significant role in determining the population size.

Seasonal life cycle

The life cycle of the jellyfish is seasonal in most species, which creates its seasonal appearance, although it is not yet understood what causes a jellyfish bloom to occur. In many areas, jellyfish can appear and disappear with great annual regularity, although, because populations commonly undergo inter-annual

fluctuations, some years bring much larger populations of jellyfish than others.

As a result, the fishing season for jellyfish is often restricted to only several months per year, the timing of which can vary with locality, and be influenced by fishing methods, freshwater outflow through river systems, and calm seas.

The typically high variation and fluctuation in annual catch highlight the potential instability of the fishery, and while a mass occurrence of jellyfish can bring in economic interests from outside, jellyfish, on other occasions, may suddenly disappear from fishing grounds altogether.

Jellyfish populations seem, in recent years, to have become unstable or show signs of decline in East Asian waters. Although the reasons for this are uncertain, pollution and overfishing are the most likely contenders for a cause, the effect being that Asian dealers are now exploring new sources of jellyfish.

The fishery for jellyfish has, until recently, remained predominantly in Southeast Asia, the annual catch for jellyfish for this region between the years of 1988 and 1999 being estimated at 169,000 tonnes wet weight, which is just over half of the worldwide estimated catch of 321,000 tonnes over the same period.

Jellyfish are also exported to Asia from the US and Canada, Australia and, recently, India, Mexico and Turkey, and a wide scope exists for other countries and other species to join the fishery. For example, there is a growing interest in creating an export market in Asia for the frequent swarms of the edible jellyfish *Stomolophusmelea gris* L. Agassiz (cannonball jellyfish) from the US: an investment, which has the potential to change a species—traditionally a pest to fishermen, which clogs up nets and crushes the shrimp catches—into a huge environmental and economic benefit for the region.

In addition to the expansion of jelly fishing in the oceans, pond culture technology, particularly in China, is widespread, selling for US\$0.9 / kg, where large tent-like awnings are used to maintain a cultivated jellyfish production throughout the year. Although little has been written about this technology outside of the Far East, the fact that cultivation of jellyfish is not only possible, but already a well-established industry in some countries, may provide an alternative to dwindling global fish stocks.

Simple techniques

The cultivation and processing of jellyfish are simple techniques, and cost-effective. Could the increasing demand for jellyfish in the Far East provide alternatives for the

livelihoods of many fishermen around the globe, struggling to make ends meet and daily having to choose between knowingly overfishing their stocks or starvation? What terms could be put in place now, before the industry is taken over by only a few to soon become very rich?

One could and should perhaps ask the question: To what extent can the average fisherman benefit from this new industry? To answer this, one must first gain insight into how much they are already benefiting from the industry, and how much are they being exploited, simply because they lack the knowhow.

Sadly, it is not only the fishermen who lack sufficient knowledge about the jellyfish industry, but also the world of academia and even the industry itself, who do not know nearly enough about the jellyfish to claim whether it has or has not a future in fisheries in global terms. "In spite of their wide commercial availability, jellyfish processing and utilization are not sufficiently studied and reported in the literature," write P. Hsieh, F.M. Leong and J. Rudloe in "Jellyfish as food", *Hydrobiologia* 451 (1-3), 2001. Only little is known about the biology and fishery of the edible jellyfish, particularly so in Southeast Asia, where scientific studies cannot keep up with the rapid development of exploitation.

Surely, the potential for the sustainable utilization of jellyfish in the face of dwindling fish catches, as a contributor to global cuisine, and the substantiation of the many claims and beliefs of the medicinal properties of certain species, merits further interest and study by the fisheries community.

Jellyfish export is an established industry in several countries bordering the Bay of Bengal, including Myanmar, Thailand, Indonesia and Malaysia. In comparison to these countries, India's jellyfish fishery is still small-scale, although it is an industry that seems to be gaining momentum in terms of its development and import capacities.

Jellyfish blooms along the coast of Tamil Nadu are not uncommon, and many

fishermen readily recollect how much of a nuisance it is to have hundreds of jellyfish entangling themselves in their nets from year to year. Some years, however, bring more jellyfish than others, and it is not only the Tamil fishermen who are inconvenienced by the jellyfish swarms. A study by Madras University found that the nearby atomic power station situated at Kalpakkam has suffered reduced production efficiency, and has, in the past, even been forced to stop production entirely, due to the jellyfish swarms clogging up the sea water intake piping. This can cost an estimated Rs. 5.5 mn (approx. US\$122,000) per day on lost revenue.

Although only a year's data is not representative enough to predict the frequency of jellyfish blooms in this area, during the study that took place between January 1995 and December 1996, data showed that peaks in the jellyfish arrivals at the power station coincided with the reversal of the coastal water currents during the two monsoon seasons. These occur in early June (the southwest monsoon) and November (northeast monsoon) and anecdotally coincide with the activities of the jellyfish industry in Tamil Nadu in 2003.


The potential for local people to become more directly involved in the processing and export of jellyfish is largely limited by a lack of technological knowhow, although the benefits from such knowhow could be substantial. The cost of jellyfish when processed is increased nearly seven to eight times that of the raw commodity, but as the local fisherman do not have the technology to process and they get lots of jellyfish during the season, they cannot do processing and storing. However, as many fishermen get unexpected incomes, there are few complaints.

Extra income

One of the more alarming consequences of the jellyfish industry's operations is the adaptation of traditional fishermen to specialize in 'jelly fishing'. For example, in Pulicat Lake in northern Tamil Nadu, the traditional lake fishermen are naturally keen to also 'have a go' at jelly fishing to earn the substantial extra income they have watched their marine fishing



neighbours collecting on a daily basis. As a result, many fishermen are buying the expensive fibreglass boats that are necessary to venture into the sea. The traditional marine fishing villages are, of course, not at all happy about this, and the ability to repay the debts incurred by fishermen as a result of buying new boats is heavily dependent upon the continuation of the jellyfish industry in that area for several years at least.

If, however, the jellyfish industry leaves the area in a couple of years time, to follow periodic jelly blooms in other parts of the ocean, what fate awaits the lake fishermen, who are left with marine fishing boats, but no jellyfish market? Perhaps the lake fishermen will continue to fish in the ocean, but this transfer will not be straightforward; new nets and expertise would be needed. While, in the past, traditional disputes between villages at Pulicat have occurred over fishing rights in the lake, could it be that the jellyfish industry has shifted things so that future disputes may be over who can fish in the ocean? 

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The Holy Grail

This article examines the background to the changes now being proposed for the status of the artisanal fishing zone in Peru

In several Latin American countries, the complementary objectives of securing artisanal fishing rights and conserving marine resources are enshrined in law. Thus 'artisanal fishing zones' have come to be recognized as special kinds of marine reserves, where small-scale fishing is allowed to take place without interference from larger-scale activities. Intensive, non-selective and destructive fishing activities (often referred to as 'industrial fishing', and geared to the production of fishmeal) are banned from these close-to-shore zones. The recognition of reserved artisanal fishing zones has, in many cases, come after long and hard-won (and ongoing) struggles, particularly in the two neighbouring Southern Cone countries of Chile and Peru. Here 'exclusive artisanal zones' have been established within a boundary of five nautical miles from the shoreline.

Despite these advances, artisanal fishing zones are subject to continuing incursions, both legal and illegal, by industrial and large-scale fishing operations. Clashes are also increasingly prevalent between artisanal fishing communities and aquaculture enterprises. Again, aquaculture enterprises may operate both legally (through being granted concessions) or illegally. In some Latin American countries, aquaculture enterprises have been set up illegally following violent (often armed) seizure of land and the intimidation of local communities through killings and torture.

In addition, it is an unfortunate fact of life that some government functionaries are not impartial actors in the decision- and law-making processes. In many countries, the investment sector (for intensive aquaculture and industrial fisheries) often

carries more political clout than small-scale fisheries. Worse still, high-ranking government officials may also be the captains of those very industries seeking to gain access to conservation areas reserved for artisanal fishing.

In Chile, Ecoceanos News of 15 October 2004 reports that allegations of 'illegal enrichment' have resulted in a Special Parliamentary Commission being set up to investigate the 'black market' in aquaculture concessions. Aquaculture concessions are allocated free of charge, and with no time limit set. The only requirement is the payment of a nominal annual charge of between 60,000 and 120,000 pesos (approximately US\$100-200). The owner is then free to lease or sell these freely acquired concessions. Ecoceanos reports that in some regions such concessions may sell for as much as US\$1 mn.

In August 2001, the Chilean Fisheries Subsecretary, Daniel Albarán, resigned amid allegations of corruption and professional misconduct. Albarán was, at the same time, the chairman of several aquaculture enterprises and Fisheries Subsecretary. In his public function, he was responsible for approving large numbers of aquaculture concessions. In business, he had an interest in how concessions were allocated. He may well come under the scrutiny of the Parliamentary Commission.

Aquaculture concessions

Likewise, in Peru, the handing out of aquaculture concessions in traditional fishing areas, in both the coastal areas and inland waters, has been strongly criticized. There have been fierce conflicts between artisanal fishermen and aquaculture enterprises over issues of

access rights in several fishing communities along the coast—Chimbote, Samanco, Casma, Callao, Pisco and Ilo.

Given a situation of increasing insecurity, and faced with growing threats to their livelihood rights from competing interests, artisanal fishworkers from Chile and Peru have recently committed themselves to establishing an International Commission in Defence of the Five-Mile Zone. The commission was established earlier this year during the Second Bi-National Peru-Chile Artisanal Fishermen's Meeting that took place in the northern Chilean city of Arica, from 1-2 July 2004. Then, in September 2004, in the Port of Ilo, Peru, the commission organized an International Forum on Artisanal Fishing to widen the network and to articulate more clearly the demands of artisanal fishworkers. In parallel, non-governmental organizations in the Southern Cone region, from Chile, Argentina and Uruguay, met in July 2004 to set up a Southern Cone Coalition to promote sustainable fisheries and social equity in the region.

In 1992, an area was legally reserved for artisanal fishing in the near-shore waters of Peru through Supreme Decree D.S. 017-92. This established the zone adjacent to the coast: "comprising the area between zero and five nautical miles, as a

conservation zone for the flora and fauna that exist there". "Carrying out fishing activities for direct or indirect human consumption with purse seines, and with other methods, gear and fishing devices that modify the biological conditions of the marine environment" is banned. The decree was passed due to "the serious interference of industrial fishing fleets and fleets fishing for direct human consumption in zones declared as the exclusive reserve for the operation of artisanal fishing vessels." It recognizes the importance of this zone for "upwelling and the breeding of the principal fishery resources that sustain the fishery for direct human consumption", and the need to "establish measures conducive for its protection".

In 1995, another Supreme Decree modified some of these conditions, and clarified that the ban on purse-seining refers only to industrial fishing, and not to artisanal fishing. It also clarified that the 0-5 nautical mile zone is reserved for artisanal fishing and, as such, that artisanal purse-seines may be used in the zone, so long as they comply with the criteria set by the Ministry of Fisheries.

Fierce conflicts

But the permission granted to artisanal purse-seining activities in the five-mile zone has led to fierce conflicts in the northern region of Tumbes. Thus, in August 2004, the Peruvian Ministry of

Production was forced to call in the navy to establish control measures on the activities of the so-called *vikingos chicos* (little vikings) and *bolichitos* (mini-purse-seines) in the sea around Tumbes.

The 1995 modification also makes the ban conditional on the technical opinion of Peru's Marine Institute (IMARPE). And here lies the bone of contention for artisanal fishermen in the south of the country, notably those from the port town of Ilo. In February 2001, IMARPE published a technical report, titled *The Problematic of the Five Miles in the South of Peru and Technical Alternatives for its Management*. The report observes that, in the south of the country, the distribution and concentration of the main fishery resources are localized in the zone 10 miles from the coast. This is due to climatic and oceanographic factors, and the presence of a very narrow continental shelf. In this southern region, the shelf width averages five nautical miles, but ranges from a maximum of 13 nautical miles to less than two (compared to 70 nautical miles in the northern region around Chimbote).

IMARPE notes that the concentration of fishery resources becomes more pronounced in summer (between December and March), especially in the five-mile zone. Its report provides an overview of oceanographic conditions in the southern region, and describes the spawning behaviour of the Peruvian anchovy. Known locally as *anchoveta* (*Engraulis ringens*), it is the main species targeted by industrial fishing activities supplying the fishmeal processors. The report then goes on to describe the activities of both the industrial and artisanal fishery in the south of the country.

In Peru, some 700 marine species are legally classified according to whether they are destined for direct human consumption (some 150 species) or for industrial purposes (2-3 main species, including anchovy/ anchoveta—*Engraulis ringens* and *Anchoa nasus*—and sardine). In fact, it has recently become national government policy to mobilize supplies of fish (scad, locally called *jurel*, and mackerel, *caballa*) to address the problems of widespread malnutrition

amongst the low-income segments of the Peruvian population. This has been enshrined in law through Supreme Decree D.S. 021-2004, which establishes special conditions for the catch of industrial fishmeal vessels to be used for human consumption. But FIUPAP is highly critical of this, pointing out that the industrial sector targeting these resources is already overcapacity. Rather, priority should be given to developing the artisanal sector and providing market support to ensure that fishermen obtain a fair price and low-income consumers an affordable food.

IMARPE's 2001 report documents the significant increase in fishmeal processing capacity since 1997 in the south of the country, and the resulting increase in fishing effort for anchovy, particularly in the summer. In the period 1990-95, the industrial fleet operating out of the port of Ilo remained more or less constant, reaching a maximum of 85 vessels in 1992. By 2000, vessel numbers had increased to 165, with a peak of activity in the summer months.

In the period 1991-92, more than 60 per cent of the southern industrial fish catch (for fishmeal) was taken within five miles of the coast. During the summer months between 1993 and 1997, this rose to 80 per cent. The report also notes that, in most years, anchovy represents more than 80 per cent of the industrial catch. It refers to an additional 10 species caught by the industrial fleet classified as species for human consumption, but claims that industrial fishing activities have had little impact on the mainstay species of the artisanal sector.

In a subsequent report on artisanal fishing in the zone 16°S - 18°20'S, IMARPE states that over the period 1996-2002, 65 per cent of the artisanal fishing fleet's activities were carried out in the 0-1.5 mile zone, and 99.5 per cent within the 2.5 mile zone. These observations have been hotly contested by the artisanal sector. They claim that part of the sector has been forced to retreat inshore to avoid interference from the industrial sector.

New sector

Also, in the last few years, a new deep-sea sector has developed, and artisanal

fishing boats range as far out as 150 miles to catch *perico* (*Coryphaena spp*) and sharks (*Tiburón diamante* and *Tiburón azul*).

The IMARPE study only looked at activities in the five-mile zone, and not outside it. As such, it provides an incomplete picture. Also, it only looks at interference between sectors, and not into sustainability issues. The Ilo fishermen, therefore, contest the validity of the report and its use for policy decision making.

The IMARPE report states that “due to the greater concentration of fishery resources in the coastal zone in the summer months, the application of a seasonal exception is justified in this period, that would allow for less interference with artisanal fishing.

As there is a much smaller artisanal fleet South of 18°S (that is, up to the Chilean border), free fishing should be allowed in this area during this period.” The report goes on: “One measure that could be applied is that when industrial fishing vessels fish inside the five-mile zone and catch fish classified as being for human consumption, these could be given to the artisanal fishermen,” with the caveat that “so long as catch controls are improved for the by-catch of fish for direct human consumption. This would also require improving the port infrastructure (the artisanal fishing quays) and establishing marketing channels.”

For the artisanal fishermen, the conclusions and recommendations provide stark prospects. According to IMARPE, the applicability of the five-mile zone law in the south of the country is not in line with the seasonal oceanographic variations and changes in species abundance.

They, therefore, recommend that “during the summer, there should be a seasonal exception to the five-mile law”. This would involve allowing the industrial fleet to fish to within three miles of the coast in a belt of about 120 miles (16°S to 17°59’S). From 18°S to the Chilean border, industrial vessels would be allowed to fish freely right up to the coast. “In all cases, by-catch of species for human consumption should be handed over to the artisanal fishing community.”

In December 2003, these recommendations found their way into Peruvian fisheries law. Supreme Decree No 037-2003 calls for a special fisheries regime to be established for anchovy in the southern region, from 16°S to Peru’s border with Chile. It proposes that access be allowed to larger-scale purse-seiners to specified areas (so-called ‘penetration windows’) within the artisanal five-mile zone.

The law also establishes that a special, non-Statal, financing mechanism (FONDEMPASUR) be set up for the development and modernization of the artisanal fishing sector in the southern region. This is to be financed by a levy placed on each metric tonne of fish landed by licensed industrial fishing operations.

The law also specifies that all fish caught other than anchovy should be handed over to the authorities at the nearest artisanal fish landing quay, or to the most representative organization of artisanal fishermen. Permission is also given to the owners of artisanal fishing vessels to catch anchovy, and, under exceptional circumstances, sell it for human consumption.

In effect, the industrial sector is required to set up a compensation fund in exchange for being given these ‘windows of penetration’, and is being ordered to do the artisanal fishermen’s work of catching fish for human consumption.

This decree is more or less exactly what the industrial fishing sector had been lobbying for. It is strongly backed by the southern fishmeal producers organization, APROSUR, which claims that in 2003, due to the lack of nationwide access to the five-mile zone, some US\$ 95 mn worth of foreign exchange from potential fishmeal exports was lost to the nation, and further, that in the southern region, potential US\$ 17.33 mn and 4,000 jobs were lost due to fishmeal plant closures. They say that the IMARPE report completely vindicates their claims.

Coastal fishing

“The (artisanal zone) decree applies to the whole coast without taking into account the difference in the nature of the coastline in the South and the North. While in

Chimbote, the shelf extends to 70 miles, in Ilo, it hardly reaches 3.5 miles. This means that the (southern) industrial fishing has to be predominantly coastal," they say.

They claim that reserving the five-mile zone for artisanal fishing makes their industry less competitive than Chile's. "The anchovy that is not caught by the Peruvian fleet is caught by the Chilean industrial vessels," they say. APROSUR and the National Society of Fishing Vessel Owners (SONAPE) have been actively organizing demonstrations and other lobbying efforts to raise public awareness and influence the political processes in their favour. The artisanal fishermen of Ilo have strongly challenged both the IMARPE findings and the claims of the industrial fishing sector. They accuse the Minister of Production, Javier Reátegui Roselló, of being both judge and jury, given his personal interests in the fishmeal industry. In their view, allowing 'windows of penetration' for the industrial fishery in the south is tantamount to ruining the fishery.

According to them, the anchovy and other fishery resources of the south represent a natural resource bank. It is of major importance as a feeding and spawning area, which is disrupted and harmfully transformed by industrial fishing activities. They claim that "measures like making exceptions to closed seasons in the south or making penetration windows in

the border area for the industrial fishery are irrational, and undermine the sustainability of the fishery by not guaranteeing any resource or income for tomorrow."

They report that there are around 1,500 organized artisanal fishermen based around the port of Ilo. The main organization is the Sindicato nico de Pescadores Civiles del Puerto de Ilo Artesanales-Buzos (SUPABCPI), which is a member of the national artisanal fishermen's federation, FIUPAP. They claim that there are a similar number of unorganized fishermen in the region as well.

Artisanal fishing activities around Ilo, which are all aimed at producing food for human consumption, are diverse: mini-purse-seines (*bolichito*), gill-nets, high-seas fishing, launch (*pintero*) fishing, line fishing, shellfish gathering, and diving using both compressors and aqualung. Over the last 10 years, these activities have undergone considerable change. For example, there are very few launches (*pintero*) and gill-nets (*cortineros*) today. The artisanal fishers claim that the root cause of these changes is the impact of industrial fishing.

Localized overfishing

On the one hand, the inshore sector has been increasingly pushed toward the shore to find areas inaccessible to

Final Statement of the Ilo Forum

The first International Forum on Artisanal Fishing convened by the International Defence Committee of the Five-Mile Zone, meeting from 29 to 30 September 2004 in Ilo, Peru, declares that:

The conservation of marine biodiversity and the protection of fishery resources are fundamental in assuring a supply of indispensable food for humanity, as well as in assuring the livelihoods of the communities that depend on fishing.

The coastal zone within five nautical miles is pre-requisite to the conservation of resources, providing an area for spawning, growing and nutrient upwelling, and, for these reasons, it should neither be subject to intensive fishing activities nor used as a dump for the industrial wastes that destroy it.

For these reasons, industrial fishing activities should be excluded from this zone, which should be used exclusively for artisanal fishing with selective and non-destructive fishing gear.

Under no circumstances should industrial fishing be allowed in this zone through 'windows of penetration'.

In order to ensure its own sustainability, the industrial fishing sector should try to overcome its dependence on fishing for fishmeal, and target a greater variety of species for producing value-added products, following the principles of responsible fisheries and with greater benefits for the fishing communities.

In order to ensure the sustainable management of fishery resources and the marine

environment, as well as the full participation of fishermen in decisions that affect them, we demand that the FAO Code of Conduct for Responsible Fisheries be turned into an International Treaty with the force of law.

The application of individual transferable quota systems fragments and divides artisanal fishing communities, depriving them of their rights and transforming them into a low-cost workforce for the industrial sector, due to which we reject their implementation.

In the case of Peru, we demand the lifting of Decree 037 that establishes 'windows of penetration' and the aspects of the fisheries law that allow these kinds of rules; in the case of Chile, we demand the lifting of the regime of 'windows of penetration' in the north of the country and an end to the quota system; in Mexico, we demand that Rule 002 that prohibits trawling in the five-mile zone be respected; and with regard to Argentina, Uruguay and Brazil, we express our concerns and reject the development of an anchovy fishery for fishmeal, which threatens the ecosystems of the region.

We call for the Second Forum of the International Commission for the Defence of the Five-Mile Zone to be implemented on the 29 and 30 September 2005 in Sinaloa, Mexico.

Also, and on the invitation of the Chilean delegation, we have decided to meet again during 20-22 November in Valparaiso, Chile, where the Congress of the National Confederation of Artisanal Fishermen will be held.

industrial fishing vessels. This has resulted in localized overfishing and a particular demise of the shellfish resources.

In response, closed seasons have been established, although no seasonal bans on the sale of closed-season species have been applied. This has tended to encourage illegal fishing. Traditional fishing areas have also been designated as areas for aquaculture concessions, putting further pressure on fishermen and resources in the increasingly restricted areas where they can fish.

On the other hand, an offshore artisanal fishing sector has developed in the last few years. Due to interference from the industrial sector, artisanal fishermen have been extending their range of operations to as far out as 150 miles, according to Ilo fishermen. But conditions are very harsh, with fishermen spending more than two weeks away from their families, and working in extremely dangerous and exposed conditions. Not only are there significant investment costs to be made in navigation equipment and fishing gear, but, with dramatically increasing fuel prices, this fishery is also becoming an

economic struggle, particularly as fishing trips may clock up distances of 700 miles.

Since its introduction, the December 2003 Supreme Decree has been hamstrung by the extreme polarization of the situation. In January 2004, the Ilo fishermen initiated a 'Peruvian Five-Mile Zone Defence Committee', supported by fishermen from Arequipa, Ilo and Tacna. This was followed up by a number of strikes in the south, aimed at disrupting fishing and related activities.

These local activities took on national significance when, at the end of March 2004, FIUPAP called for an indefinite national artisanal fishermen's strike starting on 5 April. This was scheduled to coincide with the start of the Holy Week, a time when many Peruvian families traditionally eat fish. Subsequently, FIUPAP asked the Food and Agriculture Organization of the United Nations (FAO) to intervene formally in the process, claiming that article 6.18 of the FAO Code of Conduct for Responsible Fisheries supported their claims for a five-mile zone, and was a just cause for complaint.

On 1 April 2004, the Ministry of Production suspended the implementation of the new access regime for three months. At the same time, an Enquiry Commission was established to evaluate the proposed new fisheries regime, and to report within 75 days. This 'temporary suspension' has since been renewed twice—on 1 July for 90 days, and then, most recently, on 4 October 2004 for a further 90 days, up to January 2005. The most recent suspension came four days after the first International Forum on Artisanal Fishing, and was considered a victory.

But although a battle may have been won, the 'windows of penetration' law still poses a very clear and present danger. It is only a matter of time—three short months before the current suspension expires. In the meantime, the government and industrial sectors are gathering information to support their case to lift the five-mile zone restrictions in the south. Nevertheless, the artisanal fishermen of Peru continue to protest, to organize themselves in readiness for the next

onslaught, and to widen their support base in defence of their sacrosanct five-mile zone—a zone that is fast becoming the Holy Grail of artisanal fishermen throughout Latin America, and a banner under which they are uniting to defend their rights. They will need all the strength and support they can muster if they are to prevail in the unequal power struggle with the mighty industrial fisheries lobby, who have influential friends in high places.

This article has been compiled by Brian O'Riordan (briano@tiscali.be), based on correspondence with various organizations, and using news items and official documents available on the Internet

Fisheries co-operation

Welcoming and friendly

This is an account of an exchange trip of two South African community leaders from fishing villages to Mozambique

In August this year, two community leaders from fishing villages along the Western Cape coast of South Africa visited fishing villages along the coast of Mozambique. Nico Waldeck and Charles Thompson were representing Masifundise Development Trust and the fishing communities with whom Masifundise works. The trip was organized by the Trust for Community Outreach and Education (TCOE), a non-governmental network of organizations to which Masifundise is affiliated. The aim of the trip was to enable leaders from rural communities in South Africa to learn from the experiences of rural people's movements in Mozambique, to share strategies for organizing and to build alliances and networks.

This was the first time that either of the two fishers had ever visited fishers in another country, and they were both very excited and curious when they left South Africa and crossed the border into Mozambique. Although community leaders have been concerned about the poverty and problems facing small-scale fishers in South Africa, they were shocked to see the difficulties faced by fishers in Mozambique.

Nico reports on the aspects that struck him the most: "Mozambique is a land of many faces. On the one hand, it is a very green landscape, with beautiful fishing areas, a tourist's paradise. On the other, it is a land with very visible poverty, especially within the fishing communities. Mozambique has been badly affected by the war of independence with the former colonial power, Portugal. The infrastructure in the fishing villages is of very poor quality. The roads to, and in, the fishing villages are chaotic. The majority of the fishers'

houses are made of reeds. There are no facilities or factories, not even freezing facilities in the communities. As a result, fishers are forced to sell their catch for very low prices on a daily basis. Low prices mean that fishers must catch fish every day. This places heavy pressure on the fish resources. The boats and equipment are also very outdated. For the first time in my life, I saw fishers go to sea without protective clothing or safety gear.

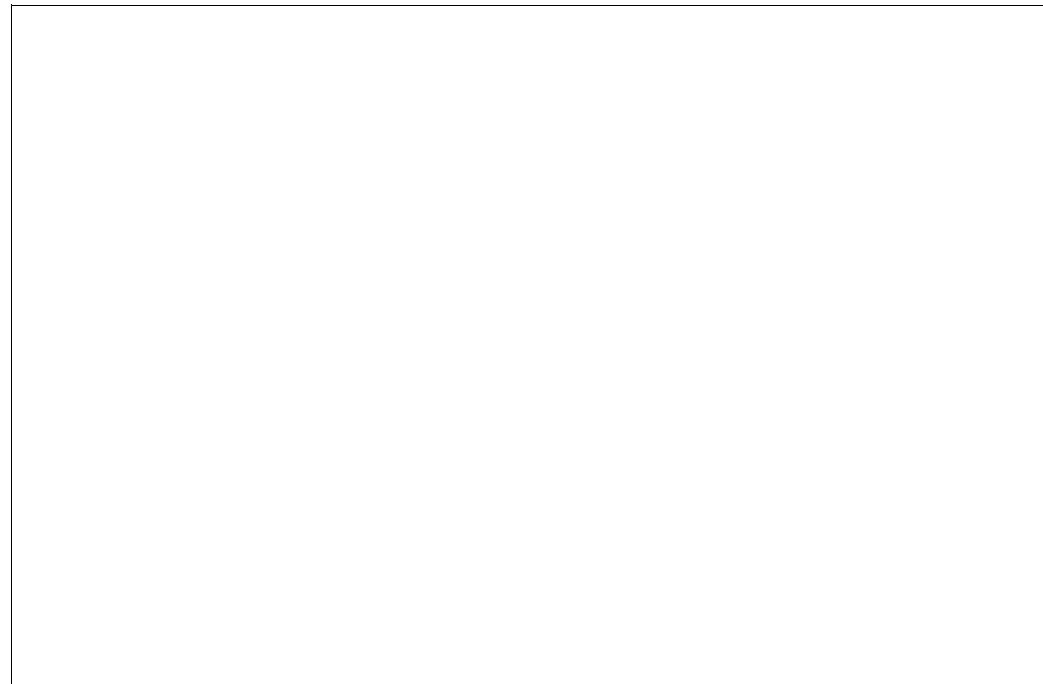
Women are also very involved in the fishing industry. They play a big role in the harvesting as well as in the buying and selling of fish. It is also obvious that the government of Mozambique does not have the financial resources and manpower to protect and manage their fish resources effectively.

The highlight of the fishing industry in Mozambique is the fish market in Maputo. Here you can buy fish and prepare it right there. You can choose from a great variety of food fit for a king, such as crayfish, lobster, calamari, oysters and many more.

Although the fishers are very poor, they are very welcoming and friendly. The fishing industry in Mozambique urgently needs development. Development is necessary so that the resources can be protected and the fishers can derive a livelihood from the fishing industry."

Raising awareness

On his return to South Africa, Nico has been actively raising awareness about the conditions facing fishers in Mozambique. It is his dream to be able to send the fishers that he met in Mozambique a wooden boat built on the west coast of South Africa. It is hoped that this trip will be the beginning of a process of building solidarity amongst fishers within the Southern African region. In November



2004, Nico and Charles will have the opportunity to reciprocate the warm hospitality they received in Mozambique when they and other fishers working with Masifundise in South Africa will host a conference for leaders from fishing and coastal communities in the Southern African Development Community (SADC) countries.

This report is based on an account by Nico Waldeck (jackie@tcoe.org.za or naseegh@masifundise.org.za), a community leader from Lambert's Bay on the west coast of South Africa. He also serves as a community representative on the Masifundise Board of Trustees and is an active member of 'Coastal Links', the regional structure representing fisher and coastal communities in the Western Cape

Fisheries management

Coming together with confidence

This article looks at co-management of lake resources in Uganda through 'beach management units'

Fisheries resources throughout the world are under increasing pressure, and effective approaches to improve management are being sought. Many countries are looking for ways to involve fisheries users in management and the term 'fisheries co-management' has been adopted to refer to a broad range of user-government partnerships. This shift is in recognition of the failure of centralized management of fisheries to maintain stock levels and secure dependent livelihoods within fisheries communities.

Co-management has been defined as "a sharing of responsibility and authority for resource management between the government and local resource users/community" ("Community-based and co-management institutions for sustainable coastal fisheries management in Southeast Asia", by R. S Pomeroy, *Ocean & Coastal Management*, 27 (3), 1995). There are, however, different interpretations of co-management, with different types of responsibilities and levels of authority shared between communities and government. The different approaches to co-management have implications for how fisheries stakeholders, particularly the boat crew and women, benefit from co-management.

Recent experience from Uganda in the implementation of a co-management approach to fisheries management demonstrates how the more marginalized stakeholders in fisheries—the boat crew and women—can be empowered through legislation, capacity building and participation in decision making.

The contribution of fisheries to the national economy of Uganda is

considerable, with an annual economic value of US\$301 mn (Ministry of Finance, Planning and Economic Development figures for 2004). Over 300,000 people are directly employed in the capture fisheries sector, many of whom are the poorest in rural society, with a further 1.2 mn people in rural households dependent on the sector. The government recognized that this significant contribution to poverty reduction can only be maintained and increased if the management of fisheries resources involves all relevant stakeholders, including the poor and women.

To implement the new fisheries co-management approach, the government, through its Department of Fisheries Resources (DFR), developed and approved the first-ever National Fisheries Policy (NFP) in March 2004, developed a provisional Fisheries Sector Strategic Plan (FSSP) and passed legislation to empower new fisheries community groups called 'beach management units' (BMUs). The BMUs are designed to ensure that the poor and women participate in key decision-making processes. A draft Fisheries Bill (2004) has been developed that will strengthen the new approach considerably, strengthening new institutions and reforming fisheries taxation.

Significant move

This article explains how BMUs represent a significant move from the past, centralized approach to fisheries management, how they operate and how those involved in capture fisheries, particularly the boat crew and women, benefit from the roles and responsibilities of BMUs and from the legislation that supports their active involvement. In Uganda, as in most other countries, fisheries management in the past was

vested with central government using out-posted fisheries staff. The administration and management was based on a command-and-control approach. There was very little or no participation by fisheries communities in resource planning, management and development.

At various stages in past management history, informal institutions were established, including local fisheries leaders, known as *gabungas*, landing site committees and fisheries taskforces. Representatives in all these informal institutions were not democratically elected, and had no legal status; their functions were not clearly defined and their operations lacked sufficient transparency and accountability.

Consequently, fisheries management using these institutions within a centralized approach was not very effective and did not reflect the needs of all fisheries stakeholders. Many fisherfolk were excluded from decision making and management, particularly boat crew (the fishermen) and women fishmongers and processors.

In light of the failure of the centralized approach to tackle harmful fishing practices and sustainably manage resources, and in line with the Government of Uganda's

decentralization policy, Uganda adopted a new, more participatory approach to fisheries management.

This approach is founded upon principles underpinning wider government policies that promote poverty-focused and gender-sensitive development strategies. It aims to build good governance, transparency and accountability in fisheries management. It deepens decentralization through participatory fisheries planning and management. This includes marginalized stakeholders, especially poor fishing crew members and women in decision-making structures and processes governing the management of resources upon which their livelihoods depend. This co-management approach brings fishing communities and government together for more effective management and implementation of policies and regulations.

In developing the new NFP and the provisional FSSP, the government held several consultative workshops with local government officials and representatives of all fisheries stakeholder groups. This consultation resulted in consensus and raised awareness about the new approach and ensured that policy was informed by experience and practice.

Sustainable exploitation

The primary objective of the NFP is to ensure "sustainable exploitation and

culture of the fishery resources at the highest possible levels, thereby maintaining fish availability for both present and future generations, without degrading the environment”.

There is no explicit mention of access rights and livelihoods, but the key policy strategies clearly demonstrate a strong commitment to a new co-management approach. Policy commitments on devolution of some decision-making responsibilities to communities and local government, the formation of sustainable institutions at all levels for fisheries management, and co-operation between local government and communities, guide the implementation of the co-management approach in Uganda.

In order for BMUs to become fully effective, the DFR recognized that they must associate with one another and with local governments to manage lake resources using an ecosystem approach. This is being achieved by the formation of Lake Management Organizations (LMOs), bringing together the local governments and communities bordering a lake, and addressing catchment issues that affect lake resources. The NFP also includes plans to create a Uganda Fisheries Authority (UFA) to take over from the DFR.

The UFA will be an autonomous institution under the parent Ministry of Agriculture, Animal Industries and Fisheries (MAAIF), which will be more flexible than a government department, more responsive and client-oriented, while costing less money for the government, through raising money within the sector.

The provisional FSSP was developed to implement the policy and includes detailed activities and spending plans. This document is used by the DFR to lobby for funds within MAAIF. The plan was instrumental in ensuring that DFR could lobby effectively during the revision of Uganda’s Poverty Reduction Strategy Paper (PRSP), the overarching policy framework, for poverty reduction required by the World Bank and International Monetary Fund for debt relief for Highly Indebted Poor Countries (HIPC). Uganda’s PRSP is known as the

Poverty Eradication Action Plan (PEAP) and it is essential that fisheries and key action areas within fisheries that will lead to poverty reduction are included in the PEAP to secure resources for implementation.

DFR was successful in ensuring that fisheries is included in the revised PEAP, and the need for financial support for the formation and capacity building of fisheries co-management was noted as a priority area. This strengthens the ability of fisheries stakeholders in lobbying for resources to improve livelihoods, while also increasing productivity.

Fisheries co-management is being implemented through the formation of BMUs at designated landing sites, as required by the Fish (Beach Management) Rules, Statutory Instrument No. 35, July 2003. They are the institutional structures within which fisheries stakeholders work in partnership with local and central governments, to improve planning and to sustainably manage fisheries resources. Over 200 BMUs have been formed, mainly on Lakes Kyoga, George and Edward, with hundreds more expected on Lakes Victoria and Albert.

The statutory instrument is accompanied by detailed guidelines that set out how BMUs should be formed (such as raising awareness, registering members and holding elections for the committee) and who should be on the BMU committee. The legislation requires that boat crew have 30 per cent of the places on the BMU committee, and that women, wherever possible, also have 30 per cent of places. The percentage allocations are one way of ensuring that all fisheries stakeholders participate in decision making, safeguarding against domination by stakeholder groups that have traditionally managed landing sites, that is, fishing boatowners who invariably do not fish themselves. The legal allocations are supported by capacity building, monitoring and, in the future, by development initiatives to build the capacity of boat crew and women in decision making and leadership.

UK aid

With assistance from the UK’s Department for International Development

Table 1: BMU Composition on Lakes Kyoga and George

Number of...	Kyoga	George
BMUs	192	8
Boats	Approx 10,000	326
BMU members	42,281	2,478
Men	37,630	2,017
Women	4,651	461
Boat owners	8,572	444
Boat crew	24,740	1,158
Fish mongers	3,823	288
Fish processors	2,121	44
Other fisheries stakeholders	3,025	544

(DFID)-funded project, Integrated Lake Management (ILM, www.ilm.mrag.co.uk), BMUs have been formed on Lakes George and Kyoga. Lake Kyoga is in the centre of Uganda, covering around 2,800 sq km, with 10 districts bordering the lake. George is a much smaller lake, in the southwest of Uganda, within the Queen Elizabeth Protected Area. It covers 260 sq km, with three districts bordering the lake.

Table 1 shows the composition of these BMUs in terms of men and women, and stakeholder groups.

Table 1 shows that 11 per cent of BMU members on Kyoga are women, whereas the much smaller Lake George has 18.6 per cent women. On Kyoga, there are, on average, 2.5 boat crew per boat, and on George, 3.5 per boat. The higher figure on Lake George is due to sharing of boats and licences and the fact that Lake Kyoga includes dugout canoes where owners also go fishing.

Not all the BMUs on Lakes Kyoga and George have complied with government regulations on the composition of the committees. Forty-five per cent of the BMUs on Lake Kyoga had 30 per cent or more women on the committee, and 73 per cent had 30 per cent or more boat crew. In some fisheries, such as male-dominated dugout canoes, there is justification for fewer women and boat crew on the committee (as the boat owners also crew

the boats, so there are fewer registered boat crew), but in other cases, more effort is required to improve poverty focus and gender sensitivity. On Lake George, two of the eight BMUs have fewer women than required by law on the committees, and one has fewer boat crew.

Resistance to the allocation of committee member places to boat crew and women was particularly strong at two landing sites on Lake George, where the dominance of a small group of boatowners had prevailed for decades. The boatowners were able to lobby at ministerial level for a change in the guidelines, but were unsuccessful, largely due to the counter efforts of the DFR and district political leadership. The same groups did, however, succeed in slowing down the election process, but eventually accepted the prescribed procedures and committee composition.

This does not mean that opposition to the new approach has disappeared. It is expected that, in some places, dominant groups may still try to use the new arrangements to continue their dominance.

Effective participation

Boat crew and women, in particular, need support and capacity building to ensure they can effectively participate in decision making within BMUs and are able to resist attempts by certain boatowners to

dominate the management of, and the share of benefits (legal and illegal) from, fisheries resources.

In terms of planning for, and managing, fisheries resources, what are BMUs doing? The statutory instrument clearly sets out their roles and responsibilities, but the main areas of activity can be summarized as:

- collecting information that can be used in planning and making management decisions, for the fisheries, but also for development of the landing sites;
- using this information for taking local and lake-wide management decisions and making management plans, by BMUs, lake management organizations and government;
- monitoring fishing activities and working with local and central governments to enforce management rules and regulations; and
- participating in control of access to the lake for fishing. Participatory processes for the licensing of boats promotes greater transparency and accountability within local communities.

From these roles, many benefits are expected from BMUs, both in terms of better management and, therefore, higher productivity, but also in terms of empowerment and poverty reduction. BMUs provide an entry point to fisheries communities and have enabled local government and non-governmental organizations to work more effectively with these communities, now they are organized and the structures are inclusive. BMUs are mandated to contribute to local government development planning and the new government-led, community-based planning approach to local government development planning provides an ideal route through which BMUs can participate in planning and lobby for resources.

In 2002, prior to the formation of BMUs, the government decentralized licensing powers to the administrative heads of local government. On Lake George, a lake with a fixed number of boat licences, this coincided with an evaluation of the number of licences and the procedures of issuing licences. It was agreed between all stakeholders that a participatory process would be developed that would increase access by boat crew and women to boat licences, while also ensuring continuity of licensing for livelihood security. New procedures are now in place, with benefits for resource management and local livelihoods.

Table 2: Performance of BMUs

Lake	No. of BMUS sampled	Percentage of BMUS				
		Holding meetings	Recording views of women & crew	Book-keeping	Collecting fisheries information	Reducing illegal gear use
Edward	5	100	100	40	100	80
George	8	100	88	25	100	50
Kyoga	186	69	53	14	52	48
Total	203					

Although BMUS were only formed on Lakes Edward, George and Kyoga in late 2003, their performance was assessed in June 2004 to provide baseline data and to identify areas where capacity building and support are particularly needed. The ILM project spent five years working on Lake George, compared to three supporting Edward to some extent, and three on Kyoga. The scale of Kyoga meant that capacity-building efforts required considerable resources and, so the Kyoga BMUS have not performed as well as the fewer BMUS on Lakes Edward and George. Further capacity building and support is needed to build on the capacity building already provided.

Performance was assessed using a monitoring framework provided in the Guidelines for BMUS, issued by DFR in 2003. A selection of the results from this monitoring programme is shown in Table 2.

The results show that many of the BMUS have already held meetings and that over half (55 per cent) are recording the views of women and crew in minutes of meetings. All the BMUS on Lakes Edward and George and over half on Kyoga are collecting fisheries information. This is very encouraging, as ILM had only recently rolled out training on fisheries information collection on Kyoga. Almost half the BMUS are addressing the challenge of the use of illegal fishing gear. The performance of BMUS, in terms of bookkeeping, is disappointing, and highlights the need for more support on financial management for BMUS.

Fisheries provide a significant livelihood from lake resources. However, for effective lake and fisheries management, BMUS must come together for co-ordination and coherence between management plans.

BMUS can associate with one another, both between BMUS at different landing sites and to form different levels of association. They may wish to associate at different levels of local government. On both Lakes George and Kyoga, LMOs have been formed to develop and implement lake management plans.

The Lake George Basin Integrated Management Organization (LAGBIMO) and the Lake Kyoga Integrated Management Organization (LAKIMO) are founded upon the BMUS, with representatives attending the lake-wide assembly and represented on the executive committee to ensure that their concerns are addressed across the lake. The organizations are associations of local government, formed under the Local Government Act, 1997, though the BMU statutory instrument also allows for BMUS to associate.

Improved management

The LMOs bring communities and local governments together for improved lake management. Such organizations are essential for developing a harmonized approach to managing a lake and for development interventions in the area. The LMOs are doing much to support the role of women and boat crew in fisheries management and beach development, through supporting their participation in

decision making, capacity building and through targeted interventions, as set out in the management plans.

The fisheries sector generates significant revenue. Not only is fish one of the biggest agricultural export earners for Uganda, it also generates revenue for local communities and local government. Some of these resources are being ploughed back into the management of lake resources through both BMUs and local government.

Money from fish movement permits, profits from fish-landing site tenders and collection of fish or money per boat landing (as determined through bylaws) is generating revenue to enable BMUs to hold meetings, collect valuable information, plan and implement decisions and monitor fisheries activities.

The collection of landing fees is tendered by local government to an external contractor. The tenderer is contracted to remit a certain amount to local government but can collect far in excess of that amount, removing vast sums from fisheries resources.

To address this removal of funds that could be used for reinvestment, the new draft Fisheries Bill 2004 includes provisions for BMUs to collect a Landing Site User Fee (LSUF). Financial analyses

reveal that this system, if adopted, will decrease the charges to resource users, particularly the poor, but, at the same time, increase the amount going to local governments for wider development, and leave a substantial amount for fisheries management and development by BMUs.

BMUs are set firmly alongside the government system. Although they are not formally part of the government system, many of the functions set out in the statutory instrument require close collaboration with local and central governments.

In fact, the parish or village executive committee is charged with monitoring and supervising the operations of BMUs. The Chief Administrative Officer of the district local council has overall responsibility and reports directly to the Commissioner of the Department of Fisheries Resources.

Local plans


In order to be effective in management, BMUs are required to develop local fisheries management and beach development plans and advocate for their integration in other local development plans. Integration of their plans into local government development planning, through Parish Development Plans, will increase the opportunity for funding and implementation. This strong integration into the local government system ensures

that a BMU works closely with government and that its plans and activities are integrated into local government development and work plans.

The policies and legislation are in place and over 200 BMUs have already been formed. It is, however, very early days for fisheries co-management in Uganda, and it is critical that the government, at national and local levels, provides the support that BMUs will continue to need to operate effectively and to ensure that all fisheries stakeholders benefit.

The need for support to, and capacity building of, BMUs and LMOs is clearly set out in the draft revised PEAP of March 2004, the PRSP of Uganda. This recognition is critical for DFR and others to lobby for resources to support fisheries co-management institutions.

Women and boat crew are already actively involved in BMUs and are speaking out on issues of concern to them. They recognize the opportunities brought by fisheries co-management. A woman member of a BMU committee on Lake George remarked, "I have gained confidence and exposure. Now I can contribute to discussions at the BMUs and in workshops when called, even if men are present".

Uganda has embarked upon an innovative co-management approach to fisheries management that, if effectively implemented, will result in increased productivity and improved livelihoods. This will, however, require greater financial support to the sector to ensure the new institutions have the capacity to operate effectively and deliver these critical outcomes. 

This article is by Fiona Nunan (trevorandfiona@hotmail.com), the former Institutional and Social Development Advisor of the ILM project, and Jim Scullion (jscullion@lvfo.org), the former Team Leader of the ILM project, now the Project Manager of the Implementation of the Fisheries Management Plan for Lake Victoria, Lake Victoria Fisheries Organisation, PO Box 1625, Jinja, Uganda

Fisheries policy

Anxiety-ridden fishing community

Pakistan fishermen are demanding that their government introduce sustainable fisheries management policies

Last month, a packed hall of a hotel in Pakistan's port city of Karachi saw citizens, experts and policymakers assemble to discuss the issues of the fishing community, especially the fishworkers engaged in the traditional fisheries along the 350-km Sindh coastline, and rivers, reservoirs and lakes scattered across many parts of the province.

The Pakistan Fisherfolk Forum (PFF) had organized the event and invited the experts and policymakers to support the preparation of a fisheries policy draft that would alleviate the livelihood conditions of the community. However, in the absence of effective participation by government officials, the official point of view did not come across.

Saeed Baloch, General Secretary of the PFF, gave a brief overview of the aims of the seminar. He said that whenever policymakers introduce policy measures, they rarely bother to invite the real stakeholders for discussions. Despite the fact that about 1.6 mn acres of fertile land have been destroyed due to acute shortage of fresh water, the Pakistan government has decided to build new dams on the River Indus, he maintained.

Those who have been involved in agriculture for generations have joined the fishing sector because their agricultural lands in the coastal region have been destroyed. The influx of people from other sectors adds to the burden of the fisheries sector. There are no checks and balances on the part of the government, and traditional fishworkers have been forced to be jobless as fish catches decline day by day.

Sikandar Brohi of the Centre for Information and Research of the Shaheed

Zuklfiqar Ali Bhutto Institute of Science and Technology (SZABIST), in his presentation, detailed the highlights of the proposed draft prepared by the PFF. Discussing the problems in introducing the policy, he said, "It is the responsibility of the government to introduce favourable policy, but here, the officials concerned are indifferent. While government itself should have taken efforts to introduce a favourable fisheries policy in the country, the PFF is forced to do so."

Tayyaba Ahmed, a doctoral student of Karachi University researching the women-in-fisheries sector, gave a presentation of the women involved in fish-related activities in their coastal localities. Tayyaba said that although women in shrimp-peeling centres in coastal neighbourhoods work hard, they get low wages. Besides, there are no personal or work-related facilities for them at these workplaces. Neither is there any concept of social security for these women workers.

Ghulam Mustafa Meerani, from Manchhar Lake, said: "There are 1,200 water bodies in the Sindh province, of which 600 have been dehydrated due to persistent water shortage. There is no freshwater downstream, hence all lakes in these two districts have dried. Hundreds of fishermen who have been engaged in fishing in these waters for a livelihood since time immemorial have become jobless."

Policy draft

Meerani added: "The government's policymakers have never tried to take the stakeholders into confidence during the preparation of certain policy drafts." For instance, he said, though there is a separate director for the inland waters in

the Fisheries Department, he is practically ineffectual. Besides, he said, influential landlords have occupied water bodies in the province. The largest Manchhar Lake was once witness to 52 fish and 65 bird species, apart from hundreds of trees. But now the once attractive lake is ruined, and several fisher families have migrated to other water bodies in search of livelihoods.

According to Meerani, when the Sindh Irrigation Department officials recently released water from Manchhar Lake to the River Indus, about 50 people died drinking the polluted water. But the irony is that the people of Manchhar Lake continue to use the same poisonous water.

In his presentation, Mohammed Ali Shah, PFF chairperson, said: "We have a mission to launch an effective struggle for the solution of the problems of fisher communities. In this matter, we are engaged in advocacy and lobbying with the government to solve the problems."

"Making policy is the responsibility of the government, but we are working to improve the policy draft and hope that we can launch these efforts on the occasion of World Fisheries Day on 21 November 2004," he added.

Shah said that hundreds of fishermen are facing unemployment and poverty

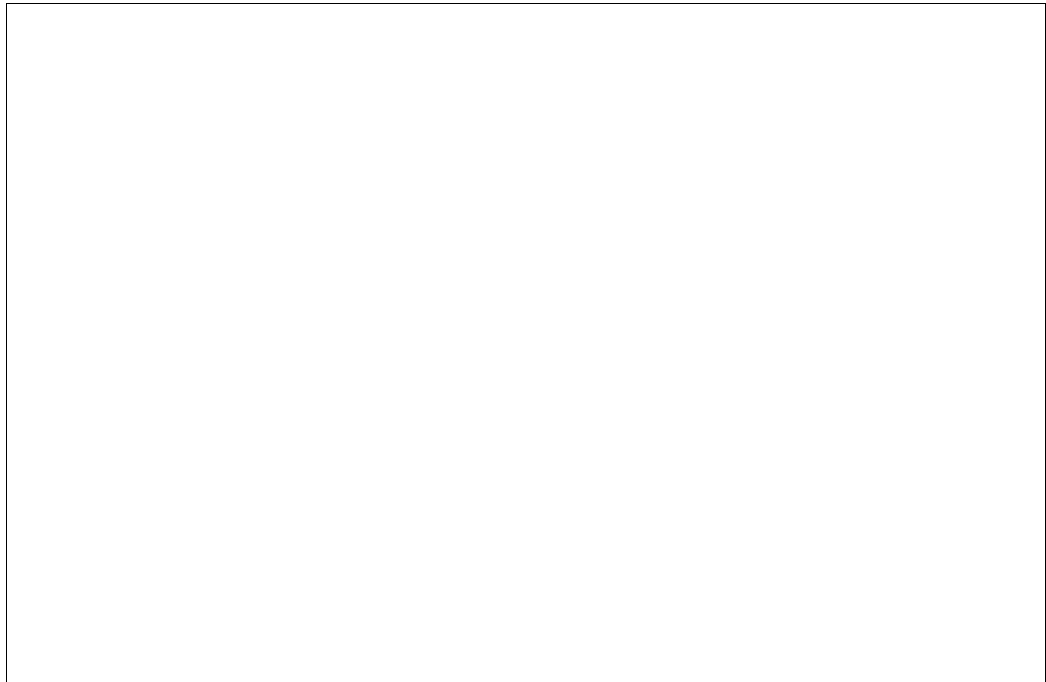
because the government failed to introduce a sustainable fisheries policy. Fisher families, he said, are the real custodians of these waters, but due to the indifferent attitude of the government, their lives and livelihoods are at stake.

Officials in Islamabad have issued licences to deep-sea vessels that help destroy the country's fish stocks. Besides, the wide use of destructive nets, increasing marine pollution and overfishing are the other main problems, which have played havoc with the lives of the traditional fishing community.

"We have always demanded that the government allow the trawlers to operate 50 nautical miles away from the seashore. We have suggested that a proper survey of fish stocks be carried out to identify the quantity of fish off the country's coast. Then we may be able to determine the number of trawlers or vessels sufficient for the exploitation of the fish stocks."

Sustainable policy

Majeed Motani, a traditional fishworker, said that a sustainable fisheries policy may be key to the survival of future generations of fishing communities. "There are 17 creeks in the Indus Delta, which are linked with 5,000 other water outlets. The most horrible thing is that hundreds of destructive nets, including *boolo* and *gujjo*, are used at these creeks, which are playing havoc with our own



natural resources. These nets catch juvenile fish and cause destruction of fish species. The poor fishworkers with small boats and nets face many problems," Motani said.

Fishing is the only source of livelihood for about 3 mn people living along the 1,050-km coast. Pakistan's coastline is divided into two parts the Sindh province, with a 350-km area, and the Balochistan province coast of 700 km. The Sindh coast fisherfolk live in settlements and villages in Karachi, Thatta and Badin districts of the province.

Haji Shafee Jamot, Director, Fishermen's Co-operative Society, opposed the ban on traditional nets, saying these have been uses for centuries and are not harmful like the *boolo* and *gujjo* nets. If a ban on traditional fishing nets continued, it will affect the fish sector as well as force hundreds of traditional fisher families into joblessness, he said. He added that government officials should decide the optimal mesh size of the nets to be used, instead of banning traditional nets altogether. ¶

This report is by Jan Khaskheli (Jan_khaskheli@yahoo.com), a freelance writer from Karachi, who also works with the Pakistan Fisherfolk Forum

Inshore fisheries

A case to follow

The future of Canadian inshore fisheries policy hinges on an upcoming court case

An obscure contractual dispute between two fishermen could soon have a major impact on access rights to Atlantic Canada's \$1.4 bn inshore fishery. The case, scheduled to go to court in December, will clarify whether private agreements can subvert public policy in the fishery.

At stake are two key measures put in place more than 25 years ago to keep inshore fishing licences in the hands of working fishermen and prohibit the concentration of fishing licences and the vertical integration of fishing and fish processing operations in the inshore fishery.

Canada adopted the two measures, known as the 'owner-operator' and 'fleet-separation' policies, after extension of its fisheries jurisdiction to 200 nautical miles in 1977. Prior to 1977, European and Soviet bloc offshore fishing fleets and a domestic inshore fleet exploited the enormous marine fishery wealth along Canada's Atlantic continental shelf.

After 1977, government policy encouraged industrial fishing by offshore trawlers owned and operated by Canadian fish processing corporations to replace the foreign distant-water fleets. Government planners saw the existing seasonal inshore fleet as a socioeconomic liability with low labour productivity, low-income levels and a chronic over supply of labour. It was thought that the new industrial fleet would soon generate year-round employment opportunities through backward and forward linkages to absorb some of the underemployed inshore fishermen.

The rush towards industrial fishing alarmed Canada's independent inshore fishermen who feared that the highly capitalized processing companies would

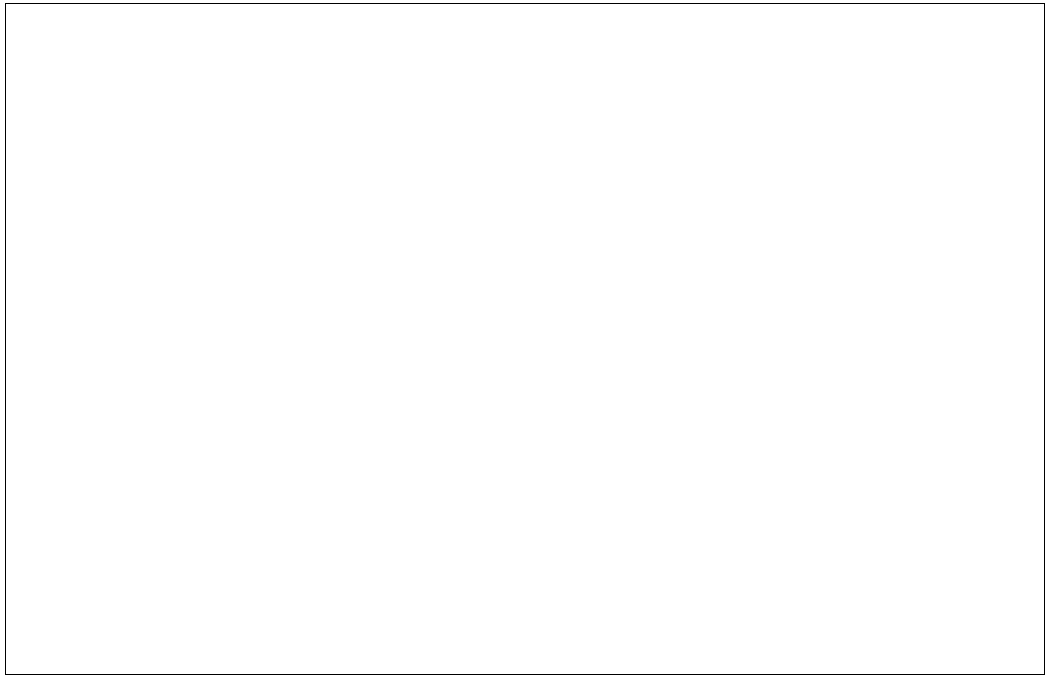
soon extend the industrial model into their traditional inshore fisheries. To allay these fears, the government divided the fisheries access pie in two. The processing companies, with their offshore trawlers, were given rights to more than half of the valuable groundfish allocations, while the rest of the groundfish was reserved for the inshore fleet of independent owner-operators.

In addition, inshore fleets were given almost exclusive access to fisheries that, at the time, were considered less valuable: species like lobster, crab, herring, scallops, mackerel, and so on.

Two government policies—the fleet-separation and owner-operator policies—established a firewall between the offshore corporate fleet and the independent inshore fleet. The fleet-separation policy prohibited corporations from acquiring licences for vessels less than 65 ft (19.8 m) LOA (length overall), essentially 'separating' the harvesting from the processing, and making vertical integration illegal in the inshore fishery. The owner-operator policy further strengthened the independent nature of the inshore fleet by stipulating that licences for species fished from vessels less than 65 ft must be fished personally by the licence-holder, that is, the individual must be on board at all times directing the fishing operations, unless otherwise temporarily exempted for health reasons, for example.

Greater competition

By blocking vertical integration in the inshore fishery, the fleet-separation policy stimulated competition amongst fish buyers for inshore products, while the owner-operator policy meant that the economic benefits derived from fishing remained in the hands of the individuals



who fish, the captains and crewmembers of the inshore fleets.

By 1992, the government's offshore fisheries strategy was in shambles. Overfishing by the industrial fleet, combined with inadequate management controls, obliterated the once plentiful groundfish stocks, and the government declared a moratorium on most groundfish species, which is still in effect today. Ironically, the productivity and economic value of the inshore fishery improved steadily during the same period.

The marketing of live lobster to the US and Europe increased the incomes of inshore fishermen, who also intensified their fishing efforts with improvements in gear and technology. At the same time, the previously marginal snow crab fishery emerged as a multi-million dollar industry, serving the lucrative Japanese market and benefiting from a sharp fall in landings of Alaskan king crab. The abundance and range of the East Coast snow crab also improved with diminished groundfish predation and a favourable shift in water temperature.

With both of these species firmly under the control of owner-operator fleets, the economic profile of the Atlantic inshore fishery improved consistently throughout the 1990s to the point where it now represents 99 per cent of the

harvesting employment and 75 per cent of the landed value of the Atlantic fishery.

The owner-operator and fleet-separation policies effectively blocked concentration of ownership of licences and ensured that the economic benefits of the inshore fishery were widely distributed throughout hundreds of small coastal communities in the five eastern Provinces (Québec, New Brunswick, Prince Edward Island, Nova Scotia and Newfoundland), providing good incomes and seasonal jobs in areas of high unemployment.

The greatly increased economic value of the inshore fishery, however, did not go unnoticed by processors and other investors. With the assistance of lawyers well versed in property law, they have opened a legal breach in the protective policy wall.

Over the last decade, fish processing companies, successful inshore fishermen and investors from outside the fishery have been using a loophole in the fisheries regulations to gain control over, and accumulate, valuable inshore fishing licences in clear violation of public policy.

Complex processes

The legal aspects of the process are quite complex. A fishing licence is not property in Canada. It is a privilege granted annually at the absolute discretion of the Minister of Fisheries. Although

transferring a fishing licence is technically illegal, it happens all the time through a government-sanctioned process called the issuance of a 'replacement licence'.

The government initiated this process with the introduction of limited-entry licensing in the 1970s and 1980s to facilitate the transfer of inshore licences between retiring captains (licence-holders) and younger fishermen—most often, family members.

The typical process is that an inshore licence-holder wishing to retire works out an agreement with an 'eligible' fisherman for that person to take over the fishing enterprise as a new entrant. The retiring licence-holder receives a payment from the new entrant, then asks the Department of Fisheries and Oceans (DFO) to issue him/her a replacement licence. While these transactions are commonly referred to as 'licence purchases', in strictly legal terms, no sale has taken place because a fishing licence cannot be sold.

The process of issuing replacement licences to facilitate inter-generational transfers of licences has become an accepted practice in the inshore fishery, and normally would not be a problem, since government policy states that the replacement licence can only be issued to an 'eligible' fisherman.

However, ineligible parties (fish processing companies, inshore fishermen who already hold licences and other investors) have been subverting the process and gaining control over inshore licences. They do so by entering into 'trust agreements' with the legal titleholder to transfer the 'beneficial use' of the licence.

These trust agreements are essentially contracts that separate the 'use' of the licence from its legal 'title'. In this way, the transaction is not illegal, in strictly legal terms, because the legal title has not been transferred, only the use. But, in reality, the use is everything. Whoever controls the use of the licence, controls the money that can be made from the licence through fishing.

A typical transfer transaction occurs as follows. A processor or other investor approaches a licensed fisherman nearing

retirement age and offers to 'purchase' the 'use' of his or her fishing licence. A trust agreement is drawn up between the two parties whereby they agree that the fisherman will legally transfer to the purchaser the 'beneficial use' of the fishing licence, and that the fisherman will ask the DFO to issue a replacement licence to an eligible person designated by the purchaser. Usually, the eligible person is a longstanding crewmember of the retiring fisherman, who, in turn, also signs an agreement to transfer the 'beneficial use' of the licence to the purchaser.

The new titleholder, however, does not enter the fishery as an independent owner-operator but rather as an employee fishing for a share of the catch or for wages. The profits from the inshore fishing enterprise get siphoned off to those who control the use of the licence—the holders of the trust agreement.

The consequences of this can be quite dramatic. On Canada's Pacific coast, where the fleet-separation and owner-operator policies were never adopted, control over fishing licences has fallen largely to investors who, in turn, lease the licences to working fishermen. In recent years, the costs of licence leasing have eaten up to 70 per cent of the landed value in some Pacific coast fisheries.

By creating the legal fiction of a 'beneficial use' in a licence, ineligible parties have been gaining surreptitious control over the Atlantic inshore fishery at an alarming rate.

Because of the private nature of the agreements, it is difficult to know for certain how extensive the practice is. However, it is commonly believed that four small but economically significant inshore fleets in Nova Scotia (mobile groundfish, scallop, herring and bluefin tuna) are now all under processor control. Some of these same interests and other powerful investors are now moving to buy up control over licences in the valuable inshore lobster and crab fisheries throughout Atlantic Canada.

Old decision

They are encouraged, in part, by a court decision several years ago that upheld a trust agreement contract and forced a

licence-holder to comply with its provisions. The existing jurisprudence, therefore, favours investors intent on gaining control over inshore licences.

But this may soon change. The existing precedent was established in a case without any arguments presented on the agreement's impact on fisheries policy by the government of Canada or any other party.

The Canadian Council of Professional Fish Harvesters (CCPFH), the national federation of owner-operator fishermen's organizations, has received legal opinion that a different result could be obtained if the DFO were to defend its policy before the courts. That now appears to be about to happen.

The DFO will be called to testify in a new case that has been winding its way through the legal process and is about to come to trial in December in New Brunswick. The case involves a crab licence fished under a trust agreement, one of five discovered by a DFO Gulf region investigation initiated at the request of the province of New Brunswick.

The DFO's Gulf region, historically sympathetic to the owner-operator fishery, ruled that by surrendering the 'beneficial use' of their licences, the licence-holders were no longer the heads of their enterprises and were thus violating the owner-operator policy. (One licence-holder was also found to be violating the fleet-separation policy because the trust agreement was clearly held by a processing company.)

The original licences were cancelled, new temporary licences were issued and the licence-holders were given a deadline to sever the trust agreements or risk losing their licences permanently. Two of the cases were settled to the satisfaction of the DFO.

The three others are still pending, one of which is scheduled to go to trial in December. In this case, the lawyers for the holder of the trust agreement are arguing that the existing jurisprudence supports their client and that the titleholder must fulfill the terms of the contract, including

requesting that the DFO transfer the licence to their client, which the Gulf region has indicated that it will refuse to do.

The case, if it does make it to trial—there is always the possibility of the parties settling out of court up until the last minute—will be the first test of the strength of government policy and the government's resolve to defend it.

Interestingly, the CCPFH has been granted intervener status in the case and has hired a well-known university jurist to defend the government's policies in court. The situation is rather unusual since it is the national fishermen's organization initiating the defence of public policy, and not the government. The CCPFH, however, took the lead in defending the public policy when the government was initially slow to respond.

Beginning in 2000, the CCPFH presented the DFO and successive Ministers of Fisheries with a detailed legal analysis of the threat trust agreements posed to the fleet-separation and owner-operator policies, along with the legal remedies needed to give the policies the force of law. The DFO's initial position was that trust agreements were civil arrangements between parties and difficult for the government to monitor. The whole question was referred to a major review of its Atlantic fisheries policy launched by the DFO.

The policy review team (all DFO officials) initially attempted to sidestep the trust agreement issue by asserting that the fleet-separation and owner-operator policies were fully in effect.

However, they also proposed that the different inshore fleets be allowed 'flexibility' in the application of the policies. This proposal was widely interpreted as a way to allow those fleets already under processor control to opt out of the policies.

Flexibility proposal

The strong reaction by fishermen's organizations to the flexibility proposal and their continued focus on the trust agreement problem led the government to produce a discussion paper and to hold special public consultations seeking broad

stakeholder input on how to deal with the problem.

In the discussion paper, released in December 2003, the DFO clearly recognized, for the first time, that trust agreements violate public policy. The document states:

‘Trust agreements’ that purport to transfer the beneficial use of a licence, although they have not been considered as illegal by courts, contravene the owner-operator and fleet-separation policies and the Core fisher designation since they allow a corporation, third party or entity other than the licence-holder to control a licence in the inshore fleet. (*Preserving the Independence of the Inshore Fleet in Canada’s Atlantic Fisheries: A Discussion Document*, DFO, 2003)

The DFO has yet to announce how it intends to deal with the problem. The public consultations, however, revealed the deep cleavage that exists within the industry around public policy. Independent fishermen’s organizations,


provincial governments and coastal community organizations were almost unanimous in calling for a strengthening of the fleet-separation and owner-operator policies. On the other hand, fish processing companies and spokespeople for the fleets they control called for the elimination of the policies and the free movement of capital into the inshore fishery.

There is some urgency to deal with the problem. The majority of licence-holders in the inshore fleet are nearing retirement age and most will transfer their licences to new entrants over the next 10 years. Unless the legal loopholes in the public policy are eliminated, control over these licences and an annual landed value of Can\$1.4 bn in wild inshore fishery products will end up in the hands of non-fishermen.

Enormous stakes

The stakes are enormous in terms of how the wealth generated by access to this public resource is distributed. A carefully crafted and successful public policy

designed to keep this wealth in the hands of working fishermen residing in small coastal communities could very rapidly be turned into an empty shell.

Those interested in the links between fisheries policy and the sustainable socioeconomic development of coastal communities should follow the evolution of this case closely. 

This article is by Marc Allain (marcallain@sjma.net), Senior Policy Adviser to the Canadian Council of Professional Fish Harvesters

The Simonstown Declaration

The Simonstown Declaration by Small-scale Fishers was adopted at Cape Town on 5 November 2004

We, the representatives of civil society and small-scale fishers and fishing communities* from the SADC region gathered in Cape Town, take note of the existence of the SADC Protocol on Fisheries, its objectives in Article 3, and, in particular, the content of Article 12, as well the formal endorsement of this protocol by the respective SADC governments in August 2001.

(* Small-scale fishers and fishing communities refer to all men and women who are involved in all aspects of small-scale fisheries, regardless of their geographical location.)

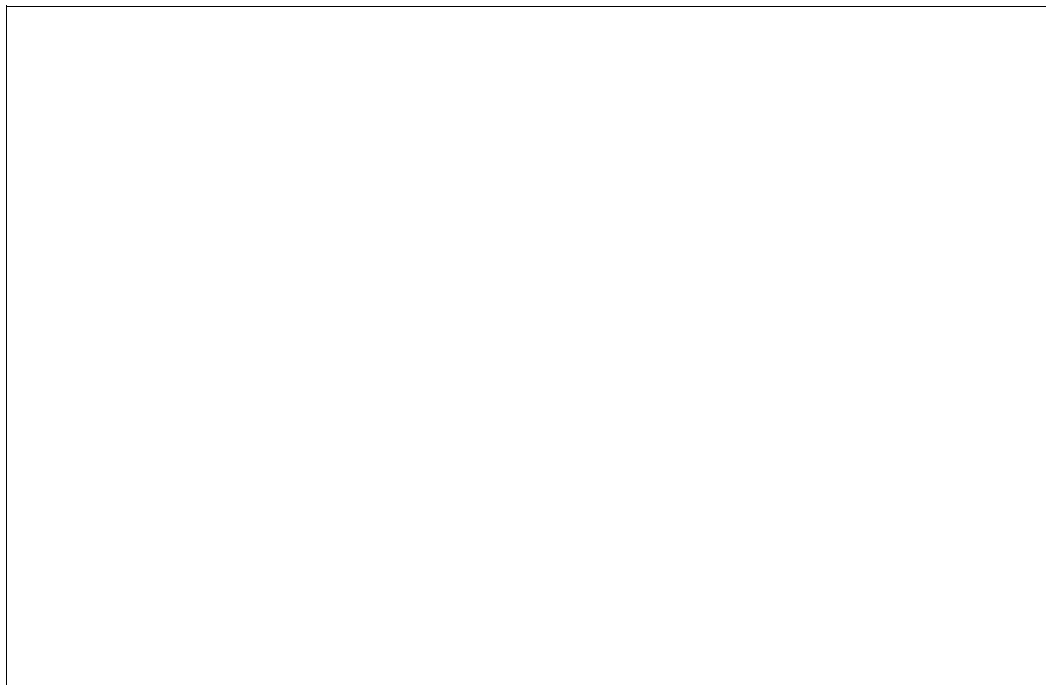
This conference notes the following:

- the lack of legal recognition of artisanal and traditional fishers in certain SADC countries.
- the lack of recognition of the dignity and integrity of artisanal and traditional fishers in certain SADC countries.
- the failure of certain governments to protect the sustainable livelihoods of artisanal and traditional fishers as required by the protocol.
- that many governments have largely not protected artisanal and small-scale fishers against the social and economic impacts of globalization, that is, increased marginalization and poverty.
- the absence of equitable and sustainable access to inland and marine aquatic resources in certain countries.

- the cumbersome and bureaucratic licensing procedures in South Africa and Namibia, in particular.
- the lack of involvement and participation of the small-scale fisher community in the policy formulation and related decision-making processes in certain SADC countries.
- the lack of access to credit facilities, infrastructure and subsidies on fishing inputs.
- the continued marginalization and unfair treatment of women in all sectors of the fisheries.
- the absence of health, safety and fair labour practices.
- the absence of concrete steps to put in place measures regarding shared aquatic resources in certain SADC countries.

We call on our SADC governments:

- to urgently take responsibility to secure the following rights for small-scale fishers:
 - equitable and fair access to living aquatic and fishing resources
 - social security measures for small-scale fishers
 - food security for small-scale fishers
 - sustainable livelihoods for small-scale fishers.



- active participation in policy formulation and related decision-making processes
- to recognize, respect and ensure dignity of traditional and artisanal fishers.
- to incorporate indigenous knowledge systems of small-scale fishers into resource management processes.
- to take concrete and practical steps to involve the traditional and artisanal fishers in the management of aquatic resources and ensure fair distribution of costs and benefits among beneficiaries.
- to ensure that the forthcoming NEPAD fisheries conference takes cognizance of this declaration and makes provision for the participation of fisher representatives in the NEPAD process.

We further call on our SADC governments:

- to assist in empowering and building the capacity of small-scale fishers through:
 - regional exchange visits and networking
 - promotion of micro-financing enterprises
- to safeguard the livelihoods of artisanal fishers against the social and economic impacts of globalization.
- to ensure harmonization of law and regulations, and the fair distribution of resources in respective countries.

This conference resolves:

That, considering that fishing communities are particularly vulnerable areas for HIV/AIDS transmission, governments and civil society organizations should take a leading role in the following areas:

- provision of health facilities
- supply of anti-retroviral drugs
- awareness and educational campaigns
- provide infrastructure support to orphans and the aged

This conference further resolves:

- to maintain this network of small-scale fishers within the SADC region on an ongoing basis.
- to request Masifundise, together with Coastal Links, to play an interim secretariat role for this network.
- to undertake the following activities in our respective countries:
 - disseminate and share information (with the support of WWF, Masifundise, PLAAS and ICSF)
 - engage with the ILO process towards developing new labour standards for the fishing sector, with a view to reaching a greater portion of the world's fishers, particularly small-scale and artisanal fishers
 - raise awareness of the NEPAD fisheries process and advocate for the full participation of fisher representatives in this process
 - advocate and lobby for programmes to improve the plight of small-scale fishers
 - mobilize and organize small-scale fisher groups and networks in all our countries
 - constructively collaborate with respective governments in terms of the implementation of the protocol
 - exchange visits and lessons learned

This declaration was adopted on 5 November 2004 at the Southern African Small-scale Fishers' Conference at Cape Town

News Round-up

Export boost

The **Fiji** government has allocated \$100,000 to subsidize cargo charges for all agricultural, fisheries and timber products bound for export.

Minister for Forests and Fisheries Konisi Yabaki says this is an incentive to help develop and introduce commercialized resource-based industries.

Mr Yabaki said this incentive would be based at all fishing centres his ministry was setting up alongside all shipments of export-bound products.

Fiji Chamber of Commerce president Taito Waradi welcomed the incentive, saying it would certainly help to boost export earnings and capabilities. Fishing centres at Vanuabalavu, in the Lau Group, and Vanua Levu, as well as those planned for Levuka and Kadavu, will benefit from this incentive.

These fishing centres are places where fishermen near these islands send all their catch for export or to be sold in Suva.

Training youth

Youth Service members in **Namibia**

are to be trained in fish farming, according to a recent Cabinet decision.

The Cabinet decision touches on a number of other aspects,

including options to source initial capital for aquaculture development.

The Ministry is planning an international investors' conference for February next year. It will be funded by the Norwegian government.

Freshwater fish farming projects have started in the Caprivi and Okavango regions, while pilot projects are ready to be set up in other regions.

These community projects would mainly focus on tilapia fish.

A nine-member Aquaculture Advisory Council was also recently announced.

Beyond fishing

Djibouti boasts 372 km of coastline, the ragged edge

separating scorching, desolate land from waters so teeming with marine life they have become hugely popular with divers.

Yet experts say the country reels in just 10 per cent of its potential catch.

The abundance of fish has also not provided a defence against hunger. An estimated 20 per cent of all children under the age of five are malnourished in the poor, desert country.

A recent government paper blames lack of support, equipment, and illiteracy on the poor state of the fishing industry, that with investment, experts say, could be worth 4,000 jobs and an annual \$10 mn in much-needed foreign exchange.

In its fisheries code issued in September 2002, the government gave full rights to small-scale fishermen and banned the use of trawlers. But the law has been repeatedly flouted.

The Djiboutian navy impounded five foreign trawlers with a total capacity of 1,000 tonnes earlier this year, while a dozen or so Yemeni fishing boats are currently sitting in Djibouti's port, hauled in because of illegal fishing.

Heavy emphasis on one market or species

can also have drastic effects on a delicate marine environment. Officials noted that Djibouti's shark population drastically shrank in the past decade, victims of the Asian appetite for shark fin soup.

Free soon

Pakistan and India have discussed issues of bilateral interest and agreed to expedite the release of held fishermen after completion of legal formalities.

The discussions were held in Islamabad between Pakistani Interior Minister Aftab Ahmad Khan Sherpao and Indian High Commissioner Shivshankar Menon, the official Associated Press of Pakistan (APP) reported.

They discussed a number of issues of bilateral interest, with special emphasis on the release of fishermen held in the

two countries, according to the report.

The two sides agreed that release of held fishermen will be expedited after the completion of legal formalities. Every year India and Pakistan arrest hundreds of fishermen for fishing across the sea boundary.

Dolphin curry

Wildlife officials have warned Thais against eating dolphins after receiving reports they were turning up in restaurant curries and meat markets.

Thailand's Department of Marine and Coastal Resources said it was investigating reports that dolphin meat had gone on sale in two coastal provinces.

"I have sent officials to verify whether people in Chumphon and Prachuap Khiri Khan have killed and eaten dolphins," the department's director Maitree Duang-sawasdi told AFP.

Dolphin dishes are not popular in the kingdom according to Maitree, who said any meat found in curries and coastal markets would likely come from accidental netting or carcasses found on the shore.

However, the director said he had advised the Fisheries Department to step up patrols within three kilometres (two miles) of the coast, where most dolphins

breed, including Southeast Asia's endangered Irrawaddy dolphin.

Thailand was the driving force behind a complete trade ban on the Irrawaddy dolphin granted last month after experts

Fishing ties

The Spanish Popular Party (PP) has expressed support for negotiations for a fishing agreement between the **European Union (EU)** and **Peru** for EU fishing licences in

his party will support EU negotiations for a fishing agreement with Peru, granting fishing licences to the EU fleet targeting tuna and other fish species.

During the meeting, the Peruvian

President seemed well in favour of Varela's proposal for Peru to request the EU to start negotiations leading to an agreement for the possible fishing of the EU fleet in Peruvian waters. In exchange, the EU should offer cooperation and support in regard to the development of sustainable fishery of Peru.

Varela, who is also Vice-president of the International Trade Commission for the European Parliament, said that this new agreement will exist parallel to the Association Trade Agreement currently in negotiation between the EU and countries of the Andean Agreement.

SAMUDRA News Alerts launch

The International Collective in Support of Fishworkers (ICSF) will officially launch its SAMUDRA News Alerts service in January 2005. The service, which has been in the beta (test) phase for almost a year now, is designed to deliver news on fisheries and related issues, on a daily or weekly digest basis, in plain-text or HTML format.

Apart from news and stories on fisheries, the service also focuses on environmental and oceans topics as well as issues that deal with women in fisheries and safety at sea. So far, around 1,700 alerts have been mailed out. Apart from news from secondary sources like newspapers, agencies, mailing lists and websites, the service has also featured SAMUDRA Exclusives, original stories from ICSF sources.

The alerts sent out daily (except on Saturday and Sunday) provide headlines, a summary of news and links to the original sources. The weekly news digest, sent on Saturdays, provides only headlines and links to the original sources. The news archives can be searched on the ICSF website by keywords, themes and country names.

The SAMUDRA News Alerts service has so far attracted close to 400 subscribers in different parts of the world. The users include academics, journalists, policymakers, inter-governmental organizations, researchers, students, non-governmental organizations (NGOs) and fishworker organizations.

Please visit <http://www.icsf.net> to subscribe to the news alerts.

said their number in the wild may be as few as 100.

Under Thai law, anyone caught with dolphin meat or parts faces up to four years in jail and/or a fine of 40,000 baht (us\$977).

Peruvian waters. After a meeting with Peruvian President, Alejandro Toledo, and the Peruvian Minister of Production, Alonso Velasquez, the EU Deputy for the Popular Party, Daniel Varela, informed that

Furthermore, the Peruvian Minister mentioned that another possible field of co-operation could be the transfer of Peru's tuna fishing licences, which are not being used at this time.

“In towns where the fishing community had to share space with society, all too often the fisher town became an area of that town in itself, a separate quarter, usually at one end, where the councils found they were able to push the fishers, boats, gear and all. And so the fishing communities grew from their own blood, marriages between fisher families being the norm, although sometimes they mixed with other fishers from along the coast. They became apart from the rest of us, their lives wholly dependent on the sea and the shoals they sought in earnest, working by night, sleeping by day.”

— From *Herring: A History of the Silver Darlings*
by Mike Smylie



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

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

SAMUDRA Report can now be accessed on ICSF's home page on the World Wide Web at <http://www.icsf.net> or <http://www.icsf.org>

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