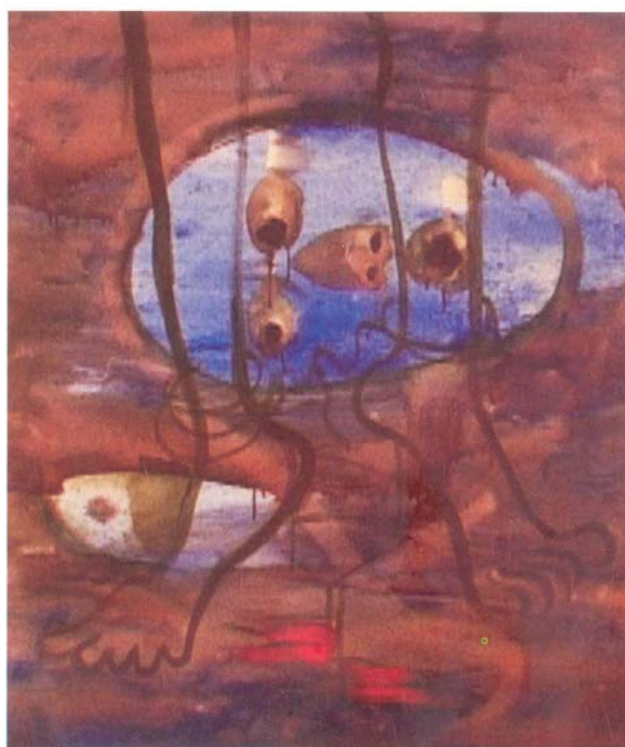


SAMUDRA

REPORT

INTERNATIONAL COLLECTIVE IN SUPPORT OF FISHERWORKERS



DEBATE ON RIGHTS-BASED FISHERIES

MSC ECOLABEL CERTIFICATION

PERU'S FISHMEAL INDUSTRY

TUNA FISHING IN THE PHILIPPINES

ILO WORK IN FISHING CONVENTION

FISHERIES LEGAL HANDBOOK

NEWS ROUND-UP

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Comment

Basing it just right

Rights-based approaches to development that use human rights—economic, social, cultural, civil and political, as established by international law—as the framework to guide development agendas, have been increasingly adopted in recent years and particularly in the last decade, including by the United Nations and its agencies. In essence, it is recognized that all development initiatives should contribute directly to the realization of human rights.

In this context, the paper prepared by the Secretariat of the Food and Agriculture Organization of the United Nations (FAO) for the Agenda item on “Social Issues in Small-scale Fisheries” (COFI/2007/6), stressing a human-rights perspective to foster social development and effective resource management, is timely and needs to be welcomed. The paper notes that a rights-based approach to development in fisheries needs to focus as much on promoting human rights, raising living standards and addressing the vulnerability and social exclusion of fishing communities, as on improving management of fisheries resources. A narrow focus on the latter may be ineffective if undertaken in isolation from the broader social and cultural conditions in fishing communities and societies at large, it stresses.

In a context where fishing communities in some parts of the world, and particularly in countries of the South, are known to live in poverty, with minimal access to basic services or representation in decision-making processes, there is no denying the essential logic and desirability of this approach.

As a possible strategy towards bringing together responsible fisheries and social development within a human-rights perspective, the paper proposes, as a principle, the need to include poverty-reduction criteria as a key component of decisions related to equitable allocation of rights to fish, including in decisions over inclusion and exclusion. It also points out that, according to the Code of Conduct for Responsible Fisheries, fishery-management objectives should have both a social and economic equity component.

Viewed through the lens of equity and poverty reduction, certain fisheries-management measures, such as the creation and effective enforcement of artisanal trawl-free fishing zones — long demanded by artisanal and small-scale fishworkers from countries like Peru, Chile, Thailand, India and Indonesia — would make sense, particularly if accompanied by measures like ensuring gear selectivity and use of labour-intensive techniques, among others.

The same lens would also demand a reappraisal of rights-based approaches in fisheries that have conferred private-property rights to fish resources on individuals, or even groups, to the exclusion of large numbers of other fishers. These could be owner-operators, including part-time and seasonal fishers, both men and women, and others with limited means. Fishworker and fishing community organizations from Chile, South Africa, Canada, Iceland and Australia, among others, have pointed to the tremendous social costs of such systems, and how they violate basic human rights.

As Svein Jentoft points out (see pg. 30), rights-based approaches in fisheries should only be adopted where it is convincingly demonstrated “...not only in theory but also in practice, and not only on average but for the specific situations in which fishing people find themselves, that a particular property-rights regime will increase the welfare of those most in need...”

Fisheries policymakers have the responsibility to ensure that fisheries-management regimes are built on principles of sustainability, equity, and social and cultural appropriateness, and contribute to the social development of fishing communities. Ignoring these principles could jeopardize the objectives of fisheries management itself.

Being open, transparent, inclusive

Developing-country fisheries, and small-scale ones, in particular, have been marginalized in the Marine Stewardship Council certification system

Protecting consumers from unsafe food, the environment from overexploitation of resources and pollution, and workers and producers from unjust labour and trade relations, are generally considered, in development circles, as objectives worthy of intervention whether through regulation or, increasingly, through the establishment of voluntary standards and codes of conduct. Yet, abstract principles are eventually applied in concrete situations and have a variety of effects on differently endowed countries, groups and individuals. What may seem a good idea to consumer groups or government agencies in a Northern setting, may not turn out to be so advantageous to producers in the South even though the initial stimulus in the North may have been exactly to safeguard these producers.

Food safety, environmental and social standards have become key features in the trade of agro-food products in the last 15 years. International organizations, government agencies, industry associations, and non-governmental organizations (NGOs) behind the formulation of these standards were initially defensive of efforts aimed at critically examining their effects in different settings. Questioning the inherent 'justness' of these initiatives was considered reactionary and necessarily intended to discredit them. Recently, there has been a more open attitude towards reaching a better understanding of the contradictions, limitations and differential impact of these standards. From a 'defensive' phase, these organizations and NGOs have now moved into a 'constructive dialogue' phase, where they are making efforts to be more inclusive (sometimes for public-relations reasons), and to reflect upon past experiences to improve the content,

monitoring and management of their standards. In other words, they are trying to 'make their system management-right'. This means that standards development procedures, governance structures, indicators, monitoring, verification and management systems have become much more sophisticated than even a decade ago. Where there has been little movement so far has been in acknowledging that standards are developed and applied in specific political economies, within complex power relations, and in extremely diverse local conditions and politics. In a sense, an increased focus on systems management brings these initiatives even further away from a politico-economic understanding of their effects.

The focus of much of the work to make ecolabels 'better' is based on the principles of non-discrimination and equality of opportunity. In this line of thought, explicitly adopted by the Marine Stewardship Council (MSC), if the system has been devised openly, is monitored transparently, and is administered properly, standards simply provide fuller information to those involved in transactions. Where clear disadvantages are highlighted for certain countries, groups or individuals, technical assistance and capacity-building instruments are provided, or simply suggested, as solutions.

Smaller players

It follows that one of the arguments posed by environmental NGOs to defend their standards and codes of conduct is that they provide a level playing field for all players in an industry, and that affirmative action targeted at smaller players would damage their credibility. But, if anything, the Forestry Stewardship Council (FSC) special provisions for

community forestry certification demonstrate the contrary.

Facilitating access to special projects for smaller fisheries' certification, improving outreach, and holding workshops in Africa or South Asia are not sufficient to make artisanal fisheries better equipped to be MSC-certified. As the only third-party ecolabel for capture fish, MSC bears responsibility for the inability of developing-country fisheries, in general, and artisanal fisheries in these countries, in particular, to be certified. Exceptions are found only in some fisheries of upper-middle-income countries—South African hake, Mexican Baja California red rock lobster, and Patagonian scallop are all MSC-certified, while Gulf of California (Mexico) sardine and Chilean hake are currently undergoing assessment.

Does this mean that MSC is 'bad' and should be shut down? No. It means that an organization that portrays itself as open, transparent and inclusive should actually behave so. SAMUDRA Report has hosted a heated debate on the governance of MSC since its inception, although, for some reason, the debate has basically died out after 2002, with a small reprise in 2004. Perhaps this is because most will agree, rightly so, that the governance structure of MSC, its procedures and its market coverage have improved substantially in the 2000s.

Is this enough? No. The plight of 'sustainable fisheries' that can not achieve certification in developing countries, and especially of small-scale fisheries in least-developed countries, has not been tackled seriously enough. Special flexibilities in the interpretation of certification guidelines are not sufficient. Barriers to achieving MSC certification in developing countries range from institutional weakness (lack of knowhow) to financial costs. Numerous projects and funds have been set up by, or with the contribution of, MSC. This is a welcome development, but the range of funding and the scope of activities involved are unlikely to help a substantial number of these fisheries to achieve MSC certification. For example, the 'Sustainable Fisheries Fund' can only make small grants to "help ensure broadbased stakeholder input into fishery assessments . . . It will not be in a position to support large-scale research projects" ("Funding support", SAMUDRA Report No. 32, July 2002).

Three components

The costs of MSC certification to the client industry can be broken down into three components: (i) pre-assessment; (ii) fishery assessment; and (iii) annual audits. Pre-assessment costs range from a few thousand dollars to over US\$20,000. Direct costs for a full assessment have varied between under US\$35,000 for a small, simple fishery to almost US\$350,000 for a large, complex fishery. The overall cost of

obtaining certification depends on the nature of the problems uncovered in the assessment and the corrective actions that have to be undertaken.

Furthermore, as the last article on MSC that appeared in SAMUDRA Report ("Amend principles, criteria", SAMUDRA Report No. 38, July 2004) highlights, financial arrangements for certification are left to private negotiation between clients and certification agencies. The same article calls for MSC to channel such negotiations, which would allow discounts and 'soft' payment options for selected fisheries. It also calls for a revision of principles and criteria, either amending them to fit developing-country fisheries and small-scale fisheries, or devising a separate set of principles and criteria for these fisheries. Two years on, these calls have gone unheard.

To its credit, MSC has recognized that its standards and certification procedures are not geared towards the realities of developing-country fisheries, especially small-scale and data-deficient ones. A special program (MSC Developing World Fisheries Programme) has been seeking to improve the awareness of MSC in developing countries and to develop guidelines for the assessment of small-scale and data-deficient fisheries.

The project aims at developing guidance for certifiers on the use of 'unorthodox' information on fisheries, such as traditional ecological knowledge and management systems. It also aims at using a 'risk-based' approach to qualitatively evaluate fisheries. But the aim of this project is not to write a separate standard, but rather to develop 'operational interpretations' to assess small-scale and data-deficient fisheries.

There is evidence that MSC was advised on a different approach for implementing special systems of compliance and verification to cater to the needs of developing countries and small-scale fisheries. These suggestions included the development of *specific* indicators that are appropriate to developing-country fisheries, and the use of analysis of hazard (a specific threat to sustainability posed by the practice) when analysis of risk (the calculated probability of a practice having

a negative impact) is not possible, practical or is too expensive.

Furthermore, and unfortunately, discriminating in favour of small-scale fisheries seems to go against the 'Guidelines for Ecolabelling of Fish Products' of the Food and Agriculture Organization of the United Nations (FAO). These guidelines include the need for independent auditing, transparency of standard setting and accountability, and the need for standards to be based on 'good science'. They also lay down minimum requirements and criteria for assessing whether a fishery should be certified and an ecolabel awarded, drawing on FAO's Code of Conduct for Responsible Fisheries. Unfortunately for artisanal fisheries in developing countries, transparency and inclusiveness in standard setting do not work retroactively. Also, instead of calling for special standards and verification systems to be applied in developing countries, the FAO guidelines simply call for 'financial and technical support'. This needs to be changed.

Elsewhere, in a paper for the Trade Law Centre for Southern Africa, I have analyzed the process of certification of South African hake, based on extensive fieldwork in the country in addition to a general assessment of MSC (*Ecolabels and Fish Trade: Marine Stewardship Council Certification and the South African Hake Industry*. <http://www.tralac.org/scripts/content.php?id=5212>). I highlighted that ecolabeling is not simply about science and management, but also about politics. I did not suggest that MSC itself played politics, but that to understand 'real-world' ecolabeling, one has to look at how certain interest groups use certification for their own purposes, and not necessarily for the welfare of fisheries and the environment. I also highlighted some problems with MSC's definition of 'certification unit', which, to my eyes, needs rethinking. I would like to summarize some of the findings here.

Evolution process

MSC certification of the hake trawl industry in South Africa was the result of an evaluation process that lasted almost two years, and that started with an application prepared by the South African

Deep-sea Trawling Industry Association (SADSTIA), the body representative of most (but not all) hake-trawling companies in the country.

It helps understanding the motivations behind seeking MSC certification that, within SADSTIA, the drivers of the initiative were large companies that, at that time, had an interest in defending their quota allocation from further erosion to the benefit of other trawling companies and the longline industry. This threat was arising from the process of (belatedly) 'transforming' the post-apartheid hake-trawl industry. The overall cost of fishery certification to the industry was US\$100,000 in direct costs of certification, plus US\$100-200,000 to meet conditions in the mid-term.

The assessment conducted by the certification body resulted in a relatively high scoring on the first of the three principles of the MSC standard stock management (88 points out of 100; the minimum pass is 80). According to industry sources, this was expected, as there has been a relatively long history of proper monitoring of the resource in South Africa. In relation to the second MSC principle (ecosystem impact), the South African hake industry barely made the grade (80 points). Gaps were identified in four areas: (i) by-catch management; (ii) ecosystem relations; (iii)

the impact of trawling on the benthic habitat; and (iv) the impact of trawling on seabird populations. In relation to the third MSC principle (fishery management system), the industry's score was relatively high (88 points).

In my working paper, I highlighted that MSC certification of the South African hake industry raises at least two problematic issues: (1) the trawling sector has been certified, but not the longlining sector even though they exploit the same stock; and (2) there are questions about whether the stock is shared with Namibia, which is not certified either. I do understand that the MSC definition of 'certification unit' allows for the certification of one part of an industry but not another, even though they exploit the same stock. But adopting an unsuitable definition is a technical fix and does not, in itself, ensure 'sustainability' of a fishery.

Paradoxical situation

Hake longliners (and handliners) have not been certified in South Africa, either because they lacked a strong association that could represent them and guarantee a proper management system or because they are one of the potential threats to the incumbent oligopoly. A paradoxical situation has thus been created, where the trawling sector in a fishery is certified as 'sustainable', while the smaller-scale longline sector catching the same stock is not. Yet, the overall stock is deemed to be

'sustainably managed'. Furthermore, since the MSC approach is to divide up fisheries into management units, even though they may share the same stock, the South African hake industry was certified without its Namibian sister industry, even though it is widely believed that they share the same stock.

A strict interpretation of sustainable management of stock would suggest that the South African fishery could only be 'sustainable' if both it and the Namibian fishery were certified, but the latter either did not want, or was not invited, to participate in the certification process. Therefore, the certification team stated that "although mixing [of the South African and Namibian stocks] will inevitably occur, from a fishery-management perspective, the South African hake populations may be considered as a discrete stock". Is this 'fishery management perspective' leading to better sustainability of the stock (one of the main objectives of MSC)? If one believes recent reports suggesting that the hake stock is in danger, and that catches are at historically low levels (*Southern Africa Fishing Industry News*, June 2006, p. 10; *Mail & Guardian*, 30 June 2006), perhaps some doubts are justifiable. Is South African hake going down the same way as New Zealand hoki did? (Both are MSC-certified.)

In 2005, the South African hake industry was subjected to the first surveillance exercise by the certifying team. This resulted in a surveillance report released in May 2005 that covers progress in all the conditions that were set at the time of certification. The overall assessment of the monitoring team was a positive one, and continuation of certification was recommended, despite some major problems (see my working paper for details). No MSC-certified fishery has been de-certified so far. Is this an instance of 'path dependency' or a sign of improved management?

South African observers of the fish industry made it clear that with the current rate of loss of scientists and managers at Marine and Coastal Management (MCM), the agency in charge of fisheries management, there will be no capacity to properly monitor the use and

possible abuse of quotas. Thirty-five scientists have left MCM between 1996 and 2005. In January 2005, two of the key management figures at MCM resigned. According to an industry source, current management at the regulatory agency lacks deep understanding of allocation issues. After the 2006 allocation, which, for the first time, assigned quotas for a period of 15 years (instead of one year, or, more recently, five years), compliance by industry to regulation is likely to decrease. A review of allocation should follow every two or three years to assess compliance with the terms of the allocation policy, but there is no capacity at the regulatory agency at present to undertake that.

Yet, whatever happens to MSC certification in South Africa, it is important to highlight that the drivers of the initiative have achieved two other objectives anyway. First, the longlining industry has not been allocated a higher proportion of the hake total allowable catch (TAC) in 2006. But, even more importantly, the regulatory agency, in its own policy that guided the 15-year allocation of 2006, formally embraced the argument that fewer players are better for conservation than a larger number of players. No new entrants were assigned quotas, and some of the smaller existing quotas were not renewed. Although some of the large companies lost a proportion of their quotas (a sizeable volume for one of the main players), the allocation of long-term rights is likely to create a secondary market for quotas. As a result, an even more concentrated industry may emerge in the mid-term (for details on the 2006 allocation of hake rights in South Africa, see Stefano Ponte and Lance van Sittert, "The Chimera of Redistribution", *DIIS Working Paper 2006: 32*; available at: www.diis.dk/sw29692.asp).

Conservation discourse

MSC certification, far from being simply a neutral and equal instrument yielding better conservation for humanity, is achieved in the context of global and local competition, special-interest battles, and local politics. In South Africa, although couched in a discourse of conservation, MSC was one of the instruments used to justify positions in debates that had race relations and possible redressing of past wrongs under apartheid as the main

issues at stake. It was played as a tool against the redistribution of quotas away from main, white-owned, quota holders to the possible benefit of black-owned smaller quota holders and new entrants within the deep-sea hake sector. It was also used as a tool to avoid redistribution of quota away from the large, mainly white-owned, deep-sea trawling sector to the advantage of the mostly black-owned longlining sector. Local politics and the situated political economy of conservation do matter for 'sustainability' certifications.

Developing-country fisheries, and small-scale ones, in particular, have been marginalized in the MSC system. Only three fisheries in South Africa, Argentina and Mexico have been certified so far. Delivering 'sustainability' at no additional cost and in large volumes demands standards that are tough in terms of systems compliance, but actually quite approachable in terms of the thresholds of sustainability indicators. Entry barriers to 'sustainability' entail economies of scale and scope that require managerial resources and access to networks. Since managerial and systemic objectives are harder for developing-country actors to match, this creates a hidden imbalance in favour of more endowed participants. ¶

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Tonnes of tuna

Tuna fishing is a longstanding livelihood activity among Filipino fishers but, as catches increase, sustainability measures are called for

Situated in a region that boasts great marine biodiversity and one of the most abundant tuna resources, it is not surprising that the Philippines ranked 11th in world fisheries production in 2001 and was the fourth-largest producer of tuna and tuna-like species in the world in 2003, according to the FAO Statistical Database (FAOSTAT) of the Food and Agriculture Organization of the United Nations (FAO).

Tuna fishing is a longstanding livelihood activity among Filipino fishers, especially in the southern Philippine provinces. In 2003, the Philippines ranked second in tuna production in the western central Pacific region, accounting for 22 per cent of the total catch. Although tuna resources are distributed throughout Philippine waters, the major production areas are the (i) Moro Gulf/Celebes Sea, (ii) Sulu Sea and (iii) South China Sea. In addition, Filipino fishers are also known to exploit tuna fishing grounds outside the Philippines, such as in Indonesia, Papua New Guinea and the Solomon Islands.

General Santos City is the country's tuna capital. Its reputation started to gain prominence in the 1970s due to its proximity to traditional tuna fishing grounds. The establishment of processing and canning corporations as well as post-harvest facilities like ice plants backed up the rapidly expanding tuna industry. The government supported the industry with the construction of an airport in 1991 and the General Santos City Fish Port Complex (GSCFPC) in 1998.

The boom in Philippine tuna production is generally attributed to the successful use of the fish-aggregating device (FAD) locally known as *payao*, which greatly reduced the time spent for searching and catching tuna. Production accelerated

rapidly from 2002, primarily from the output of the commercial fishers. However, the official estimate of the tuna catch for the previous years does not reflect the productivity of Philippine waters. This is because producers and canneries landed their catches in private ports and under-reported the catch to reduce taxes. Also, tuna caught outside Philippine waters were being reported as caught inside the Philippines. More recent data are expected to be more reliable for fishery-management purposes, particularly with the more extensive use of the GSCFPC.

The major tuna species are skipjack, yellowfin, bigeye, eastern little and frigate. Oceanic tuna (skipjack, yellowfin, bigeye, northern bluefin and albacore) are predominant in deep waters beyond the continental shelf, and are part of the regional stocks of the western central Pacific Ocean. Skipjack, yellowfin and bigeye tuna spawn extensively in Philippine waters, with juvenile tuna making up a high percentage of the standing biomass of all species. Neritic tuna (eastern little, frigate, bullet and longtail) are abundant in inshore waters.

The major tuna producers in Philippine waters are handliners and purse-seiners. A moratorium on the issuance of additional licences for commercial fishing vessels (purse-seiners, tuna ringnets and longliners) was passed in 2004 in order to abate overfishing. No other foreign-flag vessel is allowed to fish in Philippine waters, but foreign vessels have been regularly apprehended for illegal fishing.

International market

The primary producer of the high-priced Class A or *sashimi*-grade tuna destined for the international market are the small-scale handliners found all over the

Table 1. Estimated Tuna Fleet Structure

Type	Tonnage	Estimated Number	Fishing Grounds
Handline <i>Bancas</i>	Up to 60 GT	3,000	Philippines, Indonesia, Palau, high seas, Papua New Guinea
Purse-seiners			
1. Small purse-seine	<250 GT	110	Philippines, Indonesia
2. Large purse-seine and super-seiners	>250 GT	54	Papua New Guinea, Indonesia, high seas
Tuna Ringnet	> 100 GT	100	Mostly Philippine waters
Long liners			
1. Domestic		14	Mostly Philippine waters
2. Distant-water		25	Pacific, Indian and Atlantic ocean

Source: Barut & Garvilles, 2005

country. The adult yellowfin, skipjack and bigeye tuna are the common species caught by handline fishing.

The tuna boom in General Santos City has attracted poor fishers from different provinces in southern and central Philippines to seek their fortune in tuna handling. Depleted waters adjacent to the Philippines have pushed handliners to fish outside local waters. Handliners are not required to report where their catches are caught since they are not part of the bilateral fishing agreements with other countries. No reliable estimates can be made regarding catches outside the Philippines but it is generally accepted that more than half of the landed catch of large tuna from municipal fishers come from beyond Philippine waters.

There are two types of handline fishers, the *palaran* (catcher of flatfishes) and the *pamariles* (catcher of yellowfin tuna). The *palaran* handliner is confined to the municipal waters (that is, within 15 km of the shore), while the *pamariles* fishers can venture to distant waters that are even beyond the Philippine exclusive economic zone (EEZ). The *palaran* uses a simple vessel with outriggers to catch a wide variety of fish in the municipal waters. Due to the small size of the vessel, only a limited amount of ice is carried on board. This usually results in lower

quality of landed tuna that is not suitable for the export market.

Among the several issues faced by the *palaran* are:

- the declining catch in municipal waters due to overharvesting, destructive fishing practices (like cyanide and dynamite fishing), water pollution, and the degradation of coastal ecosystems (mangrove forests, corals, seagrass) due to various development initiatives (like fishpond and resort construction);
- theft of engines by 'seajackers'; and
- lack of capital to invest in more efficient gear and/or *payaos*.

The *pamariles* specifically target adult tuna intended for the export market. Their fishing craft comprise a mother boat, usually of 15 gross tonnes (GT) size, that carries several auxiliary boats on its outriggers. The mother boat transports the auxiliary boats to the *payaos*, where they scout for tuna. The *payaos* are usually owned by purse-seiners but handliners are sometimes allowed by the purse-seiners to harvest fish in their *payaos* as long as they respect the priority use rights of the purse-seiners and do not cut

the anchor line. The mother boats are usually equipped with radio sets, compasses and a global positioning system (GPS), and can carry up to 6-18 tonnes of ice. Depending on the size, the pumpboat can carry a crew of eight to 20.

The favourite fishing grounds of the *pamariles* are in the Moro Gulf, the Mindanao Sea and the waters surrounding Davao and the islands of Tawi-Tawi. Due to the declining catch, the bigger handline vessels scour the international waters (off Indonesia, Australia, Papua New Guinea and Fiji) for tuna, despite the looming threat of apprehension and detention for poaching. (In 2002, a bilateral fishing agreement for Philippine fishing vessels to access Indonesian fishing grounds was reached with the Republic of Indonesia, which will last until 2011.)

The players in the *pamariles* fishery include fishers, financiers, brokers, boatowners and pumpboat operators. A common sharing system between these players is *lilima* wherein the fisher gets 20 per cent of the actual gross sale of captured tuna for every fishing expedition.

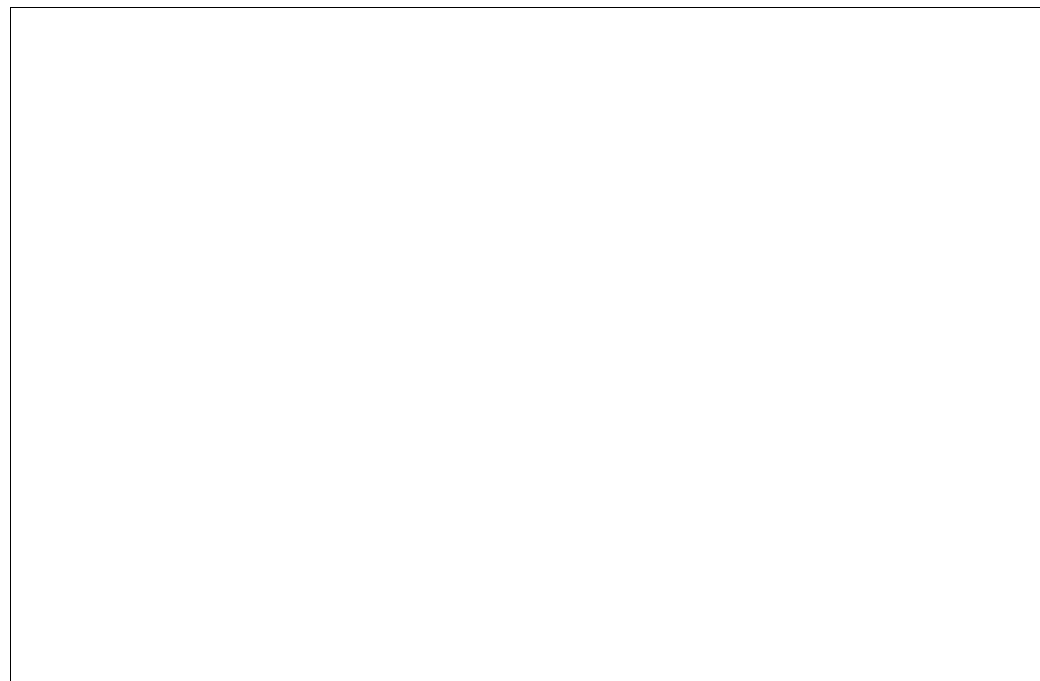
The issues faced by the *pamariles* include:

- safety at sea;

- threat of arrests by foreign authorities for poaching;
- rising operating expenses, specifically for fuel;
- stagnation in fish prices;
- entry of cheap imported and smuggled tuna products that unfairly compete with the local catch;
- stiff European Union (EU) standards, which are considered impractical for handline pumpboats and limit their entry into the EU market;
- absence of representation in the National Tuna Industry Council; and
- classification of handliners as commercial fishers, thus subjecting them to higher fees and excluding them from enjoying the use rights reserved for traditional fishers.

Cannery grade

Canners in General Santos largely depend on purse-seine fishers for their raw supply of tuna. Purse-seining is a fleet-based operation that occurs in the open sea for six months to a year. Sixty per cent of the



purse-seine catch is cannery-grade quality meant for processing, 35 per cent are delivered to the outside domestic markets, and the remaining 5 per cent are consumed locally. It is estimated that the purse-seine sector provides jobs to at least 15,000 people in General Santos City.

As handliners target adult yellowfin in the deeper column of the water, the purse-seiners (and ringnets) gather mainly juvenile tuna (mostly yellowfin and skipjack) that aggregate near the surface of the water. Studies have shown that more than 90 per cent of the catch of commercial fishers in southern Mindanao is under 12 months of age. This smaller-sized tuna catch is unsuitable for export in the fresh/frozen/chilled form. Tuna that weigh heavier than 300 grams go to the canneries, while the rest are sold to the domestic market.

The issues associated with purse-seiners include:

- access to foreign fishing grounds;
- rising operating costs;
- increasing overfishing with the use of fine-mesh nets; and
- overproduction that threatens resource sustainability and depresses fish prices.

The total output from 16 tuna canneries in 2003 was 10.5 mn cases, equivalent to 250,000 tonnes of raw product (mainly oceanic tuna). Over 90 per cent of such output is destined for the export market. Favourable trade arrangements are pushing tuna canneries to develop new product lines (like pouch packs). Outside the Philippines, there are two canneries in Bitung, Indonesia, and one in Madang, Papua New Guinea, which are Filipino-owned. The canneries in Indonesia process an estimated 20,000 tonnes per year, while the canneries in Papua New Guinea process 30,000 tonnes annually.

Close to 8,000 people work in the tuna canning industry of General Santos City. Most cannery workers are hired by canning firms through workers' co-operatives. The terms of employment are based on contracts that are continuously renewed on the basis of performance and the labour needs of the canning corporations. Workers consider the canning plants as the best employers in the city in terms of job tenure and remuneration. Nonetheless, the turnover rate of employees is considerable due to the tiring and long hours of work.

Some of the issues identified by the stakeholders in the canning industry are:

- high price of raw materials due to the decline in the purse-seine catch

and expanded taxes;

- tariff and non-tariff barriers of the major export markets (EU and the United States); and
- weak promotion or branding of Philippine products.

The Philippines' tuna industry contributes significantly to the country's international trade, both as an export and import commodity. The top export tuna commodity is canned tuna, which earned US\$111.8 mn in 2003. Fresh/chilled and frozen tuna products reached US\$44.7 mn in exports in 2003. For these products, the US is the market local exporters prefer over Japan because of more stable prices and more lenient standards.

The major issue affecting the processing sector is the saturation of the US market. After the EU ban on smoked/frozen products from Asian countries, the US market suddenly became flooded with processed imports from the Philippines, Indonesia, Thailand and Vietnam, triggering the drop in prices.

Canned tuna, mainly from Thailand and the Philippines, used to face a crippling 24 per cent tariff in the EU, compared to the 0 per cent tariff for products from the Andean countries. Through a long negotiation process, the EU offered a compromise of 12 per cent tariff on a quota of 25,000 tonnes, to be shared by Southeast Asian countries in 2003. This allowed the Philippine tuna canneries to recover and increase operations.

In terms of import, fresh/chilled/frozen tuna intended for the canneries figure amongst the top three fishery product imports of the Philippines. Local producers have long protested the entry of imported tuna because it depresses local prices. However, the strong export demand for canned tuna, the relatively low price of imported tuna and the need for a stable supply to keep the canneries operational at profitable levels led to the continued import of tuna. The continuous growth of tuna landings, based on official figures, suggests that tuna stocks are still being harvested below the maximum sustainable yield (MSY). The 2003 stock

assessment reports of the Scientific Co-ordinating Group of the Preparatory Conference of the Commission for the Conservation of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC) revealed that tuna stock in the region have not been fully exploited. Skipjack is not being overfished and the stock is not in an overfished state. Yellowfin tuna are not being overfished but the stock is nearing full exploitation, especially in the equatorial region.

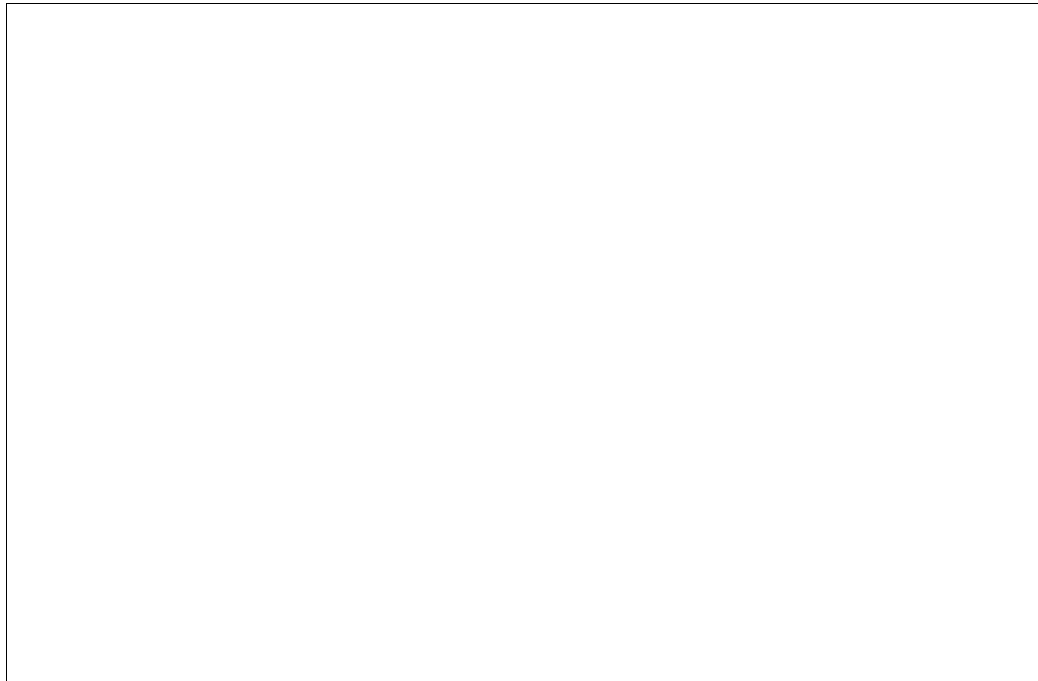
Bigeye tuna findings are inconsistent with previous studies but the conclusion is that overfishing is occurring but the stock is not yet overfished. However, the imminent collapse of Philippine tuna fisheries has been predicted because of the increasing catches and the widespread use of *payao*.

The Philippines is a signatory to the United Nations Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks (UNFSA) and is a member of the WCPFC, the Indian Ocean Tuna Commission (IOTC) and the International Commission for the Conservation of Atlantic Tunas (ICCAT).

Faced with a myriad of resource-use, management and trade problems, and the need to commit to regional management regimes, the tuna industry in 1999 organized itself by creating the South Cotabato, Sultan Kudarat, Sarangani, and General Santos Federation of Fishing Associations and Allied Industries (SFFAAI). The federation aimed to unite the diverse sub-sectors of the tuna industry; serve as a forum to discuss problems and how to resolve them; and represent the tuna industry in lobbying for policy reforms and other concerns that affect it. A national confederation soon followed.

Fishing agreements

In 2000, the government created a National Tuna Industry Council (NTIC) to formulate a strategic action plan for the industry; review and recommend policies affecting bilateral and multilateral fishing agreements, and trade relations; recommend projects and programmes for the benefit of the industry; co-ordinate with private and public entities affected by the action plan; and establish an



integrative and intersectoral mechanism for collaboration. The NTIC has representatives from the different sectors of the tuna industry. However, the handliners are in uproar since their representative is closely associated with purse-seiners and not the handliners. Among other measures, the National Tuna Management Plan proposed MSY and TAC for different species based on 2002 catch estimates.

The sustainability of tuna production continues to be a heated debate, in the context of the lack of reliable time-series data for tuna production. It is expected that enhanced fish-landing facilities and the WCPFC would improve collection of data and allow for more substantial analysis in determining the tuna stock.

Soaring fuel prices and the expanded value-added tax (EVAT) have pushed up expenses, while revenues have failed to increase proportionally. This is further aggravated by the currently strong Philippine peso currency, which eventually depresses the value of US dollar revenues. Fuel subsidies have been proposed but the suggestion has been criticized as a solution that will only further aggravate the problem.

The push for sustaining livelihoods and greater access to foreign markets must be harmonized with the limits to the

allowable catch for different producers, and there should be no substantial increase in TAC from current catch estimates. With the additional production projected to come from foreign fishing vessels in the expansion work in GSCFPC, the adverse impact on local producers and consumers would have to be addressed.

The tuna industry contributes positively to the economy of southern Mindanao through the economic benefits associated with international trade, and the employment created by the production, processing and marketing of tuna. On the other hand, with frigate tuna being one of the cheapest fish products available to the Filipino people, sustainability measures must be put in place since this commodity is not included among the species being managed under a TAC regime.

The large volumes of tuna imported for canneries do not automatically translate into enhanced food security through availability of more affordable food. This is because more than 90 per cent of the production of the canneries is re-exported.

Detrimental role

On the contrary, the export of tuna products may have a more significant detrimental role in terms of availability of food. It is critical that all sectors participate in the formulation of policies at the national and regional levels so as to

incorporate sectoral issues and concerns. Also, representatives need to well appreciate the potential decline in tuna stocks and the need to contribute to the management of stocks.

Philippines

This article is by Cesar Allan Vera (allanvera@cbcrmlearning.org), Co-ordinator, and Zarina Hipolito (admin@cbcrmlearning.org), Research Associate, of the Community-based Coastal Resource Management Resource Centre (CBCRM-RC, www.cbcrmlearning.org), Quezon City, Philippines

Work in fishing

Protecting small-scale fishworkers

South Asian groups have unanimously decided to support the International Labour Organization's Work in Fishing Convention

Central trade unions of Bangladesh, India, Pakistan and Sri Lanka, and organizations in support of small-scale fisher people and unorganized fishworkers, took a unanimous decision for a unified position to support the International Labour Organization's 'Work in Fishing Convention' when it comes up for adoption at the 96th Session of the International Labour Conference (ILC) in Geneva in June 2007.

At a meeting held at Sunflower Hotel, Negombo, Sri Lanka, from 10 to 11 February 2007, the participants agreed that the proposed ILO Fishing Convention will significantly contribute to decent work and social security in the marine fishing sector of South Asian workers on board domestic as well as foreign fishing vessels.

Considering that over 80 per cent of global fish production, fishing fleet and fishing workforce are from Asia, the participants called on the South Asian governments, trade unions and employers to demonstrate an issue-based unity in ensuring that the Convention is adopted at the ILC in June 2007.

Any international legal instrument that improves work and living conditions of fishers, upholds their dignity, and gives them identity as workers, especially in the context of globalization, should be welcomed, they said.

It was further advocated that the South Asian governments should enter into a proactive dialogue with the governments of Africa, Asia and Latin America in order to ensure that the Convention is adopted. It was suggested that the proposed ILO Work in Fishing Convention should be seen as a useful and practical guide.


The proposed Work in Fishing Convention is to update and strengthen the existing ILO instruments—the last one was adopted in 1966, long before the 1982 United Nations Convention on the Law of the Sea—concerning minimum age, medical examination, articles of agreement, accommodation, competency certificates, vocational training and hours of work. It takes into account changes in the fishing sector for the past 40 years. It recognizes the profound impact of globalization on the fishing sector. It acknowledges that fishing today is the most hazardous occupation on earth. As a comprehensive standard, issues hitherto unaddressed in relation to persons working on board fishing vessels have been taken up, namely, occupational safety and health, and social security. Also for the first time, protection for persons working on board small fishing vessels has been proposed. Further, fishers who are paid on the basis of a share of the catch are covered for the first time. The proposed Convention, also for the first time, prescribes effective flag-State and port-State provisions of compliance and enforcement in relation to fishing vessels remaining at sea more than three days beyond the exclusive economic zone (EEZ) of the flag State.

The proposed ILO Convention is an enabling instrument with provisions for flexible implementation in terms of small-scale fishing vessels. The standard, once adopted, is to be progressively implemented. There are provisions to make amendments to the standard, if deemed necessary, but in consultation with the most representative worker and employer organizations.

International instrument

ILO, for the first time, is proposing an international legal instrument that

protects the interests of fishers on board small-scale fishing vessels, and this is of immense benefit to the South Asian countries that have a large share of the small-scale fishers of the world.

The participants further urge the tripartite constituents of the ILO to unanimously adopt the ILO Work in Fishing Convention when it comes up for consideration at the 96th session of the ILC in June 2007. 

Signatories to the Press Release

1. Herman Kumara, WFFP/NAFSO, Sri Lanka
2. Linus Jayatilake, UFL, Sri Lanka
3. D. W. Subasinghe, CFTU, Sri Lanka
4. T. M. R. Rasseedin, CFL, Sri Lanka
5. M.I.M. Ibrahim, DIFSO, Sri Lanka
6. Saranapala de Silva, UFL (UFFC), Sri Lanka
7. Asoka Dharmasiri, CBEU, Sri Lanka
8. W. Sriyani Fernando, SVFWO, Sri Lanka
9. L.T.Subaideen, DIFSO, Sri Lanka
10. M.S.S. Samaraveera, SFO, Sri Lanka
11. Tahira Ali, WFFP/PFF, Pakistan
12. Mohammed Ali Shah, PFF, Pakistan
13. Sharafat Ali, PILER, Pakistan
14. Mohammed Ayoub, PFF, Pakistan
15. Mesbahuddin Ahmed, JSJ, Bangladesh
16. K. Radhakrishna, UTUC-LS, India
17. Hasubhai Dave, BMS, India
18. H. Mahadevan, AITUC, India
19. Thampan Thomas, HMS, India
20. M. Satyanarayana, INTUC, India
21. Thomas Kocherry, WFFP, India
22. Harekrishna Debnath, WFFP/NFF, India
23. Sebastian Mathew, ICSF, India
24. J. John, CEC, India

This press release was issued at the conclusion of the South Asian Workshop of Trade Unions on 11 February 2007 at the Sunflower Beach Hotel, Negombo, Sri Lanka

Fishing rights

Fulfilled, healthy, secure?

Conventional fisheries management has been dominated by the enclosing-the-commons model

A debate has emerged in the last three issues of SAMUDRA Report (Nos. 43-45) about rights-based fisheries and the allocation of fish resources. The debate was triggered by Derek Johnson in his review article on the *Sharing the Fish Conference 2006* in Australia, in which he describes how the discussions on rights-based fishing were dominated by presenters from the rich, “temperate-minority” countries. Debate at the conference thus tended to focus on the options preferred by policymakers and economists in these countries; namely, market-based access rights and allocation mechanisms, such as individual transferable quotas (ITQs). Conference participants had little to say about the applicability of these or alternative rights schemes to the tropical-majority countries.

Ichiro Nomura, Assistant Director General of Fisheries of the Food and Agriculture Organization of the United Nations (FAO) highlights in the next issue of SAMUDRA Report that fishing rights and rights-based schemes are “absolutely necessary and fundamental” to the sustainability of all the world’s fisheries. However, the configuration of these rights needs to be tailored to the specific social setting of the countries in question. He proposes that it may be an opportune time to organize an international conference on the allocation of rights in the small-scale fisheries that dominate the tropical and developing countries.

Finally, in the last issue of SAMUDRA Report, Bjørn Hersoug picks up the thread by connecting the debate over rights-based fishing to the existence of widespread poverty in fishing communities throughout the developing world. He concludes that poverty may be more related to institutional failures than

ecological or economic ones, and thus institutional reform is a prerequisite for the establishment of rights-based fisheries in order to ensure preferential access to individual or collective rights for poor fishers. For Hersoug, a conference on rights-based fishing should perhaps be entitled, “Fishing Rights to the Right People.”

In response to this timely debate within the pages of SAMUDRA Report, I wish to examine more closely what is meant by fishing rights and rights-based fishing. When economists and government officials talk about fishing rights at conferences and in publications and policy documents, are they talking about the same fishing rights that small-scale fishers have been demanding for the last few decades? I say, no. Like many progressive ideas promoted in the recent past by small-scale fishing organizations around the world—ideas like community-based management, ecological fisheries management, and integrated management—the notion of fishing rights has been seized by the academic and bureaucratic sectors, filtered through their market-based frameworks, and promoted as something quite different from the original intent.

In other words, the notion of fishing rights has been co-opted to mean not the guarantee of rights but rather the granting of privilege. In most cases, rights-based management consists of the granting of fishing privileges to certain groups within fishing communities as a means of ‘enclosing the commons’.

Common-property theory

Based on common-property theory, the objective is not to guarantee a fishing people the right to fish, but to exclude as many as necessary to ensure that those

remaining can capture the wealth produced by the sea for themselves.

If rights-based fishing then has nothing to do with rights, what is the alternative view of rights? In my view, the notion of rights is about a fundamental respect for the human being, and addresses the many conditions necessary for fulfilled, healthy and secure living. If we are going to talk about fishing rights within this understanding of rights, there are a number of dimensions in the lives of fishers that must be considered.

The first is to state that the current distortion in the distribution of the world's resources makes it close to impossible to guarantee this fundamental respect and provide the necessary conditions for every human to have fulfilled, healthy and secure lives. As we increasingly realize the limits on the availability of resources on this planet, it is clear that the guarantee of rights involves not only poverty reduction but also, and just as importantly, wealth reduction on the part of the minority who control the vast bulk of those resources. It is only in this two-pronged approach that there can be the ability to ensure fishing rights since so many fishers are among the world's poorest inhabitants. If the meaning of this view is not immediately evident, let me illustrate by saying that the demand for such products as luxury aquaculture seafood, industrial chemicals

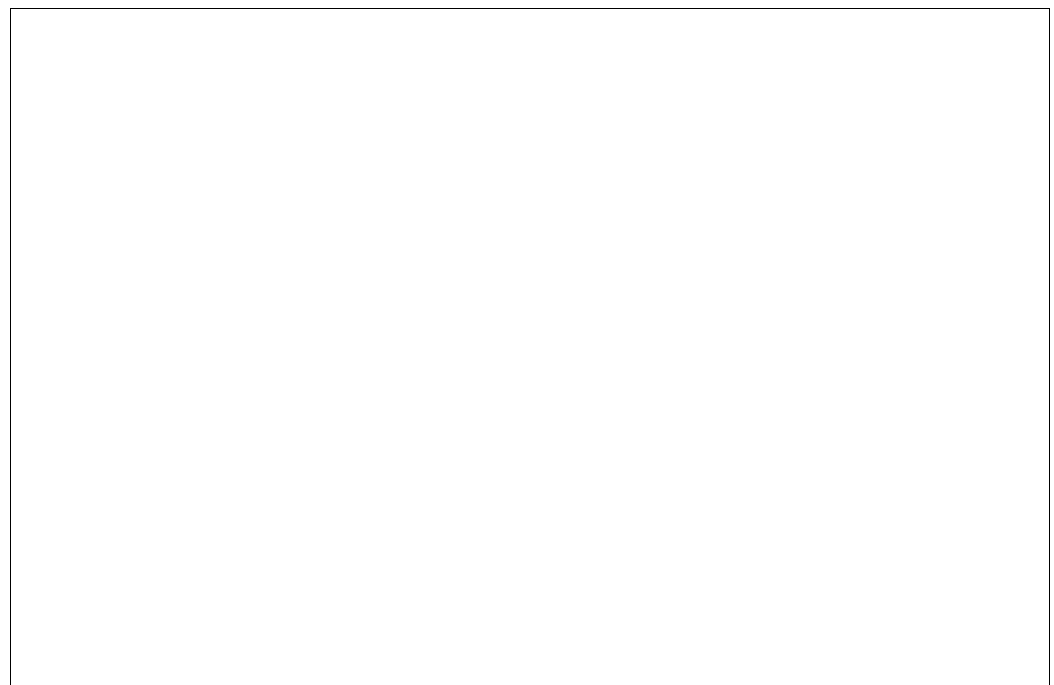
and tourism beaches on the part of the wealthy has led to serious degradation of coastal habitats and the viability of fishing livelihoods.

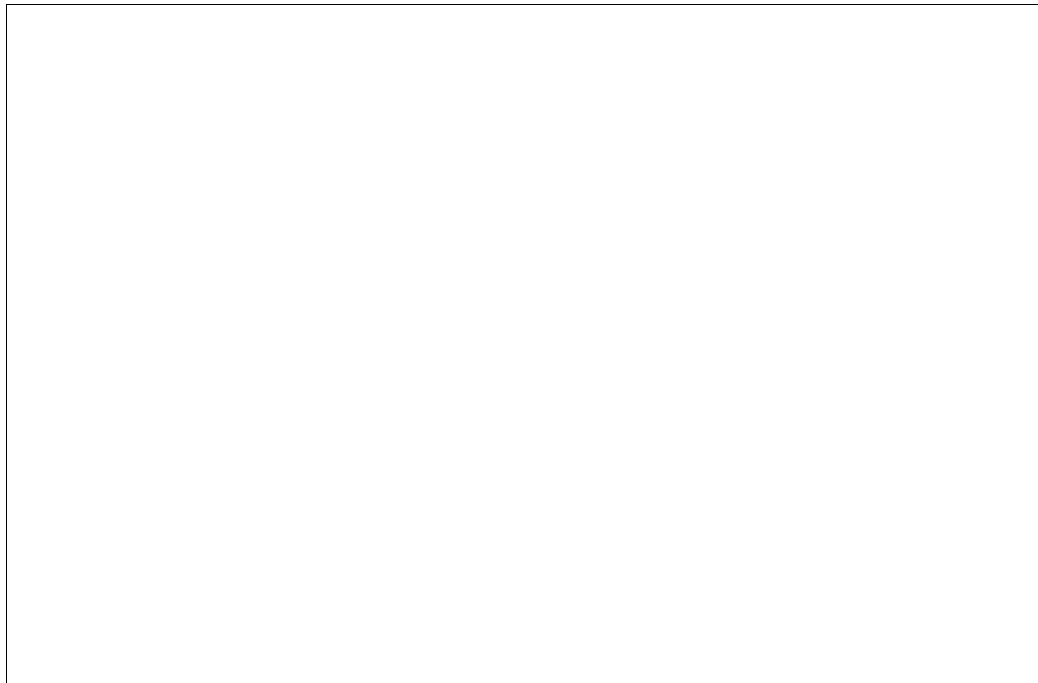
Among the many other dimensions of fishing rights, I would list the following as some of the most important:

1.The right to fish for food. Fishers provide food for their families, communities, regions and country. In Asia and Africa especially, large numbers of people depend on fish protein for their basic nutritional requirements. Local, regional and national food security should be the number one priority of sustainable fisheries management. All fisheries development should be built on this foundation, not only in developing countries but also in the developed countries where there is an increasing recognition that the most healthy and nutritious food comes from local sources.

2.The right to fish for a livelihood. For many coastal communities, fish, as a renewable resource, has the potential to be an unending means of deriving a livelihood. Coastal communities have depended on this resource for generations, and they should be permitted to continue to find their livelihoods thus for generations to come.

3.The right to healthy households, communities and cultures. Fishing





provides not only an income stream to fishing households but is also an activity around which many dimensions of life are organized, and from which meaning is derived by men, women and youth. The way fishing activities are managed and the benefits distributed are crucial in fostering healthy social relations in communities and in nurturing the culture that binds them together.

4. The right to live and work in a healthy ecosystem that will support future generations of fishers. All of the above rights depend on taking care of the environment in which it takes place, living within the limits of what the ecosystem can produce, and without upsetting irreversibly the functioning of that system.

5. The right to participate in the decisions affecting fishing. The protection of fishing rights and their optimal implementation for the benefit of fishing communities requires that everyone in these communities have a voice in decisionmaking. This means placing a high value on the knowledge of fishing people about fishing and the environment, promoting a bottom-up and community-driven decision-making process, and implementing national policies that protect fishing rights.

The development of fisheries and the design and implementation of

management plans based on the above-listed rights would look very different from a rights-based fishery as advocated by those who wish to enclose the fishery commons. A rights-based fishery stresses one value: economic efficiency. On the other hand, a fishery based on a guarantee of the fundamental rights of fishing people recognizes their equal status and dignity as members of global society, and their equal right to a fulfilled, healthy and secure life.

A rights-based fishery would allow one factor to determine the future of fisheries development: a privilege granted to a few to promote the sale of fish as a commodity to the highest bidders on international markets. In contrast, a fishery based on the fundamental rights of fishing people would result in a fishery where communities shape a future based on providing their basic human requirements for food, livelihood, communal living and a vibrant culture. It is a fishery where fishing people could begin to realize their dreams to steward the resources of the sea, make friends with them—as some of them would say—own boats and gear, obtain a fair price for their fish, and offer a brighter future to their children.

It is also important to point out that the five fishing rights listed above can all be found in a more generalized form in the Universal Declaration of Human Rights.

All too often, the denial of human rights is understood narrowly as the violation of civil liberties, without adequate recognition of the rights to food, livelihood, communal living and culture.

Finally, I wish to conclude by making reference to Derek Johnson who started this debate in SAMUDRA Report No. 43. In another article that he wrote last year ("Category, Narrative and Value in the Governance of Small-scale Fisheries", *Marine Policy* 30, 2006), he argues that the perceived importance of small-scale fisheries may not only lie in the sustainability of their scale of operations but also in the values of social justice and ecological sustainability that small-scale fishers have come to represent in response to the dominant modern narratives of change. He goes on to state that this view does not always correspond to reality, given those situations where small-scale fisheries have been overly exploitative and ecologically destructive.

The fact that the fisheries of the last 50 years have been dominated by the drive to kill fish and that many are responsible for this mining of the sea, is not at issue. The theme of this article is that fisheries management for the past 30 years has been dominated by the enclosing-the-commons model, at the same time that small-scale fishers have been demanding social justice and ecological sustainability through recognition of their fishing rights. I would argue that the dominant model of fisheries management has contributed to—or, at least, not stopped—the collapse of fish stocks and ecological degradation around the world. It has resulted in greater inequities in the distribution of fisheries benefits, and now has co-opted the notion of fishing rights in support of itself. It is time to recover the true and full meaning of fishing rights, to listen to small-scale fishers, and allow them the opportunity to exercise their fishing rights for a socially just and ecologically sustainable fishery. ♣

This article is by John Kearney (john.kearney@ns.sympatico.ca), an independent researcher who has worked with small-scale fishers and fishing communities for the past 28 years

Fishing rights

Private rights tragedy

The Canadian experience shows how flawed economic theory works to undermine sustainable development in fishing communities

The possibility that the Food and Agriculture Organization of the United Nations (FAO) would sponsor an international conference on the allocation of fishing rights focused exclusively on the interests of small-scale harvesters and traditional fishing communities is heartening. Such an event is long overdue and, if it were to provide an opportunity to hear and document those authentic voices that have been resisting and offering alternatives to the private appropriation of public fisheries resources, it would be a good thing. It might even begin to re-establish some sense of balance and objectivity in the debate about the merits of different rights schemes by identifying those that work to support sustainable development in traditional fishing communities and those that undermine it.

If the objectives of such a conference were to include discussions about how the allocation of rights could “re-establish and formalize traditional fishing rights and thus, protect the rights of fishermen”, as Ichiro Nomura of FAO suggests (see *SAMUDRA Report No. 44*, pg. 25), it would also challenge the central orthodoxy of modern fisheries management; that in their natural state, fisheries develop in the absence of rights and play out the “tragedy of the commons”.

In “Opening the tragedy?” (*SAMUDRA Report No. 45*, pg 3), Bjørn Hersoug correctly identifies Scott Gordon’s *The Economic Theory of a Common-property Resource: The Fishery* and Garrett Hardin’s *The Tragedy of the Commons*, as the core intellectual foundations that underpin the theories of modern fisheries management.

But the Hardin contribution to this foundation is seriously flawed when it

comes to understanding fishing communities and how they manage fisheries resources held in common. While Gordon recognized that fishermen come together to establish rules to regulate fishing activity, Hardin did not. This is a very significant difference.

Gordon’s treatise recognized that the so-called common-property problem was, in fact, an open-access situation. Even the most primitive of societies, he noted, generally recognized the risks of overexploitation caused by unregulated access, and moved to regulate resource use for “orderly exploitation and conservation of the resource”. Societies that failed to do so, he posited, simply would not survive. Gordon recognized that humans live in societies that impose norms to inhibit socially destructive individual behaviour.

In Hardin’s construct, community or societal regulation is non-existent, and society is but the aggregation of selfish individuals, each seeking their own individual short-term advantage.

Since Gordon understood social control as an essential trait of human society, he did not prescribe the form it should take to avoid resource depletion. (Like Nomura, he appears to have been of the “one-size-does-not-fit-all” school.) On the other hand, the absence of community in Hardin’s flawed analysis led him to prescribe only two options to prevent resource depletion: paternalistic State management or privatization of the common property.

Sustainable management

In Canada, unfortunately, Hardin, not Gordon, has been used to understand the problems and make prescriptions for sustainable fisheries management. In fact,

it could be argued that Canada's modern fisheries management has followed Hardin to the letter: first, through a short-lived and failed experience with paternalistic State management; and, in the face of failure, the subsequent dogged pursuit, in many of the country's fisheries, of Hardin's alternative—the privatization and concentration of the common property in individual and primarily corporate hands, through market mechanisms.

The first phase—the one of paternalistic State control—started with the extension of Canada's fisheries jurisdiction to 200 nautical miles in 1977, and saw the uncontrolled growth of harvesting capacity, much of it encouraged by the government's desire to industrialize the fishery.

By the mid- to late-1980s, overcapacity, overfishing and sharp conflicts between fleet sectors over resource access defined many of Canada's fisheries. In Atlantic Canada, much of this conflict was between the traditional small-scale sector, known as the inshore fishery, and the highly capitalized corporate offshore and individually owned midshore sectors.

The second phase of Canada's modern fisheries management, dealing with this overcapacity through the allocation of property rights through individual transferable quota (ITQ) schemes, began in

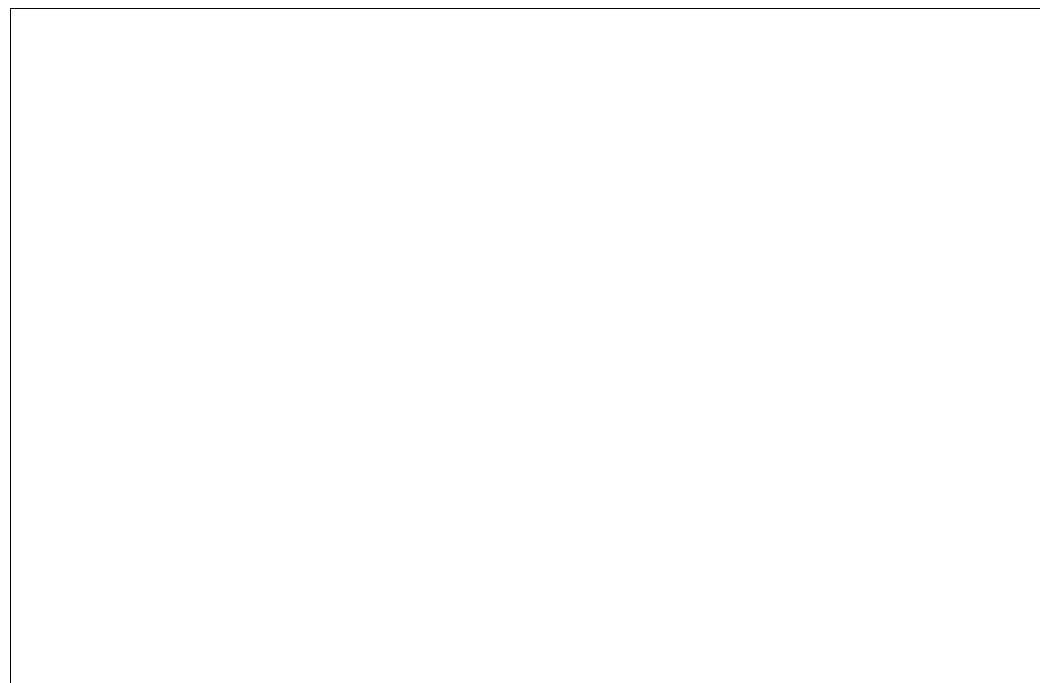
the late 1980s, and has been the State's preferred, almost exclusive, option ever since.

Descriptions of the Canadian State-sponsored private-property schemes can be found in the proceedings of both the *FishRights99* and the *Sharing the Fish 2006* conferences. They provide textbook examples of the efficiency of property rights and market-based mechanisms in putting a stop to the dissipation of resource rents in individual fisheries thereby generating rents and subsequently allowing the State to recuperate some of these through negotiated agreements with quota holders, an increasingly important objective of Canada's Department of Fisheries and Oceans (DFO) as it attempts to generate external revenues to compensate for more than a decade of continued budget cuts.

Critics in the small-scale fishery do not challenge the efficiency of classic ITQ systems in dealing with the macroeconomic problems of oversubscribed fisheries. The efficiency of the market is readily acknowledged. It is the externalized costs to fishing communities of the ITQ approach that is in question.

Small minority

From the small-scale/ community-fishery perspective, ITQ systems give rights and



benefits (including significant economic windfalls) to a small minority of individuals in fishing communities, who are encouraged to dispose of these rights in pursuit of their economic self-interest, irrespective of the impact on the community. Under this system, the benefits of the right go to the individual, while the long-term costs, in terms of employment opportunities, resource access and wider distribution of resource rents, get transferred to the communities and future generations.

In late 2004, the environmental non-governmental organization (NGO), Ecotrust Canada, published a major study on the impacts of resource privatization in Canada's Pacific fishery, documenting, for the first time, its costs from the perspective of community and the small-scale fishery.

According to the study, the capital costs of vessels and equipment in the Pacific fishery shrunk dramatically from Can\$777 mn in the pre-privatization period (the late 1980s) to Can\$286 mn in 2003, as fishing rights concentrated in fewer and fewer hands, and individual quotas eliminated overcapitalization in the race for fish. But the research also found that this decrease was offset by the soaring capital costs of quota and licences, which are now estimated at Can\$1.8 bn.

According to the report, "In the past, the problem was too many fishermen chasing too few fish, but today it has become too much money chasing too few fish. Overcapitalization in licence and quota has become the problem, especially in terms of social equity."

The costs of licences and quotas are now so high, Ecotrust Canada says, that a fisherman needs to be a millionaire to enter most British Columbia (BC) fisheries, putting ownership of licences and quota out of the reach of most rural families, aboriginal people and younger fishermen.

The study goes on to document how market-led mechanisms undermined the interests of traditional fishing communities by stripping them of fishing licences and quota. With virtually no

restrictions on who could buy fishing rights, rural ownership of both quota and licences declined precipitously. Traditional fishing communities—particularly aboriginal communities, which have been hit especially hard—lost 45 per cent of all major licences. The big winners were urban investors—both corporate and individual—who had better access to the capital needed to purchase the quotas and fishing licences that increased rapidly in value as more buyers entered the market.

Rural residents, hobbled by lower incomes, reduced economic opportunities and lower property values that limited their borrowing ability, simply could not match the prices urban dwellers and corporations were willing to pay for licences and quotas that were put up for sale by harvesters in their communities.

Another notable consequence of this transfer of fishing rights from rural to urban hands has been the siphoning off of resource rents from working fishermen to 'slipper skippers', absentee resource-rights owners, who do not fish but lease the rights they own back to working fishermen. In separate research, the Canadian Council of Professional Fish Harvesters (CCPH) has documented how in some BC fisheries, like herring, up to 70 per cent of the landed value in some years is paid to rights holders. Since the rights are leased at prices set prior to the fishing season, this has led to fishermen fishing an entire season at a loss. The practice of leasing is now so widespread that even those captains who own licences and quotas deduct the going market rate for leases from the calculation of crew shares, thereby significantly reducing returns to crew members. According to CCPH, the costs of leasing are also endangering the lives of fishermen as captains cut back on crew levels to reduce costs and also venture out in unsafe conditions because of the need to fish quota they have paid for, before the season ends.

Safeguards established

The DFO is now in the process of introducing ITQs for the Pacific salmon fishery, following the recommendations of Professor Peter Pearse, a consultant to the department who was also one of the keynote speakers at the *Sharing the Fish*

2006 conference. This will bring the last major Pacific fishery under a property-rights scheme. There is nothing to suggest that safeguards will be established to protect coastal-community interests as that process is launched.

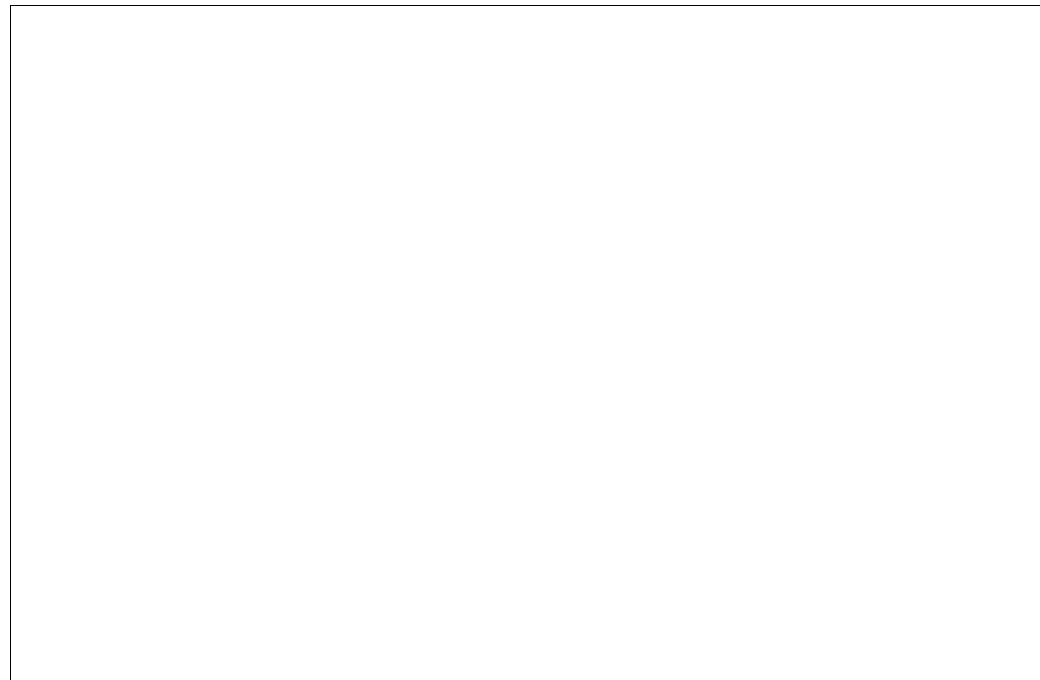
With property rights now firmly established in Canada's Pacific fishery and the costs of acquiring these rights beyond the reach of most residents of coastal communities, the only way to restore these rights to the communities that originally had them is by entering the rights market. This is what Ecotrust Canada now proposes to do. It hopes to establish a capital fund to acquire fishing licences in the open market, and then lease them to young, new entrants to the fishery from coastal communities at affordable rates. The irony here is that an NGO is having to raise significant amounts of capital to purchase rights in order to restore them to a new generation of rural residents whose predecessors acquired them for nominal costs but were allowed—even encouraged—by government policy, to sell them off to the highest bidder.

In Atlantic Canada, there has been generalized resistance to market-driven privatization by the inshore fishery, generally understood as comprising boats under 45 ft length overall (LOA). There, inshore fishermen's organizations have developed alternative rights-based

schemes to control and regulate access to the fishery. These alternatives tend to be value-driven, and are generally concerned with the equitable distribution of resource rents because of the impacts of inequitable distribution on coastal communities. They are also very process-oriented, seeking to build consensus through bottom-up, democratic decisionmaking that builds from the community level towards larger territorial units (region, province, inter-provincial). They have also tended to be ecocentric, seeking to provide small-scale harvesters with rights to the full range of harvestable species adjacent to their communities, using low-impact, fixed-gear techniques, as opposed to limiting these rights to specialist, single-species fleets using higher-impact mobile gear. Throughout the last 30 years of modern fisheries management, this community-/small-scale approach has been in constant tension and conflict with a corporate view of rights schemes that concentrates access and seeks primarily to maximize the generation of resource rents.

Modernization process

There are numerous examples of how the small-scale sector in Atlantic Canada has been successful in devising value-based rules to allocate rights and restrict access to the fishery. Very early on in the modernization process, as the State imposed limited entry to control access to fisheries resources, it made a significant



concession to the small-scale sector by prohibiting corporations from holding licences for species fished from vessels of less than 65 ft LOA. This became known as the 'fleet separation policy' as it prohibited fish processors from 'owning' inshore fishing licences, thereby 'separating' processing from harvesting.

Individuals who obtained fishing licences in the under-65 ft fleets also had to fish these licences themselves. They could not (and still can not) lease the licence or hire others to fish for them. This became known as the owner-operator policy.

Individuals were also prohibited from holding more than one licence for the same species but a multispecies-licence portfolio approach was encouraged for the small-scale sector, allowing only those who held certain key licences to obtain licences for other species as these became available either through harvester retirement or the development of new fisheries. The use of value-based criteria such as 'dependency' (level of income derived from fishing) and 'attachment' (length of time in the fishery) were also used first in the Gulf region of the Maritime provinces (New Brunswick, Prince Edward Island and Nova Scotia) under the 'bona fide policy' and, subsequently, in Newfoundland, under the fish harvester professionalization programme, to

restrict access to full-time fishermen. In Newfoundland, this led to the denial of access to approximately 15,000 part-time licence holders, cutting the numbers in the small-scale sector in half, a process that generated surprisingly little opposition, largely because of the extensive community-level consultations on the measures. Nowhere has the contrast been sharper between the value-driven approach for the equitable distribution of fishery rents and the rents concentration model than in the Atlantic's Area 12 snow-crab fishery.

Until the 1980s, snow crab was a marginal fishery in Atlantic Canada. The collapse of the Alaskan king crab fishery and the Japanese appetite for seafood conspired to increase international demand for this product and turn it into one of Canada's most lucrative fisheries. Under limited entry, access rights to Area 12, the most bountiful of the Atlantic's different crab-fishing areas, have been restricted to 130 licence holders, since the 1970s. (They include seven native-owned licences that were transferred to aboriginal communities following a Canadian Supreme Court ruling recognizing their treaty rights to the fishery.) This fishery is generally recognized as being well-managed.

Individual quotas

The owner-operator licence holders in this midshore fleet (vessels under 65 ft LOA)

moved to individual quota management with strict limits on transferability in the late 1980s, eliminating the race for fish and many wasteful practices. The licence holders fund and manage dockside monitoring, and contribute significantly to funding the government-based scientific stock assessment through co-management agreements. In many ways, the midshore Area 12 crab fishery is a model fishery except in one crucial area: the equitable distribution of resource rents.

The generation and concentration of rents, however, is the fishery's hallmark. According to costs and earnings estimates for 2002, this fishery generated gross earnings per vessel of more than Can\$750,000, and average net returns of Can\$363,000 for what amounts to a five-to-eight-week fishery. (The net return is the amount generated above the break-even point of Can\$400,000 per vessel. The break-even point includes salary of Can\$50,000 for the captain, and wages of Can\$29,400 for each of the crew, and a return on capital invested of 11 per cent.) Despite fluctuations in crab prices and total allowable catch (TAC), this pattern of very high profitability has been consistent for the last 15 years. It also contrasts sharply with the very low returns to both labour and capital for the 1,230 inshore-fishery licence holders in some of the same communities along the eastern shore of the province of New Brunswick (NB). These small-scale, multispecies fishermen, who derive most of their income from lobster but also fish other species in a season that lasts six months, generate net incomes per vessel between Can\$3,500 and Can\$5,600, after paying themselves wages between Can\$10,350 and Can\$14,000.

NB inshore fishermen were excluded from the snow-crab fishery until 1995, despite the fact that the resource was both plentiful and easily accessible to them using their existing vessels. In communities where unemployment is very high and where job opportunities outside the fishery very limited, this exclusion was a source of resentment, social conflict and general instability in the fishery. After extensive political lobbying, the Minister of Fisheries reallocated a small percentage of the

snow-crab fishery quota to NB inshore fishermen for the first time in 1995. Under the leadership of their organization, the Maritime Fishermen's Union (MFU), the licence holders chose to exercise this right in a highly creative and democratic way, with a strong emphasis on equitable distribution of benefits. Given that the allocation was not large enough to make a significant impact on each individual enterprise—had it been divided equally—the licence holders chose to hold and manage the quota collectively, through the MFU, and distribute its benefits in the following way:

- Approximately 60 per cent of the quota was divided into 11,000-lb individual quotas, which were distributed by lottery to partnership groups of four or more fishermen (that is, a partnership of four would receive 44,000 lb) who were leased crab traps purchased by the MFU. It was agreed that any fishermen who received quota through the lottery would not be eligible in subsequent years for another chance at receiving quota until all licence holders had received a 11,000-lb share.
- The remaining quota was fished by charter, and the proceeds were used to:
 - finance an extended healthcare plan for all 1,230 licence holders and their families; and
 - support a fish-harvester professionalization programme, finance scallop- and lobster-enhancement projects, and for scientific research on herring stocks.

Except for the years it was excluded from the crab fishery (1998, 1999 and 2000), the MFU continued to manage its allocation of snow-crab quota according to the same formula.

Fleet rationalization

However, the long-term decline of lobster landings in eastern NB and the deteriorating returns to the inshore fleet forced the MFU, in 2004, to significantly

change its strategy and to begin using the crab resource for fleet rationalization purposes.

It chose an approach, however, that was a radical departure from traditional practices. Instead of using market mechanisms or centrally managed licence buyback and retirement schemes, it has instead turned the crab resource over to fishing communities and empowered them to make the decisions on how best to use it to bring harvesting capacity in their communities in line with resource availability and fleet economic viability.

The approach, if it is successful, will ensure that revenues from the inshore crab allocation are spent in the best interests of coastal communities by allowing these very same communities, through democratic, grass-roots processes, to make these decisions themselves. Under the new approach, which was adopted in 2005 after extensive community consultations, the MFU continues to receive an allocation of snow crab on behalf of all inshore licence holders in eastern NB. From the proceeds of the crab allocation, it also continues to fund a health insurance plan, which is available to all licence holders and their families.

But the MFU no longer conducts a central lottery for the distribution of individual crab quotas. Instead, it distributes the crab quota on a pro-rata basis to 12 Communities of Interests (COI), territorial units made up of groups of inshore fishing licence holders who share a certain affinity/territory (see map). The COIs decide how many vessels will harvest their respective quotas and how much they will pay to have fishermen in their communities fish the crab according to harvesting plans determined and approved by all licence holders in public meetings.

The other significant change is that a mandatory minimum of 50 per cent of net revenues—after paying administration and health-plan costs—must be used for licence-retirement schemes in the communities. However, it is up to the COIs to decide how best to remove excess capacity in the fishery in their

communities, according to the funds available to them.

In addition, monies from the crab sales are also set aside in each COI for economic diversification and development funds to finance sustainable-development projects in the communities, again decided upon by the fishermen according to criteria common to all COI. For example, several COIs have already identified the purchase of lobster larvae for seeding in their communities from a project that was initiated by the MFU several years ago.

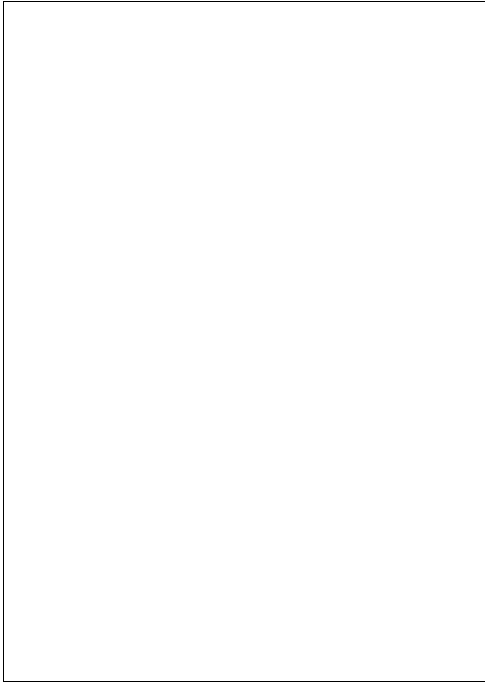
The COI approach to the allocation of fishing rights is a radical departure from the market-driven, individual-property-rights process experienced elsewhere in Canada. Instead of allocating fishing rights to individuals, who are then free to use them in the pursuit of their self-interest, irrespective of the impact on the community, it creates a situation whereby community interests are placed front and centre. In the words of the MFU, under the COI approach, fishermen have to organize themselves and make decisions collectively on the use of the fishing rights “to tackle both the problems of the fishery and the economic development challenges faced by their communities.”

The approach is designed to work in the long-term interests of fishing communities and to make fishermen accountable for the decisions that they make on the use of their rights. The programme is very new and has created all kinds of challenges for the MFU. It remains to be seen how successful it will be. But from the community perspective, it can do no worse than the alternative processes that have already proven to strip communities of access to fishery resources.

The Canadian experience with the allocation of tradable, individual property rights as a means for dealing with fisheries overcapacity shows that these schemes can be highly successful in concentrating the benefits of the fishery in the hands of individual rights holders.

Rights-based systems

These schemes, however, have worked to undermine sustainable development in traditional, rural fishing communities by



depriving them of access to fisheries resources.

In the best interest of their communities, the small-scale fish harvesters in Canada have consistently sought to devise rights-based systems for fisheries management that distribute the benefits of fisheries access equitably and avoid concentration.

If there is to be an international conference on rights-based systems focused on the interests of the small-scale fishery and traditional fishing communities, then representatives of the Canadian small-scale fishery would surely want to participate. They would not come forth proselytizing for ITQs, however, nor representing a 'temperate-world minority' view. Rather, I suspect, they would come to share, listen and learn as part of a universal majority of women and men who fish for a living, care passionately about their small communities, and want them to continue providing decent livelihoods for their children's children's children. ♣

This article is by Marc Allain (marcallain@sjma.net), former policy adviser to the Canadian Council of Professional Fish Harvesters, and now a Geneva-based fisheries consultant

Fisheries property rights

The litmus test

It should be demonstrated that a property-rights regime will increase the welfare of those most in need

Recently property rights have been heralded as *the* solution to the ‘fisheries problem’ (that is, overfishing)—by economists at a conference in Australia (see article by Derek Johnson, “Who’s sharing the fish?”, SAMUDRA Report No. 43, March 2006) and by leading institutions such as the Food and Agriculture Organization of the United Nations (FAO) (see piece by Ichiro Nomura, “No one-size-fits-all approach”, SAMUDRA Report No. 44, July 2006). That comes as no surprise. It is old news. The puzzle worth pondering, however, is this: If property rights are such a blessing to fisheries as alleged, why are they so often received with animosity within the fishing population? Let me suggest the following possibilities:

The reason could be that people do not get the message; it is either incomprehensible or they are not yet ready for it. They may not see the problem for which property rights are held to be the solution. Thus, what is needed is more effective communication to make people understand the significance of the message and feel better about it.

Maybe it is not property rights *per se* that people find so problematic, but the particular kind of property rights that is promulgated. To proclaim that property rights “are absolutely necessary and fundamental to the sustainability of the world’s fisheries resources” (Nomura) does not say much unless one is willing to specify what type of property rights one is talking about: private property, common property, community property, State property, corporate property, etc.—which all come in various forms and have different implications. Therefore, if the argument had been more nuanced and people were offered a set of alternative property-rights solutions that

they could relate to, they might be more supportive.

But perhaps the problem lies elsewhere. People may both understand the message and see its merits, and yet oppose it because they see it as threatening to their livelihoods and ways of life. For people living under an open-access regime, the property-rights concept is often perceived as an alien and inappropriate concept: “How can somebody acquire privileged ownership of a resource that was free for all to share?” If that is the case, a more cautious presentation that does not ignore people’s unease might do the job.

Still another explanation for people’s defiance may be that property rights do not offer any solution to what people perceive as their most important and urgent problems: “Whatever the problem property rights are supposed to solve, my problem is another one.” If you, for instance, struggle to feed your family on a daily basis, a property-rights regime might not figure high on your priority list.

I can think of yet another reason, which is perhaps the most likely one, why many fishing people show resistance to the property-rights systems favoured by economists: They have already suffered their consequences. They, in contrast to academics, fisheries managers and others who believe so strongly in property rights, know how it feels to lose access to the resource.

Standard definition

But in order to understand what the problem is really all about, we need to dig even deeper and ask what property rights are in the first place. Here is a standard definition: The essential thing about a property right is not the relationship it establishes between a person who is the

owner and the item that is owned but the relationship it forms between people: the haves and the have-nots. Thus, property rights are a social relationship, and any change in property rights is intervening into existing social relations by differentiating categories of people.

As someone benefits from acquiring a property right, others necessarily lose, because the owner is in a rightful position to exclude others from enjoying the stream of benefits from the thing that is owned. Thus, property rights are inherently inequitable, and this problem does not go away if you simply ignore it as Derek Johnson found was happening at the *Sharing the Fish 2006 Conference*. Neither can the equity issue be postponed until after property rights are introduced, as it will typically pop up long before you try to implement them, because people can anticipate their social and economic impacts.

It is not for nothing that social scientists have long been concerned with the empowering and disempowering effects of property rights. The famous French anarchist and philosopher Pierre-Joseph Proudhon captured the quintessence of this problem in his 1840 treatise *What is Property? Or, an Inquiry into the Principle of Right and Government* through his oft-quoted statement, “Property is theft!” Fishing rights are often opposed by

similar language. That is perhaps going too far since property rights can mean many things, and also serve good purposes. As Bjørn Hersoug argues in his commentary on both Johnson and Nomura (“Opening the tragedy”, *SAMUDRA Report No. 45*, November 2006, pg. 3), we, therefore, need to ask if fishing rights are used to empower the right people. Consequently, one should not be dogmatic about property rights, as they come with potentials as well as risks. Property rights can lead to more inequity but they can also be employed for correcting inequities, as they can be used as a mechanism to protect those in need of protection, that is, the marginalized and impoverished among fishers. This is unfortunately not what those who most eagerly sponsor property rights, such as individual transferable quotas (ITQs), have in mind.

I suggest, therefore, that before we embrace any particular property-rights regime, it should be litmus-tested against the ‘difference principle’ established by John Rawls—perhaps the most important philosopher of the 20th century—in his 1971 work, *Theory of Justice*: “Social and economic inequalities should be arranged so that they are to the greatest benefit of the least advantaged persons.”

Specific situation

Thus, unless it can be demonstrated—not only in theory but also in practice, and not



only on average but for the specific situations in which fishing people find themselves—that a particular property-rights regime will increase the welfare of those most in need, we all have legitimate reasons to remain sceptical, whatever the economists and FAO might say. ♣

This piece is by Svein Jentoft (Svein.Jentoft@nfh.uit.no) of the Norwegian College of Fishery Science, University of Tromsø, Norway

Feast for the eye

A new book provides a unique inside view of some of the fishing people of the North Atlantic regions of Faroe, Shetland, Iceland and Greenland

Images of Fishermen: The North Atlantic may well be the first book on the market to cover commercial fishing this comprehensively through photography. And the photographs are powerful enough to capture the interest of anyone, anywhere.

The book presents, in compelling language, the reality of the fisheries of the North Atlantic regions of Greenland, Iceland, Faroe and Shetland as seen through a photographer's lens. This book is a tribute to those who fish for a living and bring seafood to the world. Through six photo essays, photographer Maria Olsen delivers a feast of more than 200 amazing pictures, documenting fishing trips as diverse as gillnetting for monkfish; longlining for cod; demersal pair-trawling for saithe; twin-rig trawling for groundfish; pelagic pair-trawling for herring; and bottom-trawling for northern shrimp.

Images of Fishermen: The North Atlantic also contains an authoritative treatise written by the internationally renowned fisheries adviser, Menakhem Ben-Yami, on contemporary fisheries-management issues, first and foremost related to the special case of Faroe. The book is introduced with a brief overview of the great fishing traditions of the four tiny North Atlantic island communities, written by Búi Tyril.

Images of Fishermen: The North Atlantic is the work of three individuals: Maria Olsen, Menakhem Ben-Yami and Búi Tyril. It is a first book for Maria Olsen, who has worked for more than a decade as a professional photographer, taking

assignments from news media and clients on both sides of the Atlantic.

Menakhem Ben-Yami is an independent adviser on fisheries development and management, who started his career as a fisherman, became a master mariner, and, subsequently, a technical and management adviser, serving as Chief of the Israeli Fisheries Technology Unit and as Fishery Industry Officer for the Food and Agriculture Organization of the United Nations (FAO).

Búi Tyril is a publisher with years of experience as editor, journalist, copywriter and public-relations consultant.

Images of Fishermen: The North Atlantic is published by GlobalOne Press Ltd, Aberdeen, United Kingdom, and is available from the publisher. To order, call +44 (0) 845 052 3422 or email [nais\(a\)globalone-press.com](mailto:nais(a)globalone-press.com).

This notice is based on a factsheet handout from GlobalOne Press and PRnewsMedia.com. More information on *Images of Fishermen: The North Atlantic* is available at www.images-fishermen.com

SWIMMING IN CIRCLES: AQUACULTURE AND THE END OF WILD OCEANS. By Paul Molyneaux Thunders Mouth Press, New York, 2007

Not quite under control

The book under review paints an integrated picture of the complex reality of shrimp and fish production globally

In this very recent publication, Paul Molyneaux highlights the crisis in fish production as it has been unfurling in the last two to three decades as scientists and fish business companies try to demonstrate that the fall in capture fisheries can be replaced by aquaculture.

Having himself worked in marine capture fisheries and retrained as a writer/ journalist when it collapsed, he presents, in an extremely sensitive, live and readable style, the unethical and unsustainable route taken to end fisheries in the wild.

Essentially a journey through the communities of marine organisms, fishing people, seafood farmers and the offices of those who run aquaculture industries at different levels, the book exposes the reader to the experiences of real people and locations, moving between Maine and eastern Canada on the Atlantic coast, and Sonora and Sinaloa in Mexico on the Pacific coast, highlighting the battle for survival between the artisanal fishers and the salmon farms in the former and between the subsistence fishers and shrimp farmers in the latter.

In a very lucid, travel-diary writing style, Molyneaux weaves in and out of fishers' and farmers' experiences, government decisions, scientific promises and vagaries, the directions given by administrators and scientists of multilateral institutions, and the acumen of the business giants, making no judgements himself but certainly helping the reader understand the folly in the

prediction that production has to keep pace with growing demand of consumers, whose only criteria is the availability of cheap seafood.

Molyneaux helps the reader look at aquaculture from the perspective of ecological economics, which recognizes limits to growth, and, at the same time, exposes the prospects of biotechnology that imply that all limitations in production can be overcome. He juxtaposes this view with the struggle of the artisanal fishers and the shrinking fish stocks, actually attempting to consider the perspectives of the targeted fish and shrimp themselves.

Through his interactions with officialdom, Molyneaux highlights the impetus given by the Food and Agriculture Organization of the United Nations (FAO), which predicted in Kyoto in 1976 that aquaculture would be the food-producing system of the future, and the way its policy was carried through by its scientists despite all the disease, environmental destruction and marginalization of people that aquaculture causes.

Global trade

The United States, Mexican and Norwegian governments do likewise. While Molyneaux notes their logic of the law of comparative advantage—that aquaculture farms can feed more people than fishing can, which, in turn, leads to increased food security—the experiences of people in coastal communities prove the opposite. In addition, the global trade in aquaculture products has spread the pathogens to shrimp farms around the world and sometimes led to the contamination of wild stocks, and the assumption that technology can

substitute for natural and social capital continues to accelerate the depreciation of both.

Molyneaux does not fail to draw attention to the dismissive reactions of all fisheries-related sections to environmentalists and big-budget non-governmental organizations (NGOs) and the endless yet impractical debate on their use of the precautionary principle. He nevertheless presents sufficient evidence to support their claims. For example, in October 2001, the infectious salmon anemia outbreak that began in the Norwegian-owned company Atlantic Salmon of Maine, US, spread throughout Cobscook Bay, leading to the destruction or early harvest of 2.6 mn farmed salmon. Maines' production fell from 36 mn pounds in 2000 to 15 mn pounds in 2002. By 2005, a new management regime cut harvest to a little over 11 mn pounds. The viral epizootic brought the US\$60-mn-a-year industry to its knees and the three large farms in Cobscook Bay laid off roughly 400 of the 1,200 salmon farm workers that year. Only a US\$16-mn bailout package kept the big producers from abandoning Maine. The massive movement of water, which made the bay so attractive to salmon farming, also spread pathogens. Health monitoring and bio-security measures, such as washing of feed barges and other equipment, cost New Brunswick salmon growers around US\$40,000 per site per year, in addition to losses from ongoing

disease outbreaks. As with salmon, the best scientist in the shrimp world sought ways to enable their industry to live with disease rather than eliminate it. By 2001, the major shrimp viruses had caused at least US\$10 bn in losses, not counting the destruction of certain wild stocks in the northern Gulf of California. Molyneaux gives similar evidence of the impact of the use of drugs and contaminated feed pellets.

He notes that most research institutions are deeply tied to the aquaculture industry. Very little money has gone into risk assessment and monitoring of wild stock, which could return and haunt the industry when it starts looking for brood stock, as it needs uncontaminated shrimp. Moreover, studies like that of David Carpenter, reveal that in addition to polychlorinated biphenyls (PCBs), farmed salmon had levels of at least 13 organic pollutants more than 10 times higher than their wild counterparts. But techno-optimism goads institutions to pour millions of dollars into solutions-oriented research to address the problems inside the pens and ponds through biotechnology, disease control and what some refer to as the "geographical cure".

Offshore farms

Focusing on the present trend to move farming offshore, Molyneaux discusses the system to lease the open oceans, which stimulated the promulgation of the

Offshore Aquaculture Act in 2005 in the US, and highlights the need to ensure that the National Environmental Protection Act applies to the exclusive economic zone (EEZ) as well.

Molyneaux also brings in convincing arguments regarding the food conversion ratio. While the Suzuki Foundation accuses salmon farmers of taking more fish protein from the ocean than they generate, and destroying the ecological balance that supports wild stocks and communities, ecological economist Peter Tyedmers of Canada's Dalhousie University highlights how fish farming in the worst-case scenario uses more than three times the resources commercial fishing uses per ton of fish produced. According to Stuart Barlow and Ian Pike, by 2010, the aquaculture industry would take 79 per cent of the world's available fish oil and 48 per cent of available fishmeal, provided supply remains constant at 6-7 mn tonnes of meal and 1.1-1.4 mn tonnes of fish oil annually. Tyedmers also proves that even if the conversion ratio of food in salmon production is better than for other animals like chickens and pigs, it is the quality of food they consume that has to be taken into consideration.

Feeding high trophic-level fish to farm fish turns the food pyramid upside down and, depending on the amounts of fish used, could increase the ecological

footprint of farmed fish exponentially. But as cod and salmon farmers move offshore, shrimp farmers move inshore, attempting to wean shrimp off fishmeal diets by creating microbial systems within recirculating tanks and protecting them from disease. Finally, it is not the Malthusian argument but market factors that enhance consumption, and Molyneaux explains how the shift in production and marketing changed Americans' taste in seafood. For thousands of people who had never eaten wild salmon, the farmed varieties pouring out of Chile, Norway and other regions taste great. In 2002, five companies produced 40 per cent of the world's salmon. By 2005, Panfish controlled 30 per cent of global farmed salmon production, making it the undisputed king of farmed salmon through vertical integration. There is no differentiating between farmed and wild fish. No labels are required to identify chemicals used in production. Consumers make a statement through their buying and they put economics ahead of social and environmental considerations.

Corporate paradigm

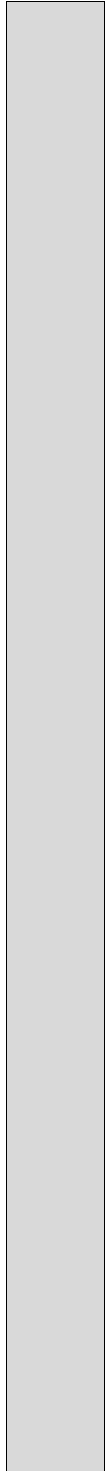
For the consumer, cheap fish is more important than sustainably produced fish, resulting in a struggle with the wild-fish producers for a place in the market. New initiatives work only within the paradigm defined by the corporate world. The business houses and governments driving the new industry believe they have it

under control. They might have failed in fisheries but, using the same development rationale, they believe they can succeed with aquaculture.

The poor people and the wild species pay the opportunity costs of these development choices, as they attempt to survive in a degraded environment that can no longer produce subsistence foods. Rather than solve fisheries problems, the industry continues to consume natural capital. Molyneaux concludes that the cost of technology in terms of its tendency to accelerate resource decline soon exceeds its benefits.

While this book paints an integrated picture of the complex reality of shrimp and fish production globally, unfortunately it is not the policymakers who will draw inspiration from it. The very structures of administrative power and thinking defy an integrated understanding of life systems. The logic of money reigns supreme whereas what actually sustains life and livelihood is the interconnectedness of living systems. The scientific community may treat the book lightly, as the author does not strictly adhere to academic norms of referencing. But, on the whole, the book provides an immense amount of information and evidence for ordinary people who desire to safeguard life on the planet. 🐞

This review is by Nalini Nayak
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A more direct dialogue

The film under review strives to understand the question of olive ridley marine turtles in Orissa, India, and their interactions with marine fisheries

Throughout the film under review, information is provided in a well-balanced way that keeps the viewer's attention. This readily allows for the marine turtle question and the interactions with marine fisheries in the locality to be understood. The film provides a structured view of the historical context, the current situation and future prospects. It also considers the possible effects of the development of the coast for the exploitation of petroleum and its derivatives, a matter that will affect the habitat and drastically complicate both the survival of the turtles and other marine species that are currently taken advantage of for human consumption.

Considering only the current situation, it is very important that the needs of the population in general and of the fishermen and their dependent families in particular are understood and resolved. Restrictions imposed on the exploitation of resources, in certain areas, will cease to be functional if they do not also resolve the problems of the families who depend on them. For however many regulations may be established, the food needs of the coastal population increase daily, becoming an urgent requirement.

Another issue is that the fishermen do not understand why they are banned from working in the traditional fishing areas they are accustomed to, when they observe that turtles are still abundant, although not all the year round. However, the film can be used to show them that large numbers of turtles are being found dead on the beaches, which indicates that something bad is happening. It also needs to be clarified that the fishermen of the locality know well, where and when they can catch marine turtles, whether intentionally or

unintentionally. As they are the ones who can best help avoid their capture, seasonal and zonal bans must be established through the common consent of authorities and the fishermen or their representatives. If they are established in this way, measures to restrict access to areas of turtle concentration and to delimit seasonal bans will be more easily accepted. In this sense, the film is a positive step, as, through it, a more direct dialogue is possible with all the people involved in the exploitation of marine resources in the area.

One of the most significant parts of the film shows the consequences of fishery regulations, designed to protect turtles, that in some cases have pushed a small number of fishermen to commit suicide. This is not only due to the laws established but also due to the circumstances under which the fishery is developed, where there is an apparent scarcity of facilities to support the fishermen's work or to help them to deal with their economic problems. It is, therefore, most necessary that these social and human dimensions are resolved in parallel with applying fishing restrictions. Also, the lack of credit for the purchase of vessels and fishing gear, increases the problems of the fishermen, and, with no clear solutions being provided, creates a vicious circle between working for turtle conservation and subsistence fishing.

Other options

What other options are open to the inhabitants of the Gahirmatha and Rushikulya coastal regions? Is it possible to project turtles as an ecotourist attraction? Can some of the eggs laid on the beaches during spawning be exploited, for example, through a simple process that transforms them into

powdered egg? It may be possible to establish an organization in the area responsible for ecotourism or utilizing those eggs that have no chances of survival. Questions also remain as to whether turtle eggs are consumed in the region illegally (through smuggling), or whether, in general, turtles are not eaten for religious reasons.

If the community in the area has no tradition of eating eggs, the work to protect the beaches will be made easier.

In major fisheries, quotas for by-catch have been established, as, for example, in the exploitation of tuna in the central Pacific, and when the ceiling is reached, the fishery is closed. Perhaps a system could be set up that puts limits on by-catch that does not affect people's survival. The film does not show whether a complete record is kept of the by-catch (for both dead and live turtles), nor does it indicate whether any record is kept of the number of turtles that are freed alive, and in what conditions they are returned to the sea. This is important for establishing mortality levels, and for understanding the impact incidental mortality has on the population of marine turtles. If no record is kept of by-catch, it will be necessary to design a log, particularly for trawlers and gill-netters. Using the information thus gathered, it should be possible to design a model of the (incidental) fishery, and its effects

over the years, so that it is possible to monitor the positive or negative effects of conservation measures (restrictions, closed fishing areas, restrictions on fishing effort and catch levels).

It is also important to clarify that the species in question "is not in danger of immediate extinction, unless its habitat is radically altered". The distribution of this species (*Lepidochelys olivacea*) is the widest on the planet. However, it is clear that there are places where their populations have reduced drastically, and there are even some beaches where massive spawning used to take place, and where now only a few of the turtles remain. Without any support or protection, it will be difficult for these to recuperate.

There are three countries where populations of this species occur in great numbers. These are India, Mexico and Costa Rica, and in all three countries, the issues are very similar. Fishing interacts with turtle populations, occasioning by-catch and mortalities, and, in each country, efforts to resolve the problem have adopted a different focus.

Incidental mortality

The film does not tell us whether the effects of incidental mortality rates on the abundance of the population have been quantified, nor about the effects on the survival of the populations. In the three countries mentioned, incidental mortality has been reduced substantially, but is still

considered to be very high. But there are no definitive studies.

In Mexico, it has been observed that on the beach of La Escobilla, in the State of Oaxaca, despite commercial catching and high levels of destruction by humans and animals (wild and domestic) on females, nests, eggs and hatchlings, after applying a total closure in 1990, and continuing with protection activities on the spawning beach, the population has remained stable and, in the last decade, has even shown a slight recovery. Activities to protect reproduction on this beach have been carried out since 1973, and between 1987 and 1988, after the turtle populations had reached minimum levels, they recovered and today the populations are considered abundant and healthy. A research centre has been established at La Escobilla, which undertakes monitoring of the species, and also offers alternative work opportunities for a community that was previously occupied with turtle fishing. There has been no significant recovery of the turtles on other spawning beaches in Mexico, possibly because protection and conservation activities have not been undertaken with the same intensity and constancy over the past 20 years. This implies that the recovery of this species can be achieved if protection programmes are implemented, and regulations for the fishery and closed seasons are respected, and if alternative occupations are given to those fishermen whose livelihoods depend on turtles.

The film under review has much about the need for protection and management, implying that the survival of the species may be prejudiced even more if the development of the infrastructure required by the petroleum industry is given the go-ahead. This requires the formation of a powerful and multidisciplinary movement to promote marine resource conservation and to support the dependent populations, given that industrialization in the area will not only affect turtles but also the entire ecosystem of the region. The human population will be particularly affected, as each day their inheritances are diminished, and their chances of survival, reduced. In Orissa, 47.5 per cent of the population live in poverty, including 70,000 fishermen. It is crucial that their

lives are improved, and that, at the same time, nature conservation is enhanced. Both marine turtles and traditional fishing—and their protection—should be seen as priorities. The diffusion of this documentary is a very important contribution towards that goal.

Review

This review is by Rene Marquez-M. (lkempii@prodigy.net.mx), Vice President of the Scientific Committee, Inter-American Convention on the Protection and Conservation of Marine Turtles (www.lacseaturtle.org)

INTERNATIONAL LEGAL INSTRUMENTS RELEVANT TO FISHERIES AND FISHING COMMUNITIES: A HANDBOOK. International Collective in Support of Fishworkers. 2006.

A practical road map

A review of a unique handbook on international legal instruments relevant to fisheries and fishing communities

The easy-to-navigate eight-volume thematic handbook on *International Legal Instruments Relevant to Fisheries and Fishing Communities*, published by the International Collective in Support of Fishworkers (ICSF), is both wide-ranging and comprehensive, and is accompanied by a CD-ROM. The information is also available on ICSF's website at <http://legal.icsf.net>.

The handbook offers a compendium of 114 instruments, including 'hard law'—those with legal effect that are binding on parties, such as treaties and conventions—and 'soft law'—those that are voluntary, such as United Nations General Assembly Resolutions, the 1995 Food and Agriculture Organization of the United Nations (FAO) Code of Conduct for Responsible Fisheries, and Action Plans.

The handbook has important and commendable features that are tailored to a readership concerned about fisheries management, many of whom may not have more than a nodding acquaintance with international legal processes or a firm understanding of the suite of issues involved. Equally, experts in various aspects of fisheries and fishing communities, who have spent a lifetime devoted to international processes that have shaped these instruments, would gain knowledge in complementary areas to round out their experience.

This reference guide was originally developed for an ICSF training programme held in 2003 for fishworkers and non-government organizations (NGOs), and it was realized that the handbook could be important in the

advocacy and campaign activities of these and many other stakeholders.

To that end, the legal instruments were grouped into seven themes:

- Human Rights, Food Security, Women and Development
- Environment and Sustainable Development
- Oceans and Fisheries Management
- Environmental Pollution
- Fishing Vessels and Safety at Sea
- Labour
- Trade

The thematic approach is of great value because it fosters an integrated approach towards fisheries management and underlines the impact of current globalization dynamics—for example, the rapidly expanding development of trade measures in fisheries.

Practical information

For each instrument, practical information is provided on the mechanisms for implementing the international instruments, including decision-making bodies and implementing agencies. The frequency of the meetings of the bodies and agencies is described, as are rules for participation by States and NGOs. Monitoring agencies and regional bodies relevant to the instrument are also listed. Importantly, the handbook highlights key provisions of each instrument that are relevant for

fisheries, small-scale fisheries and fishworkers.

In that regard, it is a useful tool because it identifies the processes of global fisheries governance and the web of decisionmaking that affects those in the fisheries and related sectors. It can serve as a framework, or checklist, for those who wish to better understand day-to-day processes at the international level, or to identify strengths, constraints or areas where reform is needed.

The instruments selected are comprehensive and, for the most part, are presented in chronological order. A general introduction is contained in Volume I, with a brief description of the origins and objective of the handbook.

It also contains an extensive and useful list of acronyms, a glossary and large foldout chart of the instruments for ease of reference. A one-page synopsis for each of the other volumes serves as a clear introduction of each theme for the initiate.

Theme I, referring to the broad, entrenched issues of human rights, food security and (thankfully) women and development, gives a human dimension to all other themes. Theme II, Environment and Sustainable Development, focuses on the United Nations Conference on Environment and Development (UNCED) and its many spinoffs, small island developing States

and other environmental and cultural instruments.

Theme III, Oceans and Fisheries Management, provides a wealth of information on binding and voluntary agreements and conferences, FAO Ministerial conferences and meetings, International Plans of Action under the 1995 FAO Code of Conduct for Responsible Fisheries, and 11 relevant United Nations General Assembly (UNGA) resolutions. It is the largest volume in the set. The coverage of this theme tends to be more about fisheries management than oceans management, as many instruments relating to the latter fall within Theme IV, Environmental Pollution. In that volume, many of the landmark agreements are reported, including the UN Framework Convention on Climate Change and the Global Programme of Action on Land-based Pollution.

Theme V, Fishing Vessels and Safety at Sea, comprises mainly older instruments. This reflects the continuing need for attention to this area. In fact, this is the thinnest volume. Recent initiatives to establish a global register for fishing vessels—made more effective by global concerns about security—may impact positively in this area.

Sixth theme

Theme VI, Labour, the second-largest volume in the compendium, is usefully divided into fisheries and applicable

general instruments, and those relating to women.

A pleasing feature about the print version of the handbook is its minimalist size: it is published in small, concise booklets that are easily transportable. It is a tribute to the publishers that such a great wealth of information was arranged in such a practical manner.

A drawback, at least for the current print version, is its lifespan: it is current as at March 2005, almost two years ago. This is offset by the fact that the current decade tends to be more about implementation of the international instruments negotiated earlier, with a surge of activity in the 1990s. Many of the instruments relating to fisheries and environment were ignited by the 1992 UNCED.

The international community continues to call for additional instruments on fisheries that would build on existing agreements, with greater detail that respond to current technologies and fisheries-management issues. The calls are generally made through UNGA resolutions or forums such as the May 2006 Review Conference of the 1995 UN Fish Stocks Agreement or the FAO Committee on Fisheries (COFI). Examples of current issues that are expected to be discussed at the March 2007 Session of COFI, and have the potential for resulting in international instruments, are the performance of flag-State responsibilities and a process for a binding instrument on port-State measures. The development in FAO of ecolabelling guidelines would also be an important addition to the compendium.


However, given the fundamental nature of the instruments already included, this should not detract from the overall body of knowledge presented by the handbook. It is to be hoped that updates can be added from time to time, at least on the website.

The handbook is set apart from other collections of fisheries instruments by its scope, template and target audience. However, although it is well organized, it would be a challenge for the layperson to navigate through the volumes without

explanation and some study. On the other hand, those who are familiar with international processes and might wish to learn more about the instruments, will find it a practical road map.

Its effectiveness for the layperson—the fishworkers themselves—could be augmented by a simple explanation in the introduction about what makes a country bound by international instruments. An explanation is presented in a piecemeal way in the glossary, but it requires that the reader knows enough to look up words such as ‘accession’, ‘date of effect’, ‘ratification’ and ‘signature’. In addition, the template could refer to websites showing each instrument, and for those that are binding, the countries that have ratified or are otherwise bound by it.

Another suggestion for expanding the readership would be to explain the purposes for which the handbook could be used. These could include, for example, compliance by countries with their international obligations, verifying standards for labour or other relevant laws, providing background for law or treaty reform, defining the obligations of countries to take into account social, economic and cultural factors, and improved understanding of regional arrangements. This would be an excellent ‘selling point’, inspiring the reader and advocate to approach the instruments from different angles.

The handbook reflects the purpose for which it was originally intended—as resource materials for a training programme—but its potential usefulness is much more wide-ranging. 

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Golden goose or albatross?

Behind the apparent success of Peru's fishmeal export industry lies a sorry tale of low efficiency, and high environmental and social costs

After the boom years of the 1960s that bust in the 1970s, it is boom time once again for Peru's fishmeal industry. Preliminary figures for 2006 indicate that Peru's export earnings from fishery products (both fishmeal and for direct human consumption) reached historic levels of around US\$1,761 mn, an increase of 7.9 per cent over 2005. Despite a 30 per cent drop in production, fishmeal retains its place as the jewel in Peru's fishery export crown. At around US\$1.136 bn, the estimated fishmeal export earnings in 2006 are slightly down on 2005.

But this is rather cosmetic, as behind this success story lies a huge, unaccounted cost, which Peru can ill afford. The annual extraction of 8-10 mn tonnes of anchoveta, a mainstay of the entire marine food web of the Humboldt Current large marine ecosystem (LME), is homogenizing Peru's rich marine biodiversity and destabilizing the marine ecosystem.

In 2006, a World Bank-commissioned evaluation report on Peru's marine fisheries sector, described the Peruvian industrial fishery for anchoveta as "being overcapacity in the fleet and processing sectors; displaying low efficiency; causing significant losses in rent and high environmental and social costs for the Peruvian State; and generating huge foreign-exchange earnings that benefit a minimal fraction of the industry."

This report highlights the fact that the fishmeal export balance sheet does not account for the:

- impact on the wider marine ecosystem, the food web, and the sustainability (and development prospects) of Peru's other fisheries, particularly the artisanal fishery;

- impact of fishmeal production on the wider coastal environment (the impact of waste discharge into the sea, air and land), and on the health of the coastal-dwelling human populations;
- highly skewed distribution of benefits, with Peruvian society at large gaining precious little from the relatively large earnings being made (at high, externalized, environmental and social costs); or
- opportunity costs of transforming all the anchovy catch into fishmeal, even as malnutrition and poverty affects 40-60 per cent of the Peruvian people.

The 'Anchovy Week' campaign took place in Lima from 4 to 10 December 2006. Organized by the newly formed Sustainable Environmental Centre (CSA), based at Peru's Cayetano Heredia University, Anchovy Week targeted the highest socioeconomic sectors of Lima's population. It aimed to change the image of anchoveta as food fit only for animals or the poor, into a luxury, gourmet product, and to stimulate investment in the production of anchovy for direct human consumption. The campaign also drew attention to the need to ensure:

- the sustainability of Peru's marine resources;
- the long-term economic viability of Peru's fishery enterprises;
- that future generations should not bear the costs of today's fishmeal factories; and
- that fishery activity contributes not only to wealth creation, but

also to sustainable development and the reduction of malnutrition in Peru.

According to the organizers, all the above is achievable if “less fishmeal is produced and more anchoveta is consumed”.

Currently, the Peruvian State receives as revenue only around US\$1.15 per tonne of anchoveta landed (a total of some US\$9-12 mn annually, given declared anchoveta landings of 8-10 mn tonnes), which is used to cover the costs of fisheries administration and research. This is a pittance, compared to the earnings of the fishmeal sector as a whole, and can hardly be described as correct practice.

Marcos Kisner, a Peruvian fisheries specialist, points out that as one tonne of fishmeal requires around 4.4 tonnes of anchovy, every tonne of fishmeal exported generates just over US\$5 for the State. Given average 2006 prices of around US\$600 per tonne, and today's prices of around US\$1,400 per tonne, the Peruvian fishmeal sector is making windfall profits.

Put another way, the Peruvian government is incurring a significant loss of potential revenue. Kisner argues that as it uses natural resources of such national and international importance, the fishery sector, as a whole, should

contribute to the State's coffers in proportion to its earnings.

The January 2007 flotation of Peru's fourth-largest fishmeal company, Copeinca, on the Oslo Stock exchange shows just how large private earnings are. With 37 vessels and five processing factories, Copeinca reportedly grossed earnings of US\$90 mn in 2006, boasting an operating margin of 40 per cent. In other words, the earnings of just one company are around 10 times the total annual revenues that the Peruvian State receives from fishing. The opportunity cost of allowing a privileged few to squander Peru's rich fisheries in this way is enormous.

Given the huge levels of investment required to improve the catching, landing, processing and distribution of fish to meet the demands for direct human consumption, the State can ill afford such huge losses of potential revenue not to mention the costs of managing and regulating the fishery; training; research and development; and combating illegal fishing.

Same prospects

As regards sustainability, the Peruvian fishmeal industry today faces the same problems, and perhaps the same prospects as it did in the boom year of 1971, just prior to its spectacular bust. The fishing fleet has the capacity to catch four

to five times the anchovy stocks available in years of abundance (when there are no ENSO events). In a single day, the fleet can catch over 100,000 tonnes, reaching the annual quota in just three or four months.

The processing plants have a combined processing capacity of 146 mn tonnes—20 times the allowable catch in years of abundance. Overcapacity is the cause of fierce competition both for fish and raw material for processing. It also encourages under-reporting and illegal fishing (notably within the five-mile zone reserved for artisanal fishing and conservation), and the use of fish species reserved for human consumption, like mackerel and horse mackerel, for fishmeal.

Catching such large quantities of anchoveta deprives other fish species of commercial importance, and guano-producing birds and marine mammals of their main food source. Patricia Majluf, Director of the CSA and 2005 winner of the Whitley Gold award for her conservation work, points out that such a large extraction of biomass affects the resilience of the ecosystem (its ability to withstand stress and to recuperate), in which the anchovy stocks represent an important cushion.

A recent study on fresh-fish landings from the artisanal fishing sector in Peru, commissioned by the International Collective in Support of Fishworkers (ICSF), highlights a related issue: the homogenization of the fishery ecosystem, and the implications of this for the livelihood and food security of the coastal populations.

The report draws attention to two main trends. Firstly, statistics have been manipulated to show that fresh-fish landings have kept pace with population growth. If these manipulations are discounted, fresh-fish landings show a decline of 40 per cent over the seven-year period 1998-2004. But in the last decade, the number of artisanal fishermen landing fresh fish has almost doubled, from between 30,000 and 50,000 in 1996 to between 80,000 and 100,000 today. A 1996 census recorded 6,200 artisanal fishing vessels; another, carried out in 2005,

showed the number to have increased to 9,090.

Official statistics show that in 2004 around 40 per cent of the fresh-fish catch, some 150,000 tonnes, originated from “other” (that is, unknown) ports, while catches from known ports had reduced from around 250,000 tonnes in 1997 to 200,000 tonnes in 2004. The report claims that a large proportion of the fish from unknown ports is, in fact, imported. It also points out that in 2004, around 25 per cent of the catch comprised one species—the giant squid, locally known as ‘*pota*’.

From insignificant levels in 1998, today *pota* forms a major part of the artisanal (and industrial) fish catch, but due to its low unit value and technical processing problems, fishermen’s incomes have reduced. *Pota* has almost entirely replaced hake in fish landings, a fish that has been subject to intense fishing pressure and which is highly dependent on anchoveta as a source of food.

Majluf contends that “although while there is no conclusive evidence that we are overexploiting the anchoveta, it is certain that we are overexploiting the ecosystem. But that does not mean that we should stop our industry. Rather, what we need is an industry that is managed from a wider perspective. We have long known that overfishing of anchoveta causes the demise of other species. But when you ask IMARPE (Peru’s Marine Institute) about this, they reply that they have studied each species, but separately. They don’t make the ecosystem connections”.

Meanwhile, unlike other industries, no effective environmental regulations are applied to the fishmeal processing industry. No maximum allowable limits are applied to the discharge of effluents, solid, liquid or gas, from fishmeal plants.

Premier city

Nelly Luna Amancio writing in Peru’s *El Comercio*, describes the seabed around Chimbote, Peru’s premier fishmeal city, as a dead zone covered with sediments over 1-m deep, and the air as a toxic mixture of sulphurous gases and vapours. There are 24 fishmeal plants that discharge liquid waste in Chimbote, but only seven are authorized to do so by the

Directorate-General for Environmental Health (DIGESA).

Processing such large quantities of fish into fishmeal also raises important questions about equity and social justice. Alongside resource richness and private accumulation of wealth, over half the Peruvian population—some 15 mn people—live in conditions of critical poverty, unable to meet their basic needs for food, health, education, clothing or shelter. Meanwhile, according to the United Nations Educational, Scientific and Cultural Organization (UNESCO), one in four under-five Peruvian child suffers from malnutrition.

According to Gastón Acurio, a Peruvian chef of world renown and one of the co-organizers of the Anchovy Week campaign, if 10 per cent of Peru's fishmeal catch was channelled into massive, targeted nutritional campaigns, Peru's malnutrition levels could be reduced by half. Therefore, in a sense, the current model of fishing in Peru robs millions of Peruvians of their right to a healthy diet.

But, as Marcos Kisner explains, "Nobody is proposing that 8 mn tonnes of anchovy should end up as food, and neither will it replace sea bass *cebiche*. Rather, what we need is a national policy that assures the possibility for, and access to, healthy nutrition for children.... Another reason for scepticism is that no one wants to replace white-fish fillets with anchovy. Just as some children may reject milk or other food that they don't like, and mothers must force them to consume these because they are indispensable for their nutrition, the same goes for anchovy."

"Anchovy should be made available to the public at a low price in various forms." He continues. "Mothers have the responsibility for getting their children used to it. Moreover, by encouraging an anchovy-eating habit, we are creating conditions for the healthy development of our children. It is this segment of the market—children and pregnant mothers—for whom the resource should be prioritized. Those who can, and those already of adult age, can go on eating other fish, and perhaps from there, they

may develop a taste for anchovy. Records show that prior to the Spanish conquest, catching, drying and trading anchoveta for human consumption was well organized, and that the Incas used to organize regular transport of anchovy to the high plains for distribution to the local population.

Peru's recently elected government has declared war on malnutrition, part of which includes the promotion of mass consumption of anchovy. Under Supreme Decree 002-2007, the National Food Assistance programme of the Ministry for Women's Affairs and Social Development is now required to allocate not less than 8 per cent of its budget to the purchase of products based on anchoveta and *pota*. The Ministry of Production and the Institute for Fisheries Technology are to work alongside the Defence, Interior, Health, Employment and Women's Affairs Ministries to develop programmes for the production and supply of anchoveta-based products. These are to be distributed through various Ministries, to provide food for police and military personnel, as well as for poorer sections of Peruvian society.

Peru also recently signed an agreement with Japan, through the Japanese International Co-operation Agency (JICA), for the "Responsible Fisheries Development of Anchoveta for Direct Human Consumption". In addition to government food-aid programmes, the private sector is also to be closely involved in this initiative, catching, processing and commercializing anchoveta for direct human consumption.

The five-year programme envisages the use of improved anchoveta handling and storage on board artisanal fishing vessels, and the use of low-cost and hygienic processing methods, with technical assistance from Japan.


Good business

But commercializing anchovy products for direct human consumption could also make good business sense both nationally and internationally. Canned anchovy from Peru is gaining ground in many foreign markets, notably in Africa, where there is a high demand for low-cost products with a high nutritional value.

foremost is the problem of how to restructure and rationalize the fishmeal sector.

Currently, the overcapacity debate in Peru is focusing on how to reduce fleet capacity. Options under discussion include the application of an individual quota system (as proposed by the industrial fishing organization, SNP), installing refrigerated fish-holds (to reduce vessel capacity by between a half and a third, also improving the quality of the end product), and vessel buyback and conversion schemes (to fish for mackerel and horse mackerel for human consumption).

But perhaps the biggest problem, as highlighted by Kisner, is that Peru's fisheries "are submerged in waters of political indecision. The absence of long-term policies with an ecosystems approach leading to a technically based structural reform of the sector, directed by decisionmakers with the capacity to provide leadership and capable of resisting the temptations that come with power, is what has brought the sector to the sorry state it finds itself in today."

All this makes Peru's anchoveta fishery for fishmeal look more like an albatross than a golden goose. 

According to Alfonso Miranda Eyzaguirre, Peru's Vice Minister for Fisheries, in 2000, practically no anchovy was landed for human consumption. In 2006, more than 50,000 tonnes were landed for direct human consumption. The value of canned anchovy exports from Peru reached US\$847 mn in 2005, with the main destinations being Colombia (US\$202,800), Italy (US\$190,900), Angola (US\$174,400) and Zaire (US\$81,700).

The Anchovy Week campaign demonstrated that, with imaginative preparation, professional marketing and promotional campaigns, anchoveta could also become a luxury food in Peru, as popular with the yuppie set as Pisco Sour. During Anchovy Week, fresh anchovy was selling in Lima's supermarkets for US\$0.5-1 per kg, and stocks were quickly sold out. In all, around 18,000 people tasted anchovies during the Anchovy Week in the 30 participating restaurants. Some earned over US\$500 per day from the anchovy dishes sold during the week. Of 600 people surveyed in these restaurants, 95 per cent liked them and would eat them again.

But redirecting Peru's fishing fleet to catching anchovy and other fish for direct human consumption, and establishing the infrastructure and economic support necessary to enable wider consumption of fish, faces many challenges. First and

This article, by Brian O'Riordan (briano@scarlet.be), Secretary, ICSF Belgium Office, is based on various sources, including Oannes (<http://www.oannes.org.pe/>), Patricia Majluf (http://www.conam.gob.pe/documentos/Analisis_ambiental/CEA%20Per%C3%BA%20-%20Evaluaci%C3%B3n%20Ambiental%20del%20Sector%20Pesquero.pdf), Marcos Kisner Bueno: (<http://pescasostenible.blogspot.com/>) and Pesca y seguridad alimentaria (http://www.cooperacion.org.pe/publicaciones2.php?id_publicacion=0087)

News Round-up

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Shifting sands

Building sand castles on the beach may be fun, but building a whole country out of sand? Not funny, as Singapore and Indonesia are discovering.

Indonesia has banned sand exports to its tiny neighbour, saying that some of its islands are being stripped bare as Singapore tries to grow more land. A decade-long squabble between the island republic and

Indonesia over what seemingly ought to be an inexhaustible commodity has escalated, with Jakarta suddenly slapping a permanent ban on sand exports and risking another setback in the oft-strained relations with its nearest neighbour.

The move is no laughing matter for the wealthy island State, which has built big chunks of its metropolis on Indonesian sand and desperately wants more. Constrained by

water on all sides, Singapore believes it must continue to grow physically as well as economically. At the very tip of Malaysia, the country is otherwise almost completely surrounded by Indonesia across the Singapore Strait. Jakarta is becoming concerned that as sand is stripped off for sale from tiny islands, the geography of the country is changing and Singapore will actually encroach the islets that make up its geographical boundary in the strait.

In 1960, the entire island State was only 581.5 sq km. It has since grown to some 650 sq km and expects to grow by another 100 sq km by 2030 if it can find the firmament. Mari Pangestu, Indonesia's feisty trade minister, has had enough. She banned the exports, saying the decision is necessary to protect the environment and maintain her country's maritime borders.

Zones harm

Some zones may be special but they could be harmful as well. That is what some marginalized communities in India are finding out. An Indian law meant to

promote economic development is causing environmental damage and harming

the livelihoods of some of the nation's poorest people, so it should be repealed or greatly revised.

This is among the conclusions of a report released by the International Institute for Environment and Development and Winrock International India on the eve of an international conference on the role of natural resources in sustainable development.

The report was compiled after a meeting of over 70 participants, including members of India's Parliament, State Biodiversity Boards and Planning Commission, nongovernmental organizations (NGOs), local communities, research institutes and international donors.

It calls on the Indian government to implement policies to protect the

environment and local livelihoods, to repeal or significantly alter laws that promote unsustainable development, and to ensure that poor people have a greater say in how the environmental resources they depend upon are managed.

The report highlights the way that Special Economic Zones—which are treated as foreign territory in order to make exports easier—are exempt not only from taxes but also from stringent environmental and labour regulations.

Legal eagle

Those who wish to be eagle-eyed about legal matters that affect fisheries and coastal communities worldwide, now have a ready reckoner—the *International Legal Instruments Relevant*

to Fisheries and Fishing Communities. Brought out by the International Collective in Support of Fishworkers (ICSF), this compendium is now available online at <http://legal.icsf.net/>.

The website provides detailed information for a wide range of instruments relevant to fisheries and fishworkers. It covers 124 legal instruments, categorized into the following seven themes: Human Rights, Food Security, Women and Development; Environment and Sustainable Development; Oceans and Fisheries Management; Environmental Pollution; Fishing Vessels and Safety at Sea; Labour; and Trade.

The site also offers other useful documents on international legal instruments, and a listing of related events/ announcements and news, as well as a timeline tracing the chronology of the various instruments thematically. The search feature on the site offers both simple and advanced functions, which allows users to call up the relevant article/paragraph for the particular keyword searched.

Green gaps

Tourists love beaches and coastal delights. But are they giving back to the environment as much as they are extracting from it? Not quite, says the International Tourism Partnership.

The tourism industry could do more to help protect the

marine and coastal ecosystems on which it relies, according to the January edition of *greenhotelier*. Exploring the value of natural assets such as coral reefs, mangrove forests, whales, dolphins, manatees, sea turtles, reef fish and other marine organisms, the magazine examines how tourism contributes to the degradation of marine and coastal environments and how its members can help redress the balance.

Protecting our coastal and marine environments looks at the vulnerability of coastal and marine ecosystems to threats such as climate change and tourism-related development.

Issues include overfishing and destructive fishing techniques, land and mangrove clearance for construction, intensive prawn farming and agriculture, sedimentation, water pollution and damage from boats and other marine recreation activities, high nutrient loading from improperly treated waste water, and increased solid

waste from imported packaged food and drinks.

There are strong economic incentives for the tourism industry to be more proactive not only to avoid stressing the natural assets from which it benefits financially but also because it is known that protection of coral reefs and mangroves costs far less than neglect. Governments, planners, developers, hotel associations, cruise lines and other tourism industry operators need to work together with community members and adopt integrated coastal zone management strategies, says the report.

Fuel fire

Fishermen around the world have to confront the problem posed by increasingly rising costs of fuel for their fishing vessels. So any alternative is seen as worth exploring. These days, fuel from biological sources are all the rage. But not without worry as biodiesel sweeps **China** in controversy.

Everyone seems eager to get a share of China's biofuels pie, reports Jiao Li for Renewable Energy Access.

Liang Yulin, a 28-year-old real estate tycoon in southern China's Guangzhou City, began investing in biodiesel

production last October. Using palm oil imported from Southeast Asia, the manager of the Guangzhou Tinyo Real Estate Development Company plans to turn out 50 tons a day, selling the fuel to fishing boats that work around the Pear River Delta.

Although he has yet to see returns from his new investment, Liang says he will keep persevering. And he is not alone to venture in this seemingly promising industry. "As far as I know, there are dozens of biodiesel companies just in Guangzhou," he said.

Even the latest price cut in the international oil market does not seem to dampen Chinese enthusiasm for the new energy resource.

Leading the game are a variety of government-supported demonstration projects.

While calling for biofuel standards and regulations, however, many experts also worry about the land use of the oil crops. Clearly, unless these issues are sorted out, fishermen can not hope to fill their tanks with biofuels.

All of this dazzling beauty paled, however, with the rise of the full moon directly at our bow, larger and clearer than I had ever seen it. Quickly it revealed its full form from behind the edge of the earth, its light tarnished golden yellow by the thickness of the atmosphere. How close it appeared: as if it could be reached just over the horizon or knocked across the heavens with a giant tennis racket. As the moon inched higher into the night's sky, the burnt yellow colour imperceptibly brightened to a sharp silver, and the silver light played on the sea water, turning it into a vast field of sparkling diamonds.

— from *Walking on Water: Four Days Over the Horizon on a Jangada* by Patrick Hefferman

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.

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