

No. 52 | March 2009

ISSN 0973-1121

# SAMUDRA

REPORT

THE TRIANNUAL JOURNAL OF THE INTERNATIONAL COLLECTIVE IN SUPPORT OF FISHWORKERS



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**Securing Small-scale Fisheries**

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**Sea Piracy off Somalia**

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**MPAs in India**

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**Traditional Fisheries in Mexico**

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**Role of Social Capital in MPAs**

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**Small Indigenous Fish Species**

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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.

As a global network of community organizers, teachers, technicians, researchers and scientists, ICSF's activities encompass monitoring and research, exchange and training, campaigns

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OLIVIER BARBROUX

## FRONT COVER



Oil Painting on Canvas  
by V. Raajendran

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## PRINTED AT

Nagaraj and Company Pvt. Ltd.,  
Chennai

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Girl in fish market, Pusan, South Korea  
Photo: Olivier Barbaroux

# SAMUDRA

## REPORT

THE TRIANNUAL JOURNAL OF THE INTERNATIONAL COLLECTIVE IN SUPPORT OF FISHWORKERS

NO.52 | MARCH 2009

PAKISTAN FISHERFOLK FORUM



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ALAIN LE SANN

An artisanal fisherman in France



# North or South, Small is Smart

**The North has much to learn from the small-scale fisheries of the South if it wishes to tackle the social, economic and ecological crisis that has gripped its own fisheries**

**D**iscussions at the 28th Session of the Committee on Fisheries (COFI) of the Food and Agriculture Organization of the United Nations (FAO), on securing sustainable small-scale fisheries (SSF), brought out a significant difference in how the issue was approached by delegations of the North and the South (see "Securing Small-scale Fisheries", page 4).

That left several questions hanging in the air: Is securing sustainable SSF only at issue in countries of the South, or is it also relevant for the North? If so, how and to what extent? Should SSF in the North be merely regarded as a welfare sector for indigenous, ethnic or subsistence fishers who have cultural ties and extreme dependence on fishery resources? Are SSF inherently more sustainable, equitable, and socially and culturally more valuable than large-scale fisheries? Or are they merely a smaller version of their larger-scale counterparts, whose development has got out of hand, and now demands stricter management, greater effort reduction and more rationalization?

The Bangkok Statement from civil society organizations (see "Recognizing Rights and Freedoms", *SAMUDRA Report* No. 51, page 7) made no such distinctions. The call to establish SSF as the preferred model for the exclusive economic zones, and the other demands made in the Statement, should apply equally to industrialized and developing countries.

However, at the 28th Session of COFI, many Northern delegations seemed not to share this view. New Zealand, for example, held that definition and application of some of the issues related to SSF, especially poverty alleviation, do not extend to their SSF. Canada supported a special programme to adopt 'modern' management principles in SSF, while the European Union chose to make no mention at all of their own SSF.

The message from the Northern delegations seemed to be—not in my backyard! While it may be

fine to develop SSF to address poverty alleviation and food security issues in developing countries, they are of no concern to the North. Whether large-scale or small-scale, and with notable exceptions, fisheries play no significant role in food security or in poverty reduction there. With Northern fisheries supplying only a relatively smaller (and diminishing) proportion of the fish consumed in the

North, and the welfare State taking care of poverty, SSF is not an issue, it would appear.

Five decades of economic boom, industrialization, subsidies, corporate investments and market orientation have affected the North's food production sectors, especially in fisheries, both small-scale and large-scale. The North now faces a crisis, with far too great a fishing effort chasing

ever-dwindling resources. Today most Northern countries depend on the South for their food security, especially so for fish, since around 80 per cent of fish production now takes place in developing countries. Policymakers in the North seem to favour smaller fleets of larger vessels, dispensing with SSF, which will only benefit fishing and marketing monopolies.

In economically well-off industrialized countries, no one is really worried about small-scale fishing communities. The welfare State will guarantee that their communities and cultures are safe, as Svein Jentoft observed in "The Human Rights of Small-scale Fishing People" (see *SAMUDRA Report* No. 51, November 2008, page 13). Despite such assurances, in many instances, he adds, "small-scale fishing people, be they indigenous or non-indigenous, are being marginalized and disadvantaged, to the extent that they are becoming extinct".

In the current context of the North's fisheries, SSF could play a vital role in placing fisheries on a more sustainable footing, and cushioning fishery-dependent communities from the economic and social consequences of the proposed capacity reduction.





# Securing Small-scale Fisheries

A recent meeting of the Committee on Fisheries of the Food and Agriculture Organization of the United Nations focused on sustainable small-scale fisheries

4

The Agenda Item of the 28th Session of the Committee on Fisheries (COFI) of the Food and Agriculture Organization of the United Nations (FAO), on securing sustainable small-scale fisheries (SSF), dealt mainly with discussing follow-up to the Global Conference on Securing Small-scale Fisheries, held in Bangkok from 13 to 17 October 2008 (see “The Right Form of Rights”, *SAMUDRA Report* No. 51, November 2008),

That landmark conference was attended by 280 participants from 65 countries, including representatives of small-scale, artisanal fisherpeople, non-governmental organizations (NGOs), governments, inter-governmental organizations and academics. COFI was invited to offer guidance on necessary action, at national and international

(see page 10) demanded an additional Chapter to the 1995 FAO Code of Conduct for Responsible Fisheries (CCRF) on sustainable development of SSF, to create conditions whereby men and women, and indigenous communities, could enjoy their economic, social and cultural rights, as well as their civil and political rights. The proposed Chapter, the Statement said, should form an integral part of CCRF, and should be developed in consultation with small-scale fishing communities.

Thailand was the first Member to speak on the Agenda Item. SSF was significant for ensuring the well-being of the ecosystem, and the livelihoods and food security of coastal communities, Thailand said, and proposed an International Plan of Action (IPOA) for responsible SSF as well as a standing programme for SSF.

India, noting the critical importance of SSF, drew attention to the vulnerable conditions of small-scale fishers, and their poor access to basic human services. India’s human development indices showed that small-scale fishers fall below the national average in terms of development, COFI was informed. India proposed a dedicated global programme on SSF, along with the creation of a separate sub-committee on SSF.

Mauritania considered SSF as vital for development, and proposed setting up a sub-committee on SSF as well as adding a new Article to the CCRF, dedicated to SSF.

## Food security

Indonesia said 80 per cent of its national fleet comprises small-scale fishing vessels, and underscored the

**COFI was invited to offer guidance on necessary action, at national and international levels, to secure sustainable SSF...**

levels, to secure sustainable SSF and to enhance their contribution towards attaining the United Nations Millennium Development Goals (MDGs).

Before giving an opportunity to the Members of COFI to address the meeting, Zbigniew Karnicki, COFI Chairperson, gave permission to Naseegh Jaffer, Co-ordinator of the World Forum of Fisher Peoples (WFFP), to make a statement on behalf of WFFP, the International Collective in Support of Fishworkers (ICSF) and the International Planning Committee for Food Sovereignty (IPC). The Statement

*This report has been written by **Sebastian Mathew** (icsf@icsf.net), Programme Adviser, ICSF*

importance of SSF in providing food security and alleviating poverty. It supported an IPOA on SSF as well as the establishment of a sub-committee to empower SSF.

Malawi, among other things, drew attention to the issue of arrest and detention of small-scale fishers even in enclosed waters—for instance, in Lake Malawi, by Mozambique and Malawi. While supporting the proposal for establishing a new sub-committee on SSF, Malawi was against opening up the CCRF for a new Article on SSF on the ground that the CCRF, even as it is, was difficult to implement.

Chile drew attention to the SSF in its waters, which ranged from subsistence to export-oriented fisheries. Thirty per cent of its national fish production and the entire shellfish and algae production originate from SSF. Chile highlighted the importance of supporting capacity-building of SSF to improve the food safety standards and hygiene of fish products and to improve commercial prospects, including through market diversification. Chile further highlighted the need for providing social protection to the SSF sector, and shared with Members its social protection measures, such as a pension system and free medical aid for small-scale fishers. Chile also spoke about recognizing the role of women in small-scale fishing communities.

Sudan said fishers in the Red Sea are not well organized, and pointed to the challenges in protecting fisheries resources and employment in the Red Sea region. Sudan highlighted the importance of undertaking responsible management of fisheries resources in the region, also to ensure decent livelihoods for fishers. It spoke in support of implementing the CCRF in the region, and further voiced support for a global programme on SSF.

Egypt spoke in support of a regional body or arrangement for the Red Sea area. Arrest and detention of fishers was an issue of concern to Egypt.

Saudi Arabia said a large proportion of its fishers (40 per cent) and fishing vessels is in the small-scale sector. Small-scale fishers receive better prices for their products due to their superior quality. Saudi Arabia has been creating

protected areas to ensure livelihood options for the country's small-scale fishers, and to conserve coral reefs. Initiatives are also underway to create co-operatives for fishers. .

El Salvador highlighted the importance of developing fishers' associations to strengthen responsible fisheries, and responded to the need for a three-tier approach to the implementation of responsible fisheries, namely, at the global, regional and national levels, particularly through regional co-operation, at the Central American level, and through leaders of fishing communities, at the local level. El Salvador sought a specific programme for extending support to the small-scale sector, as well as a sub-committee on SSF.

Mozambique said SSF, marine and inland, is vital for rural development, particularly for providing employment. There are nearly one million people dependent on SSF in some way or other, of whom 400,000 are fishers. Mozambique supported developing a special Chapter in the CCRF, along with establishing a sub-committee and a special programme on SSF.

The European Commission (EC) said combating illegal, unreported and unregulated (IUU) fisheries was necessary to protect the livelihoods of small-scale fishing communities. Its regulations to prevent, deter and eliminate IUU fisheries would protect small-scale fishing communities in developing countries from loss of revenues and livelihoods, and would

GIULIO NAPOLITANO/FAO



Opening session of the 28th Session of the Committee on Fisheries (COFI) of the Food and Agriculture Organization of the United Nations (FAO)

**The rights of small-scale fishers are sometimes not protected, and they are often forced out of their fishing grounds by pollution.**

not deny them export opportunities to the EC. The EU's commitment to achieving the MDGs was reiterated, as was the need for more attention to the potential of small-scale fisheries. The EC said it would not support a new Article in the CCRF on SSF, and advocated effective implementation of all the existing Articles as well as further development, through an inclusive process, of the technical guidelines on SSF's contribution to food security and poverty alleviation.

Considering the important contribution of SSF to world fish production and consumption, South Africa advocated a dedicated and comprehensive instrument for SSF, and supported adding a special Chapter on SSF to the CCRF.

China said the small-scale sector contributes significantly to its coastal

and inland fisheries as well as to its aquaculture, and guarantees food security, social security and human development. SSF, however, are vulnerable to climate change and natural calamities. The rights of small-scale fishers are sometimes not protected, and they are often forced out of their fishing grounds by pollution. The Chinese fisheries policies and measures for SSF include: imparting technical training to fishers, including for acquisition of skills to change jobs; popularization of relevant science and technology; promotion of ecologically sound management of aquaculture; and provision of equipment for safety of fishing vessels and crew, and for avoidance of collision of vessels at sea. China highlighted the importance of streamlining SSF to reduce fishing intensity, and proposed that FAO, within the scope of its mandate, should develop a global IPOA for SSF.

Cote d'Ivoire and Morocco said they are in support of developing an IPOA on SSF. Mauritius said it supported a dedicated global programme on

SSF under FAO. Chad and Costa Rica supported creating a special programme on SSF. Although Ecuador said it was not too happy with a proliferation of sub-committees, it supported a COFI sub-committee on SSF. Ecuador further supported a special Chapter in the CCRF on SSF. Senegal supported the establishment of a COFI sub-committee on SSF as well as setting up a specific programme dedicated to SSF.

Uganda was in favour of enhancing the role of SSF in national development. It sought a clear definition of SSF and adoption of co-management regimes to promote the direct involvement of fishers in fisheries management. It supported a special Chapter on SSF in the CCRF.

The Republic of Korea (ROK) said it has a significant number of small-scale fishers. It questioned the desirability and benefits of ecolabelling and certification schemes to SSF, especially if there are high certification costs, and wanted to ensure that such schemes do not constitute any invisible trade barrier for SSF. Considering the harsh working conditions in SSF, Korea viewed in favourable light the introduction of human rights into the fisheries agenda. It demanded a special Chapter in the CCRF on SSF.

New Zealand said small-scale fishers in the country are economically rich since they caught valuable species such as abalone and rock lobster, and held that definition and application of some of the issues related to SSF, especially poverty alleviation, do not extend to their SSF. New Zealand highlighted the importance of coherence in capacity management in SSF and recognized, in this context, the role of a rights-based approach to SSF. New Zealand supported developing a special Chapter in the CCRF, with particular attention to SSF in developing countries.

### **Pole-and-line fishing**

Maldives said SSF are relatively more environment-friendly and bring greater benefits to coastal communities. Artisanal fisheries are the mainstay of tuna fisheries in the Maldives, and are enshrined in the country's culture and tradition, as embodied in the pole-and-line fishing technique. This technique



should even be granted a geographical indication (GI) status, it was observed. Artisanal and commercial fisheries, Maldives said, often target the same fish stocks, and, in many parts of the world, SSF are threatened by commercial fishing operations. If fish landings are not differentiated, then SSF are at risk. Industrialized countries should, therefore, pay a higher price for environment-friendly SSF products from developing countries, it was argued. Maldives supported a COFI sub-committee on fisheries as well as a special Chapter in the CCRF on SSF.

Kiribati supported developing a management and development framework to enhance SSF to contribute to sustainable fisheries in the South Pacific. It bemoaned the loss of lives and fishing assets, especially of vessels below 10 m in length. Search-and-rescue operations for smaller vessels have proved to be prohibitively expensive, taking away resources that could have gone towards equipping SSF vessels for greater safety, and compromising the country's capacity to deter IUU fishing in its exclusive economic zone (EEZ). Kiribati proposed developing a framework or strategy to provide affordable sea safety equipment to SSF.

Afghanistan said a global programme dedicated to SSF, an IPOA or international guidelines for SSF are complementary, and was of the view that an IPOA on SSF can be developed, which could later lead to international guidelines for SSF. Whether or not to set up a COFI sub-committee for SSF, Afghanistan said, should be viewed in the light of FAO not having a sub-committee dedicated to small farmers.

Angola spoke on how SSF contributed significantly to employment and food security, and how they occupied the pride of place in Angolan fisheries. Women dominate fish processing and also head some fisheries co-operatives, it was observed. Angola supported a sub-committee on SSF, an IPOA, adding a special Chapter to the CCRF on SSF, and a special programme for SSF that also focuses on bolstering sea safety on board small-scale fishing vessels.

Norway was reluctant to open up the CCRF to add a special Chapter on

SSF; rather, it would support an IPOA to cover all aspects of SSF. A special Chapter, Norway argued, would not be in a position to negotiate all aspects of SSF in a concrete manner. Norway also disagreed with the proposal for a COFI sub-committee on SSF on the ground that issues discussed at a sub-committee would again be discussed at COFI. Following the civil society organizations' preparatory process for the Bangkok Conference on SSF (see "The Right Form of Rights", *SAMUDRA Report* No. 51, November 2008), Norway said it would support three regional expert consultations on SSF, followed by an international technical consultation to develop an IPOA. Norway would participate in these meetings and was willing to co-finance them. Norway also announced its decision to organize an international conference on indigenous peoples and SSF.

The United States (US) recognized the importance of increasing the contribution of SSF to sustainable development, and the need to build greater capacity towards better fisheries management through community-based and co-management regimes, and through reduced post-harvest losses. The US would not support a sub-committee on SSF at this juncture, nor would it support an IPOA on SSF, it was observed. The US proposed crafting a new Chapter in the CCRF on SSF by building on its existing provisions,

JACKIE SUNDE/MDT



A scene from the Side Event on Agenda Item 9: Securing sustainable fisheries: Towards responsible fisheries and social development

## Side Event

### Focusing on Human Rights

A Side Event, titled "Human Rights of Small-scale Fishing Communities: What Should FAO's Commitment Be?" was organized by the World Forum of Fisher Peoples (WFFP), the International Collective in Support of Fishworkers (ICSF) and the International NGO/CSO Planning Committee for Food Sovereignty (IPC) on 4 March 2009, during the 28th Session of the Committee on Fisheries (COFI) of the Food and Agriculture Organization of the United Nations (FAO). Moderated by Naseegh Jaffer, Co-ordinator, WFFP, the well-attended event featured a total of six presentations.

Arthur Bull and Herman Kumara of WFFP presented the Bangkok Statement on Small-scale Fisheries, which highlighted the key concerns and

In his talk on "Moving Beyond Commitments to Implementation of a Human-rights Approach in Fisheries", Thomas Kocherry of WFFP urged the international community to move beyond rhetoric on human rights and to honour their commitments. Organizations of small-scale fisherpeoples have a central role in undertaking campaigns and struggles for the implementation of human rights commitments by governments, he said.

On the subject of "The Right to Food Guidelines: Recommendations for Fisheries", Barbara Ekwall of FAO's Right to Food Unit stressed the obligation of States to ensure food security. A human rights-based approach, she said, is particularly pertinent in relation to access

JACKIE SUNDE/MDT



Thomas Kocherry, Chandrika Sharma, Barbara Ekwall, Naseegh Jaffer, Arthur Bull and Herman Kumara during the Side Event organized by WFFP, ICSF and IPC on 9 March 2009

interests of small-scale fishing communities. They pointed out that the Statement itself was the outcome of a much larger consultative process, which included three regional workshops.

Chandrika Sharma, ICSF, speaking on "Recognizing Human Rights of Small-scale Fishing Communities: Is There a Need for a Negotiated Instrument at the FAO?", underscored the rationale and imperative for a negotiated instrument on small-scale fisheries, in particular for a separate Chapter on small-scale fisheries in the Code of Conduct for Responsible Fisheries (CCRF).

This was supported by Natalia Laiño Lojo of WFFP. Drawing attention to her organization, AGAMAR, which works with women shellfish collectors, she pointed out that, despite the important role of women in fisheries, the aspect of gender was completely missing from the CCRF.

to resources, stakeholder participation, and a focus on the most vulnerable sections of society.

The last presentation at the Side Event, by Federica Donati of the Office of the High Commissioner on Human Rights (OHCHR), Geneva, was on "Mainstreaming Human Rights and the Human Rights-based Approach (HRBA)".

She stressed that the process adopted for implementing the HRBA is as vital as the outcome, and it is important to keep in mind the principles of participation, equality, non-discrimination and accountability. States have the obligation to respect, protect and fulfill human rights, which need to be reflected in constitutional and legislative frameworks and effective and accessible institutions like parliaments and the judiciary.

but without disturbing the existing Articles.

Brazil said respect of human rights of fishers is important, and said viewing the right to food as a human right is a move in the right direction. Brazil considered marine protected areas (MPAs) as a tool for fisheries sustainability. Brazil was concerned that fishing communities can be negatively affected by unilateral trade measures. Brazil asked FAO to seek legal opinion on creating a separate Chapter on SSF in the CCRF without affecting its existing content.

Canada said SSF defy a universal definition. SSF in Canada, for example, included aboriginal food and subsistence fisheries as well as high-value fisheries. Canada said adoption of a rights-based approach to fisheries would be good for fisheries governance. While it supported a special programme to adopt modern management tools in SSF, it was against creating a special Chapter in the CCRF and developing an IPOA on SSF.

Cambodia said more than 80 per cent of the animal protein intake of the Cambodian population came from fisheries, and pointed out that for Cambodians, fish was like butter and cheese for Europeans. It referred to the conference on a rights-based approach to SSF co-hosted with ICSF in Siem Reap in 2007 (see “Asserting Right, Defining Responsibilities”, *SAMUDRA Report* No. 47, July 2007). Cambodia supported the creation of a sub-committee on SSF and developing international guidelines on SSF, or even compiling best practices in SSF.

### Specific recommendations

Forty Members took the floor to speak on the Agenda Item. The majority of them proposed specific recommendations related to: (i) creating a specific global programme on SSF; (ii) creating a special Chapter in the CCRF on SSF; (iii) developing an IPOA on SSF; and/or (iv) establishing a COFI sub-committee on SSF. While some Members made more than one recommendation to secure SSF at the global level, a few Members supported a standalone IPOA; a few others supported a new Article on

SSF in the CCRF; and several Members suggested establishing a specific global programme dedicated to SSF.

On the whole, 12 Members were in support of a new Article in the Code, followed by 11 Members in support of establishing a COFI sub-committee on SSF, and eight in support of an IPOA for SSF. However, there was no consensus. Ten Members were in support of a specific global programme on SSF. Ultimately, COFI directed the FAO Secretariat to examine various options to carry all these suggestions forward, as well as to create a framework for monitoring and reporting on efforts to secure sustainable SSF.

Most of the COFI Members who participated actively in the discussion on the Agenda Item were from Asia

**While several Members spoke in generalities, a few saw sustainable and safe SSF as a regional or national issue.**

and Africa. While several Members spoke in generalities, a few saw sustainable and safe SSF as a regional or national issue. The industrialized country Members of COFI who spelt out different options—with the exception of Norway—appeared keen to confine them to securing SSF in developing countries, thus narrowing the scope of SSF mainly to developing countries.

### For more



[www.fao.org/fishery/nems/38478/en](http://www.fao.org/fishery/nems/38478/en)  
**Committee on Fisheries (COFI)**

[www.fao.org/fishery/about/cofi/reports](http://www.fao.org/fishery/about/cofi/reports)  
**COFI Reports**

[rights.icsf.net](http://rights.icsf.net)  
**ICSF Rights subsite**

[sites.google.com/site/smallscalefisheries/](http://sites.google.com/site/smallscalefisheries/)  
**Small-scale fisheries at COFI**



# Contributing Significantly

The following Statement was made at the 28th Session of the Committee on Fisheries of the Food and Agriculture Organization of the United Nations, on 4 March 2009

**T**hank you, Mr. Chairman, for giving us this opportunity to speak.

The world is facing a crisis economically and morally. Poverty is at its highest level. Hunger is rampant and social justice is diminishing.

I am speaking here on behalf of the World Forum of Fisher Peoples (WFFP), which consists of national network organizations of fisher people from 32 countries across the world, International Collective in Support of Fishworkers (ICSF) and the International Planning Committee for Food Sovereignty (IPC).

First of all, I would like to bring to your attention that small-scale fisheries contribute over half the world's marine and inland fish catch, providing food security to people.

We employ over 90 per cent of the world's fishers. We support a very large number of people, both men and women, employed in fishing, fish-processing, distribution and marketing.

We contribute directly to food and livelihood security, balanced nutrition, poverty reduction, and rural development.

Our small-scale fisheries are known to be relatively more sustainable. Our fisheries help alleviate poverty and help realize right to food in rural areas where few alternative employment and income opportunities exist.

For us, fisheries are not only an economic activity—they are as much a culture and a way of life, with skills, knowledge, social norms and systems of internal governance passed down and honed over the generations. Our fisheries provide the model on which to sustain fisheries into the future.

We make significant contributions to economic and social development and cultural values, but our communities often face difficult living and working conditions, due to a range of factors. Human life in our communities is losing its value. The vulnerable small-scale fishers are more and more ignored and marginalized.

Insecure rights to land and fishery resources, threats from pollution and irresponsible aquaculture, inadequate access to food, unfavourable working conditions, poor health and educational services, and absence of social safety nets are issues confronting us on a daily basis. As a consequence of the above, the women in our communities are experiencing greater discrimination and unjust treatment.

The Bangkok Conference on Securing Sustainable Small-scale Fisheries was the first initiative of its kind with small-scale fisheries as the central theme. We appreciate that FAO and the Royal Government of Thailand organized such a conference to secure sustainable livelihoods of small-scale fishery-dependent communities. We urge the Committee on Fisheries to maintain the momentum established by the Bangkok Conference.

## Negotiated process

We propose that FAO should add a chapter to the Code on sustainable development of small-scale fisheries to create conditions whereby our men and women, and indigenous communities, can enjoy their economic, social and cultural rights, as well as their civil and political rights. This Chapter should form an integral part of the Code. It should be developed through a negotiation process with full and

JACKIE SUNDE/MDT



The Statement, presented by Naseegh Jaffer, Co-ordinator, WFFP, (shown above), proposed a chapter in the FAO Code of Conduct for Responsible Fisheries, on sustainable development of small-scale fisheries

effective participation of small-scale fishing communities.

We are pleased to notice that small-scale fisheries have been a permanent agenda item since the 25<sup>th</sup> Session of COFI and we would urge FAO to continue to do so.

We look forward to a positive response from COFI.

All that we want is a more humane and caring society.

Thank you, Mr. Chairman.

**All that we want is a more humane and caring society**

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#### For more



[sites.google.com/site/smallscalefisheries/statement/statement.pdf?attredirects=0](http://sites.google.com/site/smallscalefisheries/statement/statement.pdf?attredirects=0)

#### **Civil Society Workshop Statement**

[www.un.org/Overview/rights.html](http://www.un.org/Overview/rights.html)

#### **The Universal Declaration of Human Rights**

# Pirates or Saviours of the Coast?

The issue of sea piracy off the coast of Somalia cannot be viewed in the simplistic terms of a law-and-order problem

12

Somalia's devastating civil war of 1991 pushed the country's fisheries into a state of abrupt collapse, leading to the cessation of almost all fisheries activities. An estimated 2,000 people lost their jobs, and fishing communities are still struggling to recover from the crisis. Nonetheless, illegal fishing and the dumping of nuclear and other wastes from the industrialized world continue to pose environmental threats to the country.

**Not only is fishing piracy being disregarded but the illegal poachers are also being encouraged to continue their looting...**

Sophisticated factory-fishing vessels, designed for distant-water fishing, have arrived in Somali waters from countries thousands of miles away, whose fisheries resources have either been drastically overexploited or are strictly regulated. These vessels come in search of dolphinfish, grouper, emperor, tuna, mackerel, snapper, swordfish, shark, herring and other prized Indian Ocean fish species. The outlook of the owners of these vessels is short-term, and dictated by the resource limits of Somali waters. The most damaging outcome to the country—economically, environmentally and security-wise—is the massive illegal fishing that has, over the last 18 years, led to wanton poaching of Somalia's marine resources.

Controversial United Nations (UN) Resolutions, the pressure of large economic powers and media reports all continue to condemn the hijackings of merchant ships by Somali pirates in the Indian Ocean and the Gulf of Aden. The European Union (EU), Russia, Japan, India, Egypt and Yemen are all part of this anti-piracy campaign.

If the international responses to the piracy menace were balanced and fair, it would have been easy to justify these condemnations. Why is illegal, unreported and unregulated (IUU) fishing in Somali waters ignored? Why do the UN Resolutions, the North Atlantic Treaty Organization (NATO) Orders and EU Decrees to invade the Somali seas fail to include provisions for the protection of Somali marine resources from IUU fishing? Not only is illegal fishing being disregarded but the poachers are also being encouraged to continue their looting, as none of the current Resolutions, Orders and Decrees deal with the IUU fishing that continues unabated on the Somali coast.

## Unsustainable pressure

IUU fishing is a serious global problem. The worldwide value of IUU catches is estimated at between US\$4 bn and US\$9 bn, a large part of which comes from Sub-Saharan Africa, particularly Somalia. IUU fishing does not respect national boundaries or sovereignty; it puts unsustainable pressure on fish stocks, marine life and habitats; it undermines labour standards, and distorts markets. IUU fishing

*This article has been written by **Andrew Mwangura** (mwangura@yahoo.com), Co-ordinator of the Seafarers' Assistance Programme, Mombassa, Kenya*



is detrimental to the larger marine ecosystem because it flouts rules designed to protect it, including those that place restrictions on harvesting juveniles, that make provisions for closed spawning grounds, and modifying gear to minimize by-catch on non-target species. In so doing, IUU fishing robs some of the world's poorest people of an invaluable and affordable source of protein, and ruins the livelihoods of legitimate fishermen. Incursions by trawlers into the inshore areas reserved for artisanal fishing can result in collisions with local fishing vessels, destruction of fishing gear, and deaths of fishermen.

IUU fishing also encourages the practice of laundering fish catches through mother ship factories, transshipment and re-supply at sea. Vessels can remain at sea for months, refuelling, re-supplying and rotating their crew. IUU fishing vessels never need to enter ports because they transfer their catches onto carrier vessels. Illegally caught fish are laundered by mixing them with legally caught fish on board carrier vessels.

Surveys by UN agencies, and by Russian and Spanish assessors just before the collapse of the regime of President Mohamed Siad Barre in 1991 estimated that 200,000 tonnes of fish could be caught annually in Somali waters by both artisanal and industrial fisheries; these are the rich resources that the international fishing fleets have set sights on. Unless the issue of IUU fishing is simultaneously addressed, the matter of sea piracy is unlikely to be resolved.

The origins of sea piracy and IUU fishing in Somalia can be traced back to 1992, when the regime of President Barre fell, leading to the disintegration of the Somali Navy and Coast Guard. Earlier, following severe droughts in 1974 and 1986, tens of thousands of nomads, whose livestock were wiped out, were re-settled along the villages on the 3,300-km Somali coast. They developed into large fishing communities whose livelihoods depended on inshore fishing.

Since the civil war in Somalia began—as early as 1991-92—illegal fishing trawlers started to trespass

and fish in Somali waters, even within the 12-nautical mile territorial waters. The vessels encroached on the local fishermen's grounds, competing for the abundant rock lobster and high-value pelagic fish in the warm, upwelling, 60-km-deep shelf along the tip of the Horn of Africa.

The piracy war between local fishermen and IUU fishing vessels started then. Local fishermen have documented cases of crew on trawlers pouring boiling water on the fishermen in canoes, cutting or destroying their nets, crushing smaller boats and killing all their occupants; there have been other cases of abuses inflicted on the local fishermen for trying to protect their fishing grounds. Little wonder then that soon enough, the fishermen began to arm themselves. In response, many of the foreign fishing vessels stocked up on sophisticated weapons, with which they began to overpower the local Somali fishermen.

It was only a matter of time before the local fishermen reviewed their tactics and upgraded their arms hardware. The cycle of warfare has been going on since 1991, and has developed into a full-fledged, two-pronged conflict between IUU fishing and sea piracy.

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A fisherman prepares to go fishing in his boat in Merka, Somalia. Foreign vessels have encroached on Somali fishermen's grounds, competing for high-value pelagic fish



The waters off Somalia have attracted sophisticated factory-fishing vessels from countries thousands of miles away

According to the High Seas Task Force (HSTF), at one time in 2005 there were over 800 IUU fishing vessels in Somali waters, taking advantage of the country's inability to police and control its own waters and fishing grounds. The IUU vessels, which are estimated to take out of Somalia more than

US\$450 mn worth of fish annually, neither compensate the local fishermen for the loss of resources and income, nor do they pay taxes or royalties to the State; needless to add, they do not respect the conservation and environmental regulations and norms associated with responsible fishing.

It is believed that IUU vessels from the EU alone take out of Somalia more than five times the value of EU aid to the country. Most of the foreign IUU fishing trawlers are owned by EU and Asian fishing companies.

Illegal vessels captured on the Somali coast by Somali vigilant groups between 1991 and 2008 included the Taiwanese trawlers *Yue Fa No. 3* and *Chian Yuein No.232*, and *FV Shuen Kuo No.11*; the three Italian vessels, *FV Airone*, *FV De Giosa Giuseppe* and *FV Antonietta Madre*; the *FV Bahari Hindi*, a Kenyan-registered vessel owned and managed by Marship Co. of Mombasa; the Russian-owned *Gorizont 1* and *Gorizont 2*; the Chinese-owned *Tianyu No.8*; and the Korean-owned *Dong Wong 168*, *FV Beira 3*, *FV Beira 7* and *FV Maputo 9*, among others.

### High ransoms

Tuna catches in the southwestern Indian Ocean are believed to have fallen by as much as 30 per cent last year as pirates blocked access to the waters off Somalia, which are among the world's richest yellowfin tuna grounds. The Seychelles' Victoria port handles about 350,000 tonnes of tuna each year, but catches have declined in the past two years as stocks from Somali waters have not been entering the market. The resultant fall in foreign currency earnings will impede economic recovery in the debt-laden country, say experts.

Following the collapse of the Somali government in 1991, Somali warlords and overseas companies entered into agreements for fishing through the issue of 'licences'. Somali-European joint ventures, based mainly in Europe and the Middle East, worked hand in gloves with Somali warlords who issued fake fishing 'licences'.

With the growth in IUU fishing in Somali waters, local pirates turned to piracy to deter foreign fishing vessels from destroying their own small boats and gear. Once they started raking in the lucre through ransoms, the pirates' appetite soon grew to encompass other merchant ships as well.

The other major problem linked to IUU fishing is the dumping of industrial, toxic and nuclear wastes off

the coast of Somalia, which continues unabated due to the lack of policing of the country's waters. Despite the fact that the issue has been brought to the notice of international agencies like the UN, nothing has been done to prevent these criminal activities.

As a country that lacks the capacity to harvest its own rich resources of tuna or to deal with oil spills or other environmental problems, Somalia appears set to continue being ravaged by foreign IUU fishing vessels, which will ultimately vastly deplete the waters of its fish stocks.

As the problem of piracy and attacks on foreign ships continues, alongside the attendant risk of death of crew and the ecological impact of oil spills,

**The IUU vessels, which are estimated to take out of Somalia more than US\$450 mn worth of fish annually, neither compensate the local fishermen for the loss of resources and income...**

a catastrophe of gigantic proportions appears set to be unleashed on the entire coast of east Africa and the Gulf of Aden. Only a sympathetic and understanding approach will help tackle the complex issue of why Somali fishermen, who genuinely believe they are protecting their country's waters and fish resources from pillage by foreign interests, and are viewed by the country's coastal communities as saviours, continue to defy international outrage.

Any solution that aims to be practical and lasting should address the twin problems of sea piracy and IUU fishing. Domestically, the problem with Somalia's institutions should be tackled simultaneously as well. Local institutions should be developed and supported to undertake monitoring, control and surveillance activities. Perhaps a supervisory body, under the joint auspices of the UN and the Somali government, could work to restore stability.

The other measures that are needed include establishing a regional co-ordination and information centre on piracy; formulating a regional action plan against IUU fishing and dumping



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Somali fishermen repair nets in the southern coastal town of Merka. Any lasting solution to sea piracy off Somalia should also address the problem of illegal fishing

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of toxic wastes; developing national legislation against piracy; developing Somalia's local fisheries; building up social and physical infrastructure in Somalia's coastal communities, including the establishment of a competent and trained coast guard authority; supporting the pastoralists in Puntland; and eliminating the illegal arms trade and human trafficking through Somali. 3

#### For more



[www.greenpeace.org/international/campaigns/oceans/pirate-fishing](http://www.greenpeace.org/international/campaigns/oceans/pirate-fishing)

#### Greenpeace

[news.bbc.co.uk/2/hi/africa/7358764.stm](http://news.bbc.co.uk/2/hi/africa/7358764.stm)

#### BBC News: Somalia pirates face battle at sea

[www.imo.org/home.asp?topic\\_id=1178](http://www.imo.org/home.asp?topic_id=1178)

#### IMO Chief's Appeal

[www.un.org/News/Press/docs//2008/sc9514.doc.htm](http://www.un.org/News/Press/docs//2008/sc9514.doc.htm)

#### UN Security Council Resolution

# Managing to Benefit

**A workshop on marine protected areas in India suggested ways to achieve livelihood-sensitive conservation and management of coastal and fisheries resources**

**A** two-day workshop, titled ‘Social Dimensions of Marine Protected Area (MPA) Implementation in India: Do Fishing Communities Benefit?’, was organized by the International Collective in Support of Fishworkers (ICSF), from 21-22 January 2009 in Chennai, India. The principal objective of the workshop was to discuss the findings of five case studies undertaken by ICSF on marine and coastal protected areas—on the Gulf of Mannar National Park and Biosphere Reserve, the Malvan (Marine) Wildlife Sanctuary, the Gahirmatha (Marine) Wildlife Sanctuary, the Sundarban Tiger Reserve, and the Gulf of Kutch National Park and Wildlife Sanctuary. Apart from documenting the fishing communities’ perspective on MPAs, the workshop was also meant to be a forum to discuss legal, institutional and other relevant aspects of MPA implementation in India, and to put forward proposals for achieving livelihood-sensitive conservation and management of coastal and fisheries resources.

Over 70 persons—including representatives from the Ministry of Agriculture, Government of India, the Forest Departments of the States of Orissa, West Bengal and Tamil Nadu; the Fisheries Departments of West Bengal and Tamil Nadu; the Wildlife Institute of India (WII) and the Indian Institute of Science (IISc), environmental groups, fishworker organizations and independent researchers—participated in the workshop. The first of its kind to be organized in India, the workshop was supported by the Ministry of Agriculture and the National Fisheries Development Board (NFDB).

Elaborating on marine and coastal protected areas in her introduction to the workshop, Chandrika Sharma, Executive Secretary, ICSF, highlighted that within the Indian context, the term refers to National Parks and Wildlife Sanctuaries declared in coastal and marine area, under the Wild Life (Protection) Act (WLPA), 1972.

The case studies, she said, highlighted that large numbers of men and women in fishing communities—an estimated 10 per cent of marine fishers in India—are facing loss of livelihoods due to restrictions on fisheries in coastal

**...large numbers of men and women in fishing communities—an estimated 10 per cent of marine fishers in India—are facing loss of livelihoods due to restrictions on fisheries in coastal and marine protected areas.**

and marine protected areas. Moreover, feelings of victimization and alienation due to the manner in which regulations are implemented are common, while efforts at creating alternative livelihood opportunities have remained limited. Also, there has hardly been any systematic effort to improve access to basic services for enhancing long-term livelihood options.

## Degradation and pollution

The focus has been mainly on regulating fisheries, while serious issues of degradation and pollution by non-fisheries factors have not been dealt with, which compromises the very objectives for which the protected areas (PAs) were set up. In his opening address to the workshop, M.K.R. Nair, Fisheries Development Commissioner,

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# MARINE PROTECTED AREAS (MPAs) IN INDIA



Source: Singh, H.S. 2002. Marine Protected Areas in India: Status of Coastal Wetlands and Their Conservation. Ahmedabad, Gujarat Ecological Education and Research Foundation (GEER)

There are 31 marine and coastal protected areas and two biosphere reserves in India



Department of Animal Husbandry, Dairying and Fisheries (DADF), Ministry of Agriculture, Government of India, said that fishers residing along the coastline of India are the traditional owners of the resources in those areas. While there is consensus on the need for environmental restrictions and regulations, the impact of marine and coastal protected areas on fishers who are already below the poverty line, is severe. Nair proposed a system of co-management for PAs that is located within a balanced “seascape” approach.

In their presentation on the Gulf of Mannar National Park and Biosphere Reserve, Ramya Rajagopalan, Consultant, ICSF, and S. Arulanandam, Legal Advisor to the Ramnad District Fishworkers’ Trade Union (RDFTU) highlighted that the designation of the National Park has denied fishers access to the fishing grounds surrounding the 21 islands, where no extractive activity is allowed. This has affected 35,000 active fishers, including 5,000 women seaweed collectors, and 25,000 fishermen who dive for sea cucumbers. Highlighting the socioeconomic problems facing fishing communities, RDFTU has demanded long-term, alternative livelihood options for future generations and short-term alternate livelihood options for the present generation. The union has also demanded that traditional fishers who use non-motorized vessels be allowed to fish near the islands, and that existing community initiatives, including those for regulating seaweed extraction, be recognized.

Pradip Chatterjee of Direct Initiative for Social and Health Action (DISHA) said that the Sundarbans, which has a multiplicity of PA designations—as Tiger Reserve, Wildlife Sanctuary, National Park, Biosphere Reserve and Heritage Site—provides for only non-motorized vessels to fish in the Buffer Area of the Tiger Reserve. Some of the livelihood concerns that fishworkers face arise from the limited number of licences and the complexities involved in their transfer, and the arbitrary imposition of fines for violations. The two fishworker organizations in the area have opposing positions: while



M.K.R. Nair of the Ministry of Agriculture, Government of India, and Nalini Nayak, Member, ICSF, at the opening session of the workshop

one demands restriction with a human face and a legitimate role for fishers in managing PAs, the other calls for the removal of all restrictions on fishing within the Reserve.

Narayan Halder and Giridhari Giri of the Orissa Traditional Fishworkers’ Union (OTFWU) pointed out that in the Gahirmatha (Marine) Wildlife Sanctuary, nearly 30,000 active fishers are affected by turtle protection measures, 43 per cent of whom are below the poverty line. OTFWU has put forward several proposals to protect

**While there is consensus on the need for environmental restrictions and regulations, the impact of marine and coastal protected areas on fishers who are already below the poverty line, is severe.**

the fishers’ livelihood interests while simultaneously meeting conservation objectives.

### Self-regulation

These include reducing the area of the Sanctuary, particularly of the Core Area; allowing small motorized vessels to fish in the Core Area in a sustainable manner; supporting self-regulation initiatives of fishing communities; and implementing the five-km ‘trawl-free’ zone under the Orissa Marine Fishing Regulation Act (OMFRA). OTFWU has also been demanding the

implementation of provisions in the WLPA (as amended in 2002 and 2006) for protecting innocent passage of fishers and their occupational interests, through clear guidelines and rules. The union has also called for participatory enforcement and monitoring measures to reduce conflicts; scientific studies on turtle mortality; and regulation of other non-fishery-related activities that have an impact on turtle mortality.

In their presentation on the Gulf of Kutch (Marine) National Park and Sanctuary, Nilanjana Biswas, an independent researcher, and Bharat Patel of SETU Information Centre, pointed out how the restrictions in place are affecting the *pagadiya* fishers, who wade into the waters with stake-nets to fish, as well as those using plank-built boats (*hodis*). They expanded on the severe threats confronting the area from industrial activities, especially from the petrochemical industries, oil pipelines passing through the PA, cement and coral mining, fertilizer plants, ports, shipbreaking units and special economic zones (SEZs). They stressed that the current legal regime for PAs is not adequate to address the specific needs of marine protection, especially to combat the threats from the non-fisheries activities taking place adjacent to PAs. Fishworker organizations are, therefore, demanding a comprehensive—not piecemeal—

in the declaration and management of the sanctuary that they are against. At the local level, there is a great deal of resistance to the sanctuary.

One workshop participant questioned the use of the word ‘protection’ instead of ‘conservation’, as it does not imply options for the sustainable use of resources. Several participants queried the very rationale for setting up marine and coastal protected areas, noting that there was no clear evidence of their benefits. One participant wondered whether it is a classic ‘lose-lose’ situation in which thousands lose their livelihoods, even as there is no clear indicator that conservation objectives, such as reduction of turtle mortality, are being met. On the issue of alternative and alternate livelihoods, it was said that these should benefit the local fishers who are worst affected, and should be a way to reduce pressure on fishery resources, not to take away the rights of fishers to the resource. Several participants highlighted the need for gender-segregated socioeconomic data.

Deepak Apte of the Bombay Natural History Society (BNHS) described the initiative by local communities to conserve marine resources in the Lakshadweep islands. A proposal for declaring a Conservation Reserve under the WLPA has met with the approval of local communities. Whether this is the most suitable option and whether it would reduce the role and power of local communities in decisionmaking, and, in effect, hand over management powers to Forest Department officials, is a moot point.

Manish Chandi, Researcher, Andaman and Nicobar Islands Environmental Team (ANET) and Research Affiliate, Nature Conservation Foundation (NCF), provided an overview of the coastal and marine protected areas in the Andaman and Nicobar Islands.

### Holistic approach

In a session on legal issues, Chandrika Sharma of ICSF drew attention to the need for putting in place a holistic and comprehensive management framework for protecting coastal and marine resources, which addresses

**On the issue of alternative and alternate livelihoods, it was said that these should benefit the local fishers who are worst affected, and should be a way to reduce pressure on fishery resources, not to take away the rights of fishers to the resource.**

approach to the management of the marine environment, which addresses the root causes of habitat destruction and depletion of resources.

Ramesh Dhuri from the Malvan Taluka Shramik Machhimar Sangh said that the Malvan (Marine) Wildlife Sanctuary, designated to protect coral reefs, mangroves and rocky shores, has a fisherfolk population of 9,000. While fishers in Malvan recognize the importance of conservation, it is the lack of consultation and transparency



Panel discussion on "The Way Forward" at the end of the ICSF workshop on Social Dimensions of Marine Protected Area Implementation in India

both fishery and non-fishery management concerns, and draws on international and national legal and policy frameworks.

In the fisheries context, there is need to move the focus from production to management, and develop an environmental plan for fisheries. Existing artisanal fishing zones could be seen as one of form of PA, given that they enjoy a higher level of protection than their surroundings, it was pointed out.

Sanjay Upadhyay, Advocate, Supreme Court of India, provided an overview of PA categories under the WLPA. He also drew attention to options, under other legislation, for designating specified areas that could meet both livelihood and conservation objectives. Upadhyay also stressed the need to elaborate, in operational terms, what is meant by the reference in the WLPA to "protect the occupational interests of fishermen". There are also provisions for "innocent passage" that need to be operationalized and applied, to prevent the arrest of those passing

through, but not fishing in, Sanctuary waters, he stressed. Upadhyay further underscored the need for demystified information on various aspects of designating and implementing PAs, which can be understood by lay persons.

Several workshop participants noted that the conflict between conservation and livelihoods is relatively minor—the larger fight is really against environmentally destructive development, particularly in a post-liberalization context. In the absence of the right to say no to destructive development in PAs, talk of 'people's participation' becomes merely ritualistic.

### Positive developments

Yet some recent developments have been positive, and spaces for genuine participation by the people have been created. A recent judgement of the Andhra Pradesh High Court, for example, interpreted 'consultation' to mean 'consent', under the Panchayat (Extension to Schedule Areas) Act, 1996.



NEENA KOSHY/ICSF



Member of Parliament and former Minister, Suresh Prabhu, stressed the importance of co-management approaches for the conservation of coastal and marine resources

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In his presentation on the role of fishing community institutions in conserving marine living resources, V. Vivekanandan of the South Indian Federation of Fishermen Societies (SIFFS) drew attention to several traditional systems and institutions such as the *kadakodi* system of northern Kerala, and the federated structure of governance of the *pattanavars* of Tamil Nadu and Andhra Pradesh.

These communities have, over time, put in place rules to regulate fishing activities and reduce conflicts. In recent years, several new institutional forms have emerged such as the boatowner's associations in Tamil Nadu and Maharashtra, trade unions, co-operatives, women's self-help groups, and federations and trade associations.

Vivekanandan said that a co-management approach would do well to adopt local traditional structures that are already embedded with social capital. In the absence of a level playing field among the various stakeholders, there is need for caution in propagating co-management, it was pointed out.

The group discussions at the workshop focused on the benefits from marine and coastal protected areas, and how they could be enhanced. All the group presentations highlighted that while some form of protection is needed for coastal and marine resources, on the whole, marine and coastal protected areas have had few

In the last session of the workshop, which was a panel discussion on the way forward, B.C. Chowdhury of the Wildlife Institute of India pointed out that management of existing MPAs is weak, and fishers and managers need to get together to review management approaches, and define practical win-win strategies. Establishing marine and coastal protected areas, he said, is not an end in itself; there are other ways in which marine and coastal areas can be protected, which need to be considered. Management plans must be placed in the public domain to ensure greater transparency and accountability.

Harekrishna Debnath of the National Fishworkers' Forum (NFF) drew attention to the various struggles of NFF for better management and conservation of resources, stressing the importance of a comprehensive and integrated approach. Conservation efforts should start with regulating the high-impact activities of the larger players in the fisheries and non-fisheries sectors, not the relatively lower-impact activities of the weakest. Since the entire society at large benefits from conservation efforts, the costs of conservation should be borne by all, and not just by fishers; should there be livelihood costs for fishers, they should be fairly compensated, Debnath said.

Kartik Shanker of the Indian Institute of Science and Dakshin Foundation said that it is important to recognize the concept of 'sustainable use', particularly in a marine context, and to adopt frameworks, such as marine conservation areas, rather than PAs, that do not exclude people. The process of setting up marine and coastal protected areas should recognize power differences between stakeholders, he stressed.

**Management plans must be placed in the public domain to ensure greater transparency and accountability.**

beneficial impacts, particularly for local communities. All the presentations highlighted the need for community participation, good governance, transparency, accountability, and reliable data. It was suggested that traditional knowledge systems should be integrated with conventional science for PA management, and there is need to regulate non-fishery activities and threats that pose a danger to biodiversity.

### **Better co-ordination**

The importance of conservation is indisputable, said Nalini Nayak, Member, ICSF. The need is to focus on managing ecosystems as a whole, as waters are interlinked, which calls for better co-ordination and collaboration between different departments, ministries, politicians and other stakeholders. A workable

co-management framework needs to be devised, with a substantial representation for women as members of co-management committees, she stressed.

Fisheries Departments should be seen as partners in the marine and coastal protected area management process, said Madhumita Mukherjee, Joint Director of Fisheries, West Bengal State Fisheries Department. Processes for designating PAs must take into account regional and species specificities, she stressed.

Bijoy Ketan Patnaik, Principal Chief Conservator of Forests (PCCF), and Chief Wildlife Warden, Orissa Forest and Environment Department, highlighted the importance of quantifying benefits from PAs, and, using a comprehensive socio-economic database, monitoring changes in fish catches and the incomes of fishing communities in the area. Where it is clear that livelihoods are being negatively affected, adequate compensation should be given to communities, he said. Patnaik also stressed the importance of periodic evaluations of marine and coastal protected areas, to determine whether they were meeting the objectives for which they were set up. Further, consultative processes should be started at the beginning

of any effort to declare a PA, and PA categories such as Conservation Reserves and Community Reserves, which protect the rights of local people and meet conservation objectives, should be explored.

In his concluding address, Suresh Prabhu, Member of

**...consultative processes should be started at the beginning of any effort to declare a PA...**

Parliament, and former Minister for Environment, Government of India, reiterated the need for a holistic approach to the conservation of coastal and marine resources. He stressed the importance of co-management approaches that integrate the traditional knowledge of fishers into a model of sustainable conservation.

The consensus Statement finalized by the participants of the workshop (see page 24) highlighted the need to integrate the fundamental principles of participation, environmental and social justice, and human rights in the implementation of marine and coastal protected areas.

#### For more



[mpa.icsf.net/icsf2006/jspFiles/mpa/indiaWorkshop.jsp](http://mpa.icsf.net/icsf2006/jspFiles/mpa/indiaWorkshop.jsp)

**India MPA Workshop Site**

[www.icsf.net/SU/stmt/C/](http://www.icsf.net/SU/stmt/C/)

**India MPA Workshop Statement**

[mpa.icsf.net/icsf2006/jspFiles/mpa/casestudies.jsp](http://mpa.icsf.net/icsf2006/jspFiles/mpa/casestudies.jsp)

**India MPA Case Studies**

# The Chennai Statement

**W**e, representatives of artisanal and small-scale fishworker organizations, organizations in support of fishworkers, environmental groups, and the scientific community, committed to equitable and socially-just conservation, use and management of coastal and marine living resources, having participated in the workshop on "Social Dimensions of Marine Protected Area Implementation in India: Do Fishing Communities Benefit?" in Chennai from 21 to 22 January 2009;

*Conscious of the importance of fisheries and of the high dependence of millions of fisherpeople on fisheries, and of the fact that that marine and coastal ecosystems are rich spawning and breeding grounds, and provide vital coastal protection benefits;*

*Being concerned about the livelihood problems encountered by at least ten per cent of the active marine fisher population of India from unfair restrictions on their fishing operations in the course of implementing marine and coastal protected areas, such as the Gulf of Mannar National Park, Tamil Nadu; the Gahirmatha (Marine) Wildlife Sanctuary, Orissa; the Gulf of Kutch Marine National Park and Sanctuary, Gujarat; the Sundarban Tiger Reserve, West Bengal; and the Malvan (Marine) Wildlife Sanctuary, Maharashtra;*

*Being further concerned that non-fishery activities that have a destructive environmental and ecological impact on marine and coastal protected areas, such as indiscriminate pollution and habitat degradation from industrial activities, are not being regulated, and that fishing communities are, therefore, disproportionately bearing the costs of conservation measures;*

*Being aware of the importance of effectively addressing livelihood and occupational interests of fishing communities, living in and around marine and coastal protected areas, within the framework of an integrated approach to conservation, use and management of coastal and marine living resources;*

## Do hereby recommend:

### (1) Integrate fundamental principles of participation, environmental justice, social justice, and human rights into the implementation of marine and coastal protected areas

Full and active participation of fishing communities in decision-making at all stages of marine and coastal protected area identification, planning, designation, implementation, review and evaluation should be ensured, in policy, law and practice, to meet both social and conservation objectives, drawing upon good practices within and outside India;

Fishing communities should be considered as allies, and community-led initiatives for management and conservation should be recognized and supported; diverse, participatory and site-specific approaches for the conservation and management of coastal and marine resources, should be promoted;

Fishing rights of small-scale fishers using sustainable fishing gear and practices should be protected. Should fishing activities be regulated, adequate compensation should be provided, and a systematic and participatory approach for enhancing and diversifying livelihoods of affected communities should be adopted;

Implementation of existing marine and coastal protected areas should be reviewed on an urgent basis, in the light of principles of participation, environmental justice, social justice, and human rights, with a view to addressing issues facing fishing communities in these areas;

New marine and coastal protected areas should be considered only after transparent mechanisms, incorporating principles of participation, environmental justice, social justice, and human rights, for designating and managing such areas, are established;

### (2) Address threats to coastal and marine ecosystems from non-fishery sources

Stringent measures to prevent pollution and degradation of marine and coastal habitats from non-fishery sources such as ports, shipping lanes, tourism development and other related activities, within and outside the protected areas, should be adopted; and, existing legal provisions should be strictly implemented;

### (3) Enforce marine fishing regulation act in all the states and union territories

Effective implementation of marine fishing regulation acts in territorial waters, particularly enforcement of non-mechanized fishing zones, mesh size regulation and the regulation of destructive fishing gear and practices, such as use of explosives, bottom trawling and purse-seining, should be ensured to improve fisheries conservation and management in territorial waters. Co-management arrangements should be considered to improve the effectiveness of fisheries management;

### (4) Adopt legislation to conserve and manage living resources of the EEZ

An effective conservation and management regime for living resources, including fisheries, of the entire Indian exclusive economic zone (EEZ) should be developed through a participatory process. In this context, reviewing, amending and strengthening relevant legislation, including the marine fishing regulation acts, and adopting an environmental action plan for fisheries, setting out measures that can be used towards conservation and management of fisheries resources, should be considered;

### (5) Adopt an integrated approach for the management of coastal and marine living resources

Collaboration and co-ordination, in particular, between the Ministry of Agriculture and the Ministry of Environment and



Forests at the national level, and between departments of fisheries and forests at the State level, should be improved. Better cross-sectoral co-ordination between relevant ministries with jurisdiction over the coastal and marine space, and between research institutions and non-governmental organizations, should be established.

In conclusion, we urge recognition of the need for an integrated and participatory framework for conservation, use and management of marine and coastal living resources that secures the preferential access rights of fishing communities to coastal and fishery resources. This should be consistent with India's obligations and commitments under the 1948 Universal Declaration of Human Rights (UDHR), the 1982 United Nations Convention on the Law of the Sea (UNCLOS), the 1995 FAO Code of Conduct for Responsible Fisheries (CCRF), the 1992 Convention on Biological Diversity (CBD), and the United Nations Millennium Development Goals (MDGs).

### Signatories

#### Organizations

1. National Fishworkers' Forum (NFF)
2. Malvan Taluka Shramik Machhimar Sangh, Maharashtra
3. Sundarban Fishermen's Joint Action Committee, West Bengal
4. Ramnad District Fishworkers' Trade Union, Tamil Nadu
5. Vangakadal Meen Thozhilalar Sangam, Tamil Nadu
6. Orissa Traditional Fishworkers' Union (OTFWU), Orissa
7. International Collective in Support of Fishworkers (ICSF)
8. South Indian Federation of Fishermen Societies (SIFFS)
9. Kalpavriksh
10. Greenpeace India
11. DHAN Foundation
12. Dakshin Foundation

13. Action for Food Production (AFPRO)
14. Integrated Coastal Management (ICM)
15. WWF India
16. Project Swarajya, Orissa
17. SETU Information Centre, Kutch, Gujarat
18. Group for Nature Preservation and Education (GNAPE), Tamil Nadu
19. Protsahan, Kerala
20. Direct Initiative for Social and Health Action (DISHA), West Bengal
21. Fisherfolk Foundation, Andhra Pradesh

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2. B.C. Choudhury, Professor, Wildlife Institute of India, Dehradun
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—This Statement is from the workshop on "Social Dimensions of Marine Protected Area Implementation in India: Do Fishing Communities Benefit?", held in Chennai during 21-22 January 2009.

NEENA KOSHY/ICSF



Over 70 persons took part in the workshop on MPA Implementation in India

# Caught Up in Change

The experience of traditional fisheries in marine reserves in Mexico's Yucatán State reveals the influence of social and economic effects

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The 15 human settlements along the 365-km coastline of the State of Yucatán in Mexico have engaged in traditional fishing for finfish since pre-Hispanic times. Fishing harbours, such as Celestún, Dzilám de Bravo, San Felipe and Rio Lagartos, have strong fishing traditions dating back to ancestral times. Puerto Progreso, Telchac and El Cuyo came up during the colonial era and are strongly linked to land-based activities. People from these communities have been able to accumulate a wealth of traditional knowledge based on experience, naming the various fish species and fishing grounds in the Mayan language, a tradition that continues

coastal Yucatán communities began to increase in size, encouraged by the promising activity of artisanal fishing. This continues to occupy 80 per cent of the fishing-based population, and fishing provides full-time and seasonal incomes for more than 15,000 families in Yucatán.

The era of the fishery bonanza—when origin, ethnicity and political persuasion did not matter—was undoubtedly during the decades from the 1970s to the end of the 1990s. The fisheries bonanza did not translate into wealth for all, but rather resulted in the economic and social stratification of various sections of the local population, mainly traders and middlemen engaged in fishery activities. A large section of the fishing population remains poor, marginal, and with no hope of owning a boat or outboard motor—that is, without any means of production.

Management criteria based on the biology of species continue as priorities, in the face of the social reality of increasing conflicts between groups and individuals engaged in fishing activities, with the common refrain being “the cake must be shared among more people who are entering the fishing.”

But what can be said about marine reserves? Were marine reserves created by traditional fishers, vessel owners and large traders or by urban academics? When did they begin in Yucatán? How many local marine-reserve initiatives exist? How are they translated into practice?

## Protected areas

In the coastal and marine zone of Yucatán, there are five protected natural areas, two of which are biosphere

...fishing provides full-time and seasonal incomes for more than 15,000 families in Yucatán.

with the current generation of young fishermen.

Modern fisheries in Yucatán arose during the decade of the 1960s, when national programmes began looking seawards, by incorporating *campesinos* (Spanish for farmers or farm workers in a Latin American country) on land into the framework of coastal fisheries management. In parallel, the State established fisheries co-operatives to deal with high-value species, mainly lobster and shrimp. In Yucatán, traditional fishermen and *campesinos* from inland areas began to benefit from the abundance of the seas, which provided food and cash in a society steadily transforming towards urban life. Small and medium-sized

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reserves (Ría Lagartos and Ría Celestún, created in 1979 as fauna refuges, and re-decreed as reserves in 1997 and 2000, respectively), and a marine park (the Alacranes Reef, created in 1994), administered federally. Two of the areas are State reserves (El Palmar and Dzilám de Bravo, created in 1989 and 1990, respectively). The reserves are part marine and part lagoon. However, the local inhabitants were never consulted about their creation; it was a top-down project. Community participation began with academic and emergency non-governmental organization (NGO) projects, with the federal and State branches of government involved in implementing environmental education programmes. In the main, this started during 1997-98, when the fisheries began their period of stagnation, reporting low volumes of fish catches.

From then on, community participation has been concentrated between two groups of the population: children and fisher-producers. The latter form the focal population for consultations on fishing problems and how to achieve fishing-effort reductions.

At that time, problems began to be observed between traditional fishers, who comprised 40 per cent of the total fisher population, and *campesino* fishers, who made up 60 per cent. That started an academic and public debate about those who “conserve” (traditional fishers) and those who “do not conserve but overexploit” (*campesinos* from inland areas).

Given this context, are there any local initiatives to create marine protected areas (MPAs) that continue to be sustained successfully? The only fishers’ community that has advanced with processes of traditional management in their fisheries and the creation of a marine reserve without academic or NGO interventions, has been the community of San Felipe. In 1994, it established a ‘natural fish hatchery’ in an area of 30 sq km, five km from the settlement, taking into consideration the special conditions of submerged aquatic vegetation called, in Maya, ‘Tzil’.

San Felipe’s success was maintained for 12 continuous years, and its demise in the last two years has been due to various factors detailed below. The creation of the reserve is strongly associated with the experience of longtime fishermen, who, working in inshore areas, ‘discovered’ ecological conditions that allowed—and still allow, despite the constant occurrence of hurricanes—the entry and reproduction of marine species, including crayfish.

The first factor for success was that the San Felipe fishermen were strongly associated with a fisheries co-operative, the United Fishers of San Felipe, which had 218 associates. The nature, attitude and personality of the leaders (characterized by ethical conduct, trust and communication, a legacy of their grandparents) also contributed towards the success of the reserve. Further, the co-operative constituted the entire ‘social event’ of the community, that is to say, life strongly revolved around this institution, politically and, mainly, economically, through the export of crayfish. The community connected with the co-operative much more than with the municipal government. The administration of the co-operative was not exclusively dedicated to the sea and fishermen; it administered the lives, health and religion of the community’s inhabitants, whether they were fishers or livestock rearers, expanding their

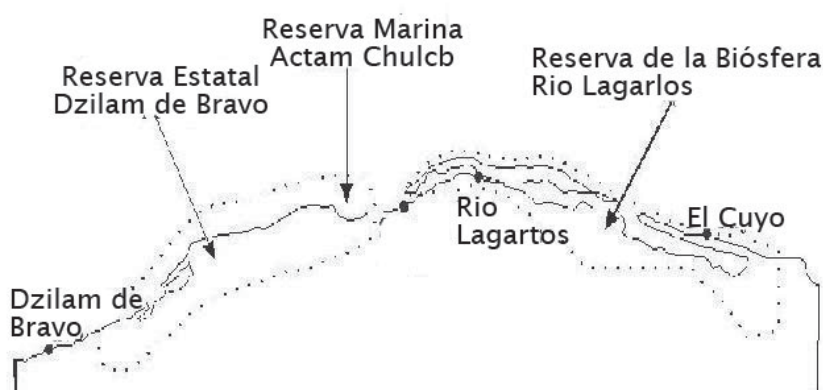
JULIA FRAGA



Eliseo, a fisherman in the marine reserve of San Felipe. Local initiatives can often help improve marine protected area implementation through the use of traditional knowledge



JULIA FRAGA



Map of the marine reserve of San Felipe in Yucatán, Mexico

community and family boundaries, at a time when the 'tragedy of the commons' was of little importance.

As mentioned earlier, the State reserve of Dzilám Bravo was created

**...due to the lack of information, participation and consultation with fishers...academics and State administrators have ignored local initiatives.**

in 1990, with its jurisdiction extending to the municipal reserve created by the fishers of San Felipe. However, due to the lack of information, participation and consultation with fishers in both localities (Dzilám, which has more than 1,000 fishers, and San Felipe, with around 500 fishers), academics and State administrators were unaware of this local initiative.

The fishers of San Felipe found out that their marine reserve is located in the State reserve of Dzilám only in 1998, when the first academic NGO

began work there with United Nations Development Programme (UNDP) funds. The discovery was by chance, they say, since the NGO course that dealt with crayfish management also had a component on MPAs. In 2002, a group of academics undertook a participative study in both areas. They invited the traditional fishers associated into co-operatives to debate, but forgot to invite 'free' fishers, that is, those fishers not formally organized into groups. Perhaps that was one of the common methodological errors that in academia are simply relegated to footnotes.

What about the community rules applied to the marine-reserve initiative? Simply due to the existence of a strong co-operative, a council of representatives supported by the municipality, and strong family ties between the leaders of both local parties, sanctions and fines have been respected since 1995, when all the associated fishers signed the agreement to these rules.

A factor of success has undoubtedly been the existence of strong family ties among those who administer the daily lives of the inhabitants. Does poaching exist under prevailing community rules? The answer is yes, and the poachers were identified some time ago. Strong kinship ties also existed among them, "but they only used to go out at night", and "with great fear".

Another factor of success was the community's fear of the established rules and the co-operative's leaders. The fishery co-operative had established night surveillance systems with volunteer fishers, who were motivated more by species conservation than by payment for watching the area.

Who paid for the surveillance? The fisheries co-operative used to manage UNDP funds, and there was even an internal fund for the co-operative to buy fuel. In reality, the fishers say, not much was spent, and "we did it because we knew that the reserve is very valuable, and many fish and crayfish are conserved there."

### End of success

The success of the San Felipe reserve seemed to end in 2004, with a division of political power and new personalities

taking over the administration of the co-operative. There was some bad management of money; kinship ties between families were broken; and a phase of gradual breakdown in the administration of the reserve gave way to a stage of social collapse in 2008, leading to conflicts and aggression. That stage coincided with low volumes of fish catches, and with poor seasons for crayfish and octopus, the two most important fisheries of San Felipe. The neighbouring fishers of Rio Lagartos, located 10 km away, noted that in San Felipe, “they have already abandoned their reserve”. For the municipal government, however, a bad season for lobster was no justification for an invasion of poachers into the reserve, and the breaking of rules established years ago.

Several assertions have been made about the collapse of the San Felipe reserve. According to various co-operative fishers interviewed in June this year, “only eight to 10 launches depleted the reserve; they cleaned out everything; now there is nothing to be done.” Some other San Felipe fishers recalled: “When we saw the amount that these few illegal fishers were earning, up to 15,000 pesos (US\$1,500) in one night, catching between 700 and 1,000 kg each night, we felt deceived, desperate, without help from anyone, neither from the co-operative nor from the government. Everyone started to enter fishing, making it something that no longer benefitted all as before.”

There is no doubt that the conservation and protection ethos that has existed for over 12 years in the San Felipe area faces a dilemma. Added to that is the presence of external institutions (including academia and tourism) that go about their work ignoring the negative consequences of the displacement of fishing as a source of subsistence and livelihood, in favour of activities that do not bring any collective benefits, in the way fishing does.

For those in San Felipe, the real conflict began in mid-2007, when, according to fishers interviewed in May 2008, “surveillance of the reserve was lifted, and money was given to the two guards of the

Actamchuleb Civil Association not to say anything”. But above all, it was “because the co-operative split into two when problems of corruption arose, and it got divided between the bi-partisan politics of PRI (Partido Revolucionario Institucional or the Institutional Revolutionary Party) and PAN (Partido Acción Nacional or the National Action Party)”, and also because “to keep watch on the reserve requires US\$48,000 per year.”

According to one fisherman, “As for us, what we take out of the reserve is little—we may take 30, 40 or maybe 60 kg. But those who have piles of nets, up to 20 pieces of nets of over 1 km in length, they are the ones who take up to 1,000 kg in a single night. And the poachers are highly concentrated inside the reserve. It is highly unjust... I tell my friends: If I accuse you, then what? How do I get out of it? There will be many fights, you will assault me, and no one can do anything. That is how the situation is.”

In a focal group discussion in May 2008, fishermen said, “We recognize that the benefits the reserve can bring to us as fishers are huge, if it can be cared for. Seizing the poachers—for us that would be excellent. We need a tough hand. Perhaps someone from the federal government can help us—the port authority, the city hall, local power groups, the fishers themselves, the co-operatives involved...”

### Keeping watch

A San Felipe poacher involved in the conflict pointed out in an interview in May 2008, “Of course I support them in the reserve, so long as they keep watch 24 hours. Because if they don’t keep a 24-hour watch, then I prefer to take advantage of it and work like mad for 12 hours, earning more than those who are going to work there.”



Gerardo, a fisherman of San Felipe. Fishermen in Mexico recognize the benefits of marine reserves, but they also need help from the federal government

JULIA FRAGA



Ferrocement boats in San Felipe. The future of marine reserves in Mexico seems linked to ecotourism

What about the factors of success highlighted above that allowed 12 years of continuity in protecting a fishing site? What happened to the old fishers, the family relations, the people who administered the co-operative? What happened to this community of 1,800 inhabitants and around 500 fishers who once felt pride in their marine reserve? What happened to the Actamchuleb Civil Association whose administrator, for 10 years, provided the link between the co-operative, the government and financing programmes? Why does the reserve not matter to them any more?

The break-up started when the co-operative split into two, dividing fishermen by age, origin, name and political affiliation. Another factor in the break-up was the absence of any strong tradition of participative action research among the academic groups, which did not integrate with the co-operative, the municipal government and the community for research, thus obviating collective motivation.

Also, it is important to note that the Actamchuleb Civil Association, not being capable of working for, and with, the community, was simply converted into a link for communication between the government and the regional UNDP programme, to attract funds to make gasoline available for the surveillance of the reserve. The State government, on the other hand, does not have the financial and human-resources capacity to apply its mandate to protect

biodiversity and protected areas. Further, personnel changes every six years modified the work programme.

Does the San Felipe reserve have a future? The area of this small reserve is included within the zoning of the Dzilám de Bravo State reserve. The management plan of the San Felipe reserve, published in 2006, denotes it as a sub-zone of special use, that is, where activities of conservation, environmental education and alternative tourism are allowed, profitable activities that may not modify the ecosystems' capacity for ecological recovery.

A July 2008 interview with the person in charge of protected natural areas in the State government, indicated that the need for a future for the San Felipe reserve as a municipal reserve is officially recognized, but it is not known exactly how this can be attained.

The future of the reserve appears to be linked to tourism, especially ecotourism, and sport fishing, which is increasing in the community, and fishers are gradually being converted into service providers. Ironically, there is an inversely proportional relationship between fish, which is decreasing and getting scarce, and tourists, who are increasingly visiting San Felipe to see and catch fish. What will there be to show them? The reserve is a good option. In mid-2009, San Felipe will be visited by more than 100 sailing boats from France. "Europeans are now looking in our direction, and are now interested in our beaches", say the fishers.

### Main motivation

By and large, most inhabitants, above all, the fishers, feel that now nothing can be done for the reserve; it is no longer a place of work that can be passed on to their children, which was the main motivation for looking after it in the first place. Even the poachers do not see value in protecting the reserve because those who profit from it are hotel owners. Why bother to care for species for the benefit of people who will cash in on the tourists by taking them fishing in the reserve?




The local Actamchuleb Civil Association has a significant future because their ex-local fisher director is strongly linked with the outsiders and has been trained to deal with them. He has secured a five-year extension of the agreement, in which one of the clauses will benefit the association as a collaborator with the State government in the management of the protected natural areas of the State. To belong to a State ecotourism network and to be dedicated more to the administration of issues external to the community, and less with its main activity (fishing), highlights the extent of the transition in the community.

The case of San Felipe in Yucatán may not be unique; there must be similar other cases in various parts of the world, fundamentally changed by the strong transition towards service activities as promoted by national and international agencies guided by the ethic of ecotourism.

Doubtless, ecotourism in itself is no bad thing. What is bad is that local people are affected as their resources are not being cared for, and they lack ownership rights. In the long term, there is a real fear that the fishers will be left without food, beaches and houses on the river banks or beaches. In the case of San Felipe, perhaps they will also be left without a marine reserve. For them, much depends on being able to once again revive the task of conserving their resources. As San Felipe fishers said in an interview in May 2008, what is difficult for them is to decide “when to drop fishing and go and protest before the office in Mérida to get the government to help us with our reserve.”

San Felipe requires the engagement of people who are honourable, honest, intelligent, trained, and who take pride in their true social capital. They need what neither the government nor academia is able or willing to give: the time and administrative resources to implement community-based coastal resource management. It would seem that what is needed is an NGO to establish itself in the area for a prolonged period, working towards the recovery and strengthening of both social and natural capital.

The incumbent president of the municipal government sees the local Actamchuleb Civil Association as appropriate to be involved in the administration of the marine reserve through co-management with the State government. The previous municipal government felt that while the local association was necessary, it required a change of leader. What seems right and should be supported is a generalized and transparent participative consultation to analyze the situation, which not only takes into consideration tourists, but local children and youth who will have to emigrate to find work outside their community. The avalanche of people looking for beach and sea areas for leisure, and their conversion into a source of employment or work through the provision of services, cannot be ignored. We cannot close our eyes to a society that is ever more interested in enjoyment of rural marine zones, but we should also think about planning for the future, taking advantage of the social conditions that already exist: direct family ties, religion, solidarity and the size of the urban community.

The San Felipe marine reserve unified the community in times of bad fishing, providing food for families most in need. It should unite them in other bad times as well, by perhaps combining fishing and low-impact tourism. 

**For more**


[icsf.net/icsf2006/uploads/publications/monograph/pdf/english/issue\\_92/ALL.pdf](http://icsf.net/icsf2006/uploads/publications/monograph/pdf/english/issue_92/ALL.pdf)  
**Coastal and Marine Protected Areas in Mexico**

# Importance of Social Capital

**Marine protected areas should factor in social capital—the relationships, networks, norms and sanctions that connect different people and institutions**

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**T**he Statement adopted on 22 January 2009 at the workshop in Chennai on “Social Dimensions of Marine Protected Area Implementation in India: Do Fishing Communities Benefit?” (see page 24) called for greater participation of fishing communities in the selection and management of marine protected areas (MPAs), and greater social justice in decisions that determine the distribution of benefits from MPAs.

The importance of the social aspects of MPAs has also been highlighted in a recent study undertaken by the author in Mozambique. The study examined the relationships between artisanal fishers

fishery management and increase local economic benefits. Evidence from the Mozambique study suggests that the relationships or social capital between different users of an MPA (namely, fishers and the tourism industry), and the alliances made with the State can be used to both uphold and undermine an MPA. In the context of the study, Social capital refers to the networks, norms and sanctions that connect different people and institutions, and can have both a positive and negative impact on people's behaviour. The social capital examined in the Mozambique case is shown to have a negative influence on compliance with the rules governing MPAs, and acts to exclude local fishers from sharing in MPA benefits.

To understand why an MPA fails, it is important to realize that MPAs are, in fact, property rights, and rely on social mechanisms and processes within society, such as laws and regulations, to function properly. The assumption made in rights-based management is that existing users of a marine resource, such as a coastal fishing community, will be willing to co-operate with the State when an MPA is sanctioned and will respect the rules governing the MPA. As a result, this will lead to compliance with the new MPA rules and better fishery management.

## Traditions and customs

However, many fishing communities have, over time, generated their own sets of rules and sanctions that govern fishery resources. These rules are embedded within social mechanisms and processes, and manifest in the traditions and customs of a community. When an MPA is allocated, it can lead to conflicts due to the tensions between

**To understand why an MPA fails, it is important to realize that MPAs are, in fact, property rights, and rely on social mechanisms and processes within society, such as laws and regulations, to function properly.**

and tourism operators using private and State-run MPAs, and compared them with open-access areas. The study indicates that when the relationships between different resource users and the State cannot be maintained, then the MPA fails, leaving the fishery resources vulnerable to overuse. The research reveals that MPAs are dependent on their social dimensions, which can be used by different agencies as exclusionary policy devices to reward and penalize different resource users from experiencing the MPAs' benefits.

The Mozambique research and the Chennai Statement are useful for any coastal fishing community that may want to use MPAs to improve

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the rules governing the rights of fishers and the new rules governing the MPA. The property rights characteristics of an MPA operate to replace the rights of local fishers, transferring them to new institutions and resource users, such as non-governmental organizations (NGOs) and tourism businesses. The conflict between traditional fishing rights and the MPA manifests as low levels of social capital between resource users, and low compliance with MPA rules.

In the Mozambique study, low levels of social capital were observed in the MPAs due, in part, to the substitution of fishers' rights by the MPAs. This was highlighted by the limited contact arrangements made between the fishery and tourism sectors, and expressed in the low compliance with MPA rules. These tensions were compounded by a second factor: divisive political alliances between some State officials and tourism businesses. This was observed through the influence of the different revenues generated by tourism in the MPAs, driven by the ability

to market conservation and exclusivity to tourists. Overnight fees within the marine national park were, on average, US\$500 per night, compared to US\$100 outside the park. This provided sufficient incentive for government officials to renege on agreements to limit tourism, and instead promote a strategy of tourism expansion. This was in contradiction to a management plan agreed on between the government and conservation groups supporting the MPA, and resulted in an increase in competition for the fishery resources, between tourists and artisanal fishers.

What appears on paper to be an MPA that will conserve marine resources and provide local economic benefits, was, in fact, undermined by an unsustainable interest in tourism development. This has left both artisanal fishers and conservation groups feeling excluded in the management process, as the linkages between international tourism businesses and the government have grown stronger.

Using social capital to analyze MPAs can help build a better understanding

CORNELIE QUIST



Fishers in Mozambique. In practice, MPA implementation may have few local benefits for fishing communities

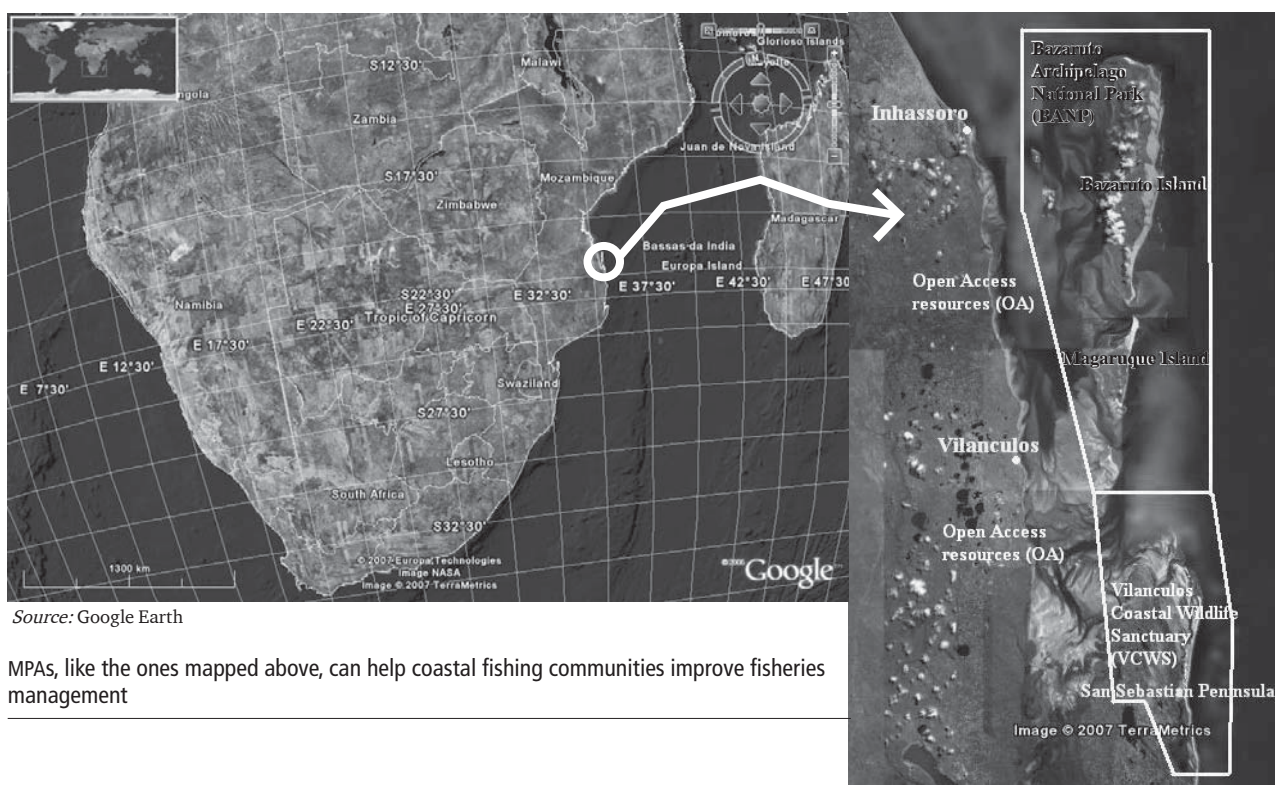


of the contextual factors (both temporal and spatial) that work to undermine or maintain an MPA. Like other forms of capital, social capital can be used by people to do things collectively for the benefit of everyone. It is commonly associated with the ties and bonds that help communities to co-operate and manage a natural resource used communally. These include the connections and networks that build traditions and customs that, over many years, can be used by fishing communities to control use and access to a fishery.

These types of social capital are referred to as 'bonding and bridging' social capital, and determine how we interact and trust each other in close, similar communities. The type of social capital that helps us understand MPAs, particularly MPAs used by different resource users, is called 'linking' social capital. This is found in the connections that reach beyond our normal group of friends and communities, and connect people and institutions from different backgrounds and cultures as well as from different levels of power and resources. The Mozambique study focused on 'linking' social capital found in cross-sector linkages between artisanal fishers, tourism operators

and MPA governing institutions, and also the social capital found within 'political society', which is expressed in the political alliances forged between different sectors and the State.

So why is linking social capital important to MPAs? The answer lies, again, in the property rights characteristics of MPAs. When an MPA is allocated over traditionally managed fisheries, it is assumed that fishers will behave rationally and enter into an agreement with the new users of the MPA, such as the tourism operators in the Mozambique case. The assumption is that local fishers will be compensated for the loss of their fishing rights within an MPA, and, in return, will comply with MPA rules and respect the rights of the new users. However, this does not readily occur, as there is a cost in getting people together, to bargain and reach an agreement. This is known as a 'transaction cost', which can be reduced when there are high levels of social capital between resource users. In many instances, the ability to reach agreement can be hindered by language and different cultural understandings, and is normally left to the government to facilitate. However, governments have limited capacities and resources, and negotiations may



Source: Google Earth

MPAs, like the ones mapped above, can help coastal fishing communities improve fisheries management

| Behavioural characteristic | Social Capital Indicators  |
|----------------------------|--|
| Co-operation               | Formal contact arrangements exist between different resource users of an MPA (artisanal fishers, tourism operators) and the institutions that govern the MPA<br>MPA management groups represent all MPA resource users, including fishers, NGOs, the private sector and the State governing institutions   |
| Compliance                 | MPA rules for fishing incorporate traditional knowledge/rules<br>MPA rules are adopted by fishers through traditional fishing rules, and are endorsed by community institutions<br>MPA regulatory mechanisms include fishers, NGOs, the private sector and the State governing institutions, including traditional fisher institutions   |
| Bargaining                 | Fishing rights within an MPA are secured with political support, and maintained through ongoing positive political alliances with the State<br>Fishing communities recognize the rights of new claimants to the fishery (tourism operators) within an MPA<br>New claimants to the fishery (tourism operators) recognize the fishing rights of the MPA's previous users (artisanal fishers) |
| Benefits Distributions     | Competition between different resource users leads to collaborative actions/activities that benefit everyone<br>MPA benefits are agreed on and shared amongst different resource users   |
| Compensation               | Negotiations on MPA compensation involves the State and all resource users with rights to the MPA, including those with migratory fishing rights   |

involve more than one Ministry, making the process susceptible to corruption, with government officials bargaining to benefit themselves rather than local fishers.

The issue of compensation and bargaining becomes more complex as the number of users who have a claim to the natural resource within an MPA, increase. The Mozambique case considered only two types of users: artisanal fishers and tourism operators; but in many coastal regions, more sectors can be involved. The importance of linking social capital is its requirement to consider political alliances, which should be established at all levels of government if an MPA is to work.

In the Mozambique case, the company managing the private MPA with rights to the marine resources for 99 years, has established strong political connections at the highest level of government but has failed to build political support locally. This has meant that many local fishers ignore the rules governing the privately managed MPA, knowing that their actions will not be penalized by local government agencies. This has led to conflicts over enforcement, and

sanctions by the State and the MPA management company, and has resulted in higher costs to patrol the MPA boundaries.

Social capital is not the only factor determining the sustainability of the natural resources within an MPA, as other political, economic and natural factors have an important influence on fishery sustainability. However, MPAs as property rights do represent a series of relationships between the different resources users, and if these relationships cannot be maintained, the MPA fails, and resource depletion ensues. In practice, social capital cannot be measured directly and has to be assessed through proxy indicators.

The table above lists some of the indicators used to identify positive levels of social capital in the Mozambique study. The indicators can act as a guide or checklist for any coastal community that is considering using MPAs to improve fishery management and attract tourism activities.

### Compliance

An example identified in the table is the issue of 'compliance' to rules governing MPAs. This can be illustrated from the Mozambique case by the different

management approaches adopted to address traditional fishing rules. The management regimes in the MPAs do not recognize traditional fishing rules, which has resulted in conflicts and low compliance with MPA rules. In the open-access areas outside the MPAs, traditional fishing rules are recognized by State governing institutions

**... it is important that there is greater contextual knowledge and understanding of the setting in which MPAs are to be used.**

and are integrated into several co-management initiatives. This is driven by the need to develop low-cost fishery management measures, and includes a closed fishing season for beach-seine fishing, and no fishing on religious holidays. The rules are sanctioned by the fishing community through collective ceremonies, and by the State through legislation. This approach has resulted in good compliance to traditional and State fishing rules, such as boat registration and fishing licensing. It has also encouraged some tourism operators to adopt the same approach to limit fishing in front of tourism lodges. Such arrangements are

independent of the MPAs and have been agreed on by fishers as traditional rules through collective ceremonies attended by representatives from tourism businesses. These arrangements function through mutually beneficial contacts, with tourism businesses providing boat transport to the community in exchange for compliance with the new fishing rules from fishers.

For policymakers and outside agencies, such as NGOs and international conservation groups, MPAs can appear to be a panacea for natural resource conservation. However, it is important that there is greater contextual knowledge and understanding of the setting in which MPAs are to be used. It requires a re-focus away from defining and delineating an MPA boundary, to gain better understanding of the social, ecological and political realities of a place. This would involve a critical examination of the relationships between existing resource users, the State and external interests, before an MPA can be effectively allocated. It is also imperative to consider if the allocation of an MPA is necessary to achieve environmental sustainability, as it may be as effective to invest in developing relationships between different resource users and the State, which are the building blocks for managing coastal fisheries. 3

CORNELIE QUIST



A pair-fishing craft off the Barra Peninsula, Mozambique.  
Local fishers ought to be compensated for the loss of their fishing rights within an MPA

#### For more



[www.wiomsa.org](http://www.wiomsa.org)

**Western Indian Ocean Marine Science Association (WIOMSA)**

[icsf.net/icsf2006/jspFiles/eastAfrica/index.jsp](http://icsf.net/icsf2006/jspFiles/eastAfrica/index.jsp)

**East Africa: A Small-scale Fisheries Perspective**

[www.gnundung.com/literature/nrm.html](http://www.gnundung.com/literature/nrm.html)

**Social Capital and Natural Resource Management**

# Work Together for Community-based Fisheries

**Rather than “bash” the Marine Stewardship Council, it would be better to work with it to help small-scale fishing communities prosper**

**T**he previous issue of *SAMUDRA Report* (No. 51, November 2008) contains an article entitled “Certifying the Certifiers” that makes the same argument we have heard for years: that ecolabelling initiatives somehow will disenfranchise small-scale fishermen. The author claims that the Marine Stewardship Council (MSC) ecolabel will only “maintain the status quo of industrial fisheries”.

Tell that to the hundreds of small-scale fishermen in Mexico and elsewhere who already benefit from certification of their fisheries under the MSC’s programme. For example, the MSC label is helping community-based spiny lobster fishermen from Puerto Abreojos on Mexico’s Baja Peninsula open new markets and get more money for their product. Their experience has encouraged other small-scale fishermen on Mexico’s Yucatán Peninsula likewise to seek certification of their lobster fishery in the Sian Ka’an and Banco Chinchorro Biosphere Reserves. More than 70 per cent of the spiny lobster caught in Mexican fisheries is exported to the United States and Europe, where ecolabels are increasingly sought by corporate seafood buyers, chefs and consumers alike.

Today, community-based fishermen in Mexico are getting more for their catch, and winning powerful support for better management of their fisheries through their participation in the MSC’s programme.

When the MSC was founded in the mid-1990s, Sebastian Mathew of ICSF and I debated at length whether

ecolabelling would ever help small-scale fishermen. Our exchange of letters was published in *SAMUDRA Report* (reproduced in “Fish Stakes”, *SAMUDRA Dossier*, 1998, available at [http://icsf.net/icsf2006/uploads/publications/dossier/pdf/english/issue\\_56/ALL.pdf](http://icsf.net/icsf2006/uploads/publications/dossier/pdf/english/issue_56/ALL.pdf)). In those days, neither of us had much actual experience on which to base our assertions. Today, we know a lot more. In the intervening years, the MSC has gone to great lengths to assure

**...the MSC has gone to great lengths to assure that its certification and ecolabelling programme will benefit community-based fisheries.**

that its certification and ecolabelling programme will benefit community-based fisheries.

In fact, a fishing community in northern Brazil once asked to have their fishery assessed under the MSC’s standards, knowing they wouldn’t pass muster. The fishermen then used the results of that pre-assessment to lobby their government to improve its management of the fishery so it could qualify for certification and access to new markets.

## **Small-scale fisheries**

Based on that and other experiences helping small-scale fisheries, the MSC’s Technical Advisory Board launched an effort to help certifiers determine how best to assess fisheries for which few

*This Letter to the Editor comes from **Michael Sutton** ([msutton@mbayaq.org](mailto:msutton@mbayaq.org)), Vice President and Director, Centre for the Future of the Oceans, Monterey Bay Aquarium, California, US*



MARINE STEWARDSHIP COUNCIL



A fisherman in Baja, California, with his catch of spiny lobster. Ecolabelling schemes can help small-scale fishing communities prosper

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data are available. The Sustainable Fisheries Fund, based in Sacramento, California, was set up to help small-scale fisheries defray the cost of assessment. Over the years, the MSC and its supporters have demonstrated that they not only care about small-scale fisheries and the communities they support, but are willing to help them qualify for certification.

I have great respect for ICSF and its mission. But to continue its tradition of “MSC bashing” based on vague, inaccurate assertions and tired rhetoric seems counterproductive. It seems to me that your constituents would be better served by working with the MSC to ensure that it does everything possible to help small-scale fishing communities prosper and foster more effective management of their fisheries. 3

**For more**[www.msc.org](http://www.msc.org)**Marine Stewardship Council**<http://www.montereybayaquarium.org/oa/>**Monterey Bay Aquarium**

# A Management Fantasy?

**Rights-based management of inland fisheries in the Netherlands through parcelling out areas of water may remain a bit of a fantasy**

**T**hey stole my fishing rights," says professional fisher Ruub Klop from Hardinxveld, a small riverside town in the Netherlands. The thieves in question are from the federation of anglers in the southwest of the Netherlands. It was in 1975 that Ruub suddenly discovered that the federation was renting the so-called 'scaled fish rights' from the State, in the same area for which he has a permit from the State to fish with legal professional fishing gear.

To understand this fisher's anger and frustration, we need to know more about the history of inland fishing in the Netherlands. In terms of geography, the Netherlands is not much more than the mouth of the river Rhine, spreading out in a huge delta. The inland water surface area is around 380,000 hectares (ha). Still, 10 per cent of the country's surface area is freshwater, although a large part of the lakes and, especially, the swamps was converted into agricultural land through the construction of polders. Inland fisheries is only a small sector in the Dutch economy, with some 500 persons employed in the capture fisheries. Still, it is seen as a valuable part of Dutch history and culture.

Like marine fisheries, inland fisheries in the Netherlands was, for a large part, an open-access fisheries until the early 1900s. A system of fishing licenses was in place for regulation purposes (some licenses were for free), but the main function of the licenses was taxation.

Anyone who wanted to catch fish with pots, traps, spears, fykes, nets or hooks-and-line, and could afford to buy a fishing licence, could do so. There were a few exemptions to the open-access character of the fisheries. Some

noblemen claimed the rights to the fish in the lakes and parts of the rivers in their territories. These noblemen did not fish themselves but handed over their rights to others as a kind of favour or sold them off permanently. Also, the economically important salmon fisheries was regulated by very expensive annual permits that were auctioned off to the highest bidder.

During the Second World War, when fishing at sea was too dangerous, inland fish became very important as a source of food. It was during that period that common inland fishing areas were subdivided into parcels that were

**Like marine fisheries, inland fisheries in the Netherlands was, for a large part, an open-access fisheries until the early 1900s.**

rented out by the State to individuals who were allowed to use professional fishing gear like pots, traps, nets and longlines. (The types of gear that are allowed are specified in the national fisheries laws.)

## **Overfishing**

In this way, the government prevented unlimited access to the resource so as to prevent overfishing in an era with many mouths to feed and few alternative income opportunities. Overfishing manifested itself mostly in the lakes and less so in the rivers. In the rivers, the decline of stocks of migratory fish like salmon and sea trout was, however, alarming. As always, fishers were blamed for the stock decline, but today we know that heavy pollution of

*This article is by **Arjan Heinen** (arjan.heinen@gmail.com), Fisheries Management Adviser, "Combinatie van Beroepsvissers" Dutch Association of Artisanal Inland Fishers*

NICO VAN DOORN



Fishermen on the river Rhine pulling in a large fyke net used to catch salmon. The system of fishing lots gave fishermen in the Netherlands the incentive to optimize their fisheries

eel, carp, pikeperch, pike, roach and bream. In the 1950s and 1960s, however, angling rapidly became an important recreational activity for industrial workers and retired citizens. Their numbers expanded rapidly. At first there was good harmony with the professional fishers, who often earned additional income from selling bait fish to the recreational fishers, but, after some time, disagreements arose on the amount of fish to be harvested and stocked. The anglers organized themselves rapidly, and some of the region-based organizations approached retiring professional fishers and offered to buy them out. In the case of the fishing rights owned by the noblemen, this meant transfer of rights to the anglers; in the case of leased fishing rights, a transfer from the fisher-lessee to the anglers' organization-lessee. Some, mostly retiring fishers without successors, accepted the offers.

In many places, buying out fishers was, however, not possible since the waters were rented by the local organization of professional fishers, not by individual fishers. Feeling themselves limited in their expansion moves, the organized anglers used their numbers—claiming more than a million members—to exert political pressure. The government was amenable to such pressure since it came with the seemingly valid argument that quality recreational activities for workers was an important aspect of maintaining the quality of life in a rapidly industrializing country. Also, politicians feared rubbing the anglers the wrong way during election time—their voting power was often exploited by the organizations of anglers. In the 1960s, the industry that developed around angling also began to assert a role. In 2000, the estimated value of the angling business was around seven times that of professional fishing and processing.

In 1972, the civil servants in the Department of Agriculture and Fisheries wrote a policy paper that, if implemented, would have increased the role of the anglers' organizations and, at the same time, allowed the continuation of fishing by small-scale professional fishers. The idea was that recreational fishers and professional

the rivers and the destruction of gravel banks are the main culprits. The gravel banks were the natural spawning grounds for migratory fish.

With the system of fishing lots, a professional fisher no longer had to fear that the small fish he let escape would be caught by other fishers in the same area. The system gave fishers the incentive to optimize their fisheries, at least for non-migratory species. Another advantage of the new renting system was that the period covered was six years. In contrast to yearly bidding, the fisher was ensured tenure of the area for a longer period. This made management measures like stocking of

**At first there was good harmony with the professional fishers but, after some time, disagreements arose on the amount of fish to be harvested and stocked.**

young eels (called glass eels) or carp feasible in the area.

The system of individual and group access rights through renting out parcels of water worked well for several years, while some regional governments initiated collective lease contracts. The professional fishers were the ones stocking and harvesting



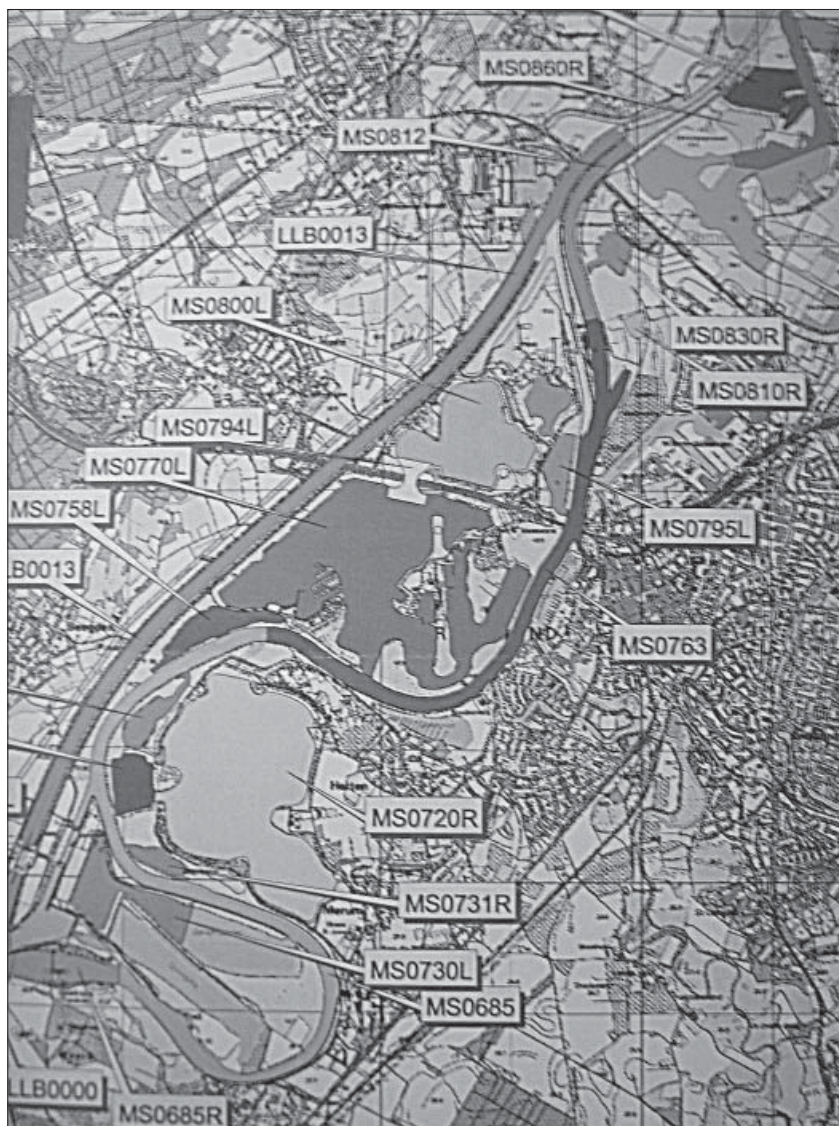
fishers could—and should—fish peacefully together in the same area, but that anglers should depend on professional fishers by leasing out fishing rights. The idea of anglers' organizations owning fishing rights and binding anglers to their organizations through the issuance of fishing permits was very attractive.

The civil servants introduced the idea of renting out split fishing rights in the same area. The rights to eel should go to the professional fishers, and the rights to scaled fish (all other species) should go to the anglers. In the 1970s and 1980s, the catches of eel and the prices fetched were so good (forming 90 per cent of the fishers' income) that other freshwater fish like pike and bream became less and less popular. Many old fishers were attracted to the idea of splitting their fishing rights in exchange for a sum of money.

Politically, it was not acceptable to withdraw fishing rights from the professional fishers and lease them out to the anglers' organizations without just compensation. Civil servants of the Department of Fisheries were, therefore, tasked by their superiors to approach retiring fishers and leaders of organized fishers with the request to turn over the scaled fishing rights to the organizations of anglers. The fishers were paid by the anglers' organization and the government for transferring the lease contract of the scaled fishing rights to the anglers. In the history of Dutch inland fishing this has come to be called the "splitting of fishing rights".

In case of the popular fishing grounds in the Rhine river estuary, the case was somewhat different. The professional fishers held the right to fish in this area through fishing permits issued to them by the national government. These permits allowed them the use of different fishing gear in the area, while the area itself was not rented out to them, as the State retained the fishing rights. The professional fishers did not mind individual anglers fishing in the same waters as they did. The government, however, accommodated the anglers' organizations by giving them the authority to issue fishing permits to anglers wanting to fish in the area.

In the case where fishing is regulated by the issuance of permits to fish in a certain area, it is the government that continues to be responsible for the day-to-day management of the fisheries in the area. The professional fishers could live with this management practice since the government never interfered in their fisheries, and the stocks in the area flourished with the improvement of the water quality in the 1970s. The anglers, however, complained and accused the professional fishers of overexploitation of the stocks of predatory fish. With the help of civil servants in the Fisheries Department, they manoeuvred to obtain the scale fishing rights. With the scaled fishing rights come the power and the obligation to manage the fisheries.



Map of part of the Meuse river, the Netherlands



ARJAN HEINEN



Members of the Dutch Association of Artisanal Inland Fishers fishing for eel. Netherlands' professional fishers are willing to take up the challenge of fisheries management

participation of representatives of professional fishers, anglers and water managers. The Department of Fisheries is not participating yet. Irrespective of the fishing rights, anglers and professional fishers should formulate common management objectives, including setting separate targets for harvests by anglers and professional fishers. The FMBs should also see to it that agreements, based on the objectives, are enforced. The process of arriving at a management plan is slow and involves many experiments where, through trial and error, a workable management system will hopefully evolve.

Currently, the Netherlands Professional Inland Fishers Organization is pushing the Fisheries Department to take final responsibility for the management agreements, a responsibility that, until now, they did not wish to take up. However, without a central authority that can compel parties to look beyond short-term profits and acquired fishing rights, the idea of different stakeholders coerced into an FMB jointly managing the fisheries will remain a fantasy. 3

Owning these rights, instead of the mere right to issue fishing permits to anglers, makes a huge difference. With the lease contract, control could be exercised over the professional fishers fishing for scaled fish.

At present, a very complicated legal arrangement governs the Rhine river estuary. On the one hand, it is the government that is responsible for the day-to-day management of the fisheries using professional gear. On the other, it is the organizations of anglers that are made responsible for the management of the scaled fisheries. They cannot seriously practise the management responsibility since they are not the ones regulating the professional fishing gear that catch the scaled fish. (Whether, if allowed to, these organizations could actually regulate the catch of the tens of thousands of anglers fishing with rods, is a question that can be tackled only in another article.)

The professional fishers also dislike the situation. They feel they are much more capable of managing the fisheries than the anglers and their organizations, and are willing to take up the challenge.

The government has now embarked on a project in which bigger areas, such as a province or a large water body, are managed by fisheries management boards (FMBs). This is a kind of co-management system with the

#### For more



[www.minInv.nl/portal/page?\\_pageid=116,1640354&\\_dad=portal&\\_schema=PORTAL](http://www.minInv.nl/portal/page?_pageid=116,1640354&_dad=portal&_schema=PORTAL)

**Netherlands Ministry of Agriculture, Nature and Food Quality**

[www.co-management.org](http://www.co-management.org)

**Fisheries Co-management: A Worldwide, Collaborative Research Project**

# Small is Nutritional

**A recent workshop in Dhaka, Bangladesh, focused on the role of small indigenous fish species in ensuring incomes and nutrition for the rural poor**

**T**he Regional Workshop on “Production and Conservation of Small Indigenous Fish Species (SIS) for Improved Food and Nutrition Security and Livelihoods of Rural Populations of South and Southeast Asia” was held during 3-4 December 2008 in Dhaka, Bangladesh. Its purpose was to bring together stakeholders to share knowledge and develop guidelines for sustainable technologies for production, management and conservation of SIS for the benefit of the people of the entire region. The workshop attracted around 40 participants from seven countries of South and Southeast Asia.

The one-and-a-half-day workshop, co-organized by the Department of Fisheries Management, Bangladesh, the Bangladesh Agricultural University and the Department of Human Nutrition, University of Copenhagen, Denmark, was a follow-up to an earlier workshop held in 2003.

The Director General, Department of Fisheries, Bangladesh, inaugurated the workshop, and Shakuntala Thilsted, Department of Human Nutrition, Faculty of Life Sciences, University of Copenhagen, Denmark, delivered the keynote address.

Fish is an important part of the daily diets of the populations of South and Southeast Asia. The age-old saying “Rice and fish makes a Bangladeshi” emphasizes that fish is an important constituent in Bangladeshi diet, next only to rice. Thilsted pointed out that international discussions on malnutrition stress the need to increase the availability of protein for the rural poor. Though protein is important from a nutritional point of view, micronutrients are the real growth limiting factors, she said.

Fish is generally seen as a rich source of both protein and micronutrients. SIS are especially important as a source of micronutrients as they are mostly eaten whole, along with the bones and sometimes the gut contents as well. They are rich in Vitamin A, zinc and calcium. The Dhaka workshop, Thilsted added, was also an opportunity to share the results of 10 years of research and extension on the contribution and production potential of culturing SIS in pond polyculture in Bangladesh. Such projects are now undertaken in countries other than Bangladesh, like Cambodia, India (in the Sundarbans region of West Bengal) and Nepal (in the Terai region). The projects are important for these countries whose

**Fish is generally seen as a rich source of both protein and micronutrients.**

populations figure high in the list of those suffering from malnutrition, she added.

Interventions on nutrition should understand local food patterns, Thilsted said. According to the Food and Agriculture Organization of the United Nations (FAO), countries of the Lower Mekong basin report an average per capita fish consumption of over 20 kg per year, while in India and Bangladesh, it is 4.7 kg and 13.6 kg per year, respectively.

Past projects, Thilsted pointed out, had focused mainly on the contribution of meat and milk to nutrition. Evidently, those projects were based on consumption patterns of the West.

*This report has been written by **Neena Koshy** (icsf@icsf.net), Programme Associate, ICSF*



NEENA KOSHY/ICSF

A scene from an experimental pond in the Bangladesh Agricultural University. Aquaculture of high-value species like the Indian carp shown above fetches rich dividends for fish farmers in Bangladesh

Fish and fish products, an important dietary component of the people of South and Southeast Asia, were largely ignored.

To be a meaningful source of nutrition, a food item should be nutrient-rich and frequently eaten. It is seen that in countries like Bangladesh and Cambodia, SIS constitutes 50-60 per cent of the fish eaten during the production season, which could be the case for other countries of South and Southeast Asia. The high intake of SIS by the local population of Bangladesh qualified it to be the target species for studies on malnutrition and the contribution of SIS in alleviating it.

However, analysis often fails to take note of the fish that are caught and consumed locally and those that contribute greatly to the nutritional intake of the local rural poor. SIS figures high in the fish intake of the rural poor, and about 140 of the 260 freshwater fish species in Bangladesh come under the category of SIS; yet they continued to be regarded as trash fish and thus failed to figure in the production statistics.

The Dhaka workshop saw many presentations on the role of SIS—especially the readily available and locally preferred mola (*Amblypharyngodon mola*)—in ensuring nutrition and livelihood security of the local population. The workshop also stressed the importance of conservation of SIS.

The various presentations at the workshop indicated that freshwater polyculture using nutrient-rich mola, along with other high-value species cultured for the market, like the Indian major carps (*catla*, *rohu* and *mrigal*) and the giant freshwater prawns (*Macrobrachium rosenbergii*), is very profitable. Since mola is a self-recruiting species, its culture does not incur recurring costs on fingerlings. The short time span between the fingerling stage of mola and its harvest stage, unlike the case of other high-value species, which take about eight to nine months to achieve harvestable size and thus permit only an annual harvest, allows mola to be harvested thrice a year. This scale of mola production has disproved the belief that introducing SIS in fish polyculture will decrease the output

of high-value species. On the contrary, it was seen that production of mola actually increased the total output from the ponds by 10 per cent.

Polyculture with SIS is not only profitable in terms of income generation, but also contributes to the health of the rural poor through the supply of nutrients and micronutrients. One of the workshop presentations noted that while 90 per cent of the high-value 'marketable' species were sold, 90 per cent of SIS went for household consumption. The lower price of mola also allowed poor households to afford the nutrient-rich fish.

The general lack of awareness of the advantages of SIS polyculture, combined with the misconception that culturing SIS will hamper the growth of larger species through feed competition, has been a major hurdle to the spread of SIS. Farmers used to clean the ponds of SIS before introducing the high-value species. This, over time, has drastically decreased the number of the once-abundant mola.

**Polyculture with SIS is not only profitable in terms of income generation, but also contributes to the health of the rural poor through the supply of nutrients and micronutrients.**

Efforts are now on in Bangladesh to conserve the nutrient-rich SIS through techniques like breeding. Wide extension work is also being carried out to spread the message of the importance of SIS as a source of cheap and readily available protein in rural diets.

#### **Efficient extension**

The Department of Fisheries (DoF), Bangladesh, and the Bangladesh Agricultural University (BAU) are complementing each other's work. While BAU carries out research on the importance of SIS, the DoF is instrumental in implementing SIS projects in the field through efficient extension officers who have strong bonds with the fish farming communities and have found great acceptance among them.



## Notes on a Field Trip

The SIS workshop was followed by a one-day field trip. A three-hour drive along a little bumpy but scenic road took us to the beautiful village of Mymensingh, situated on the western bank of one of the greatest rivers of the Indian subcontinent, the Brahmaputra. Several ponds, varying in size and shape, dotted the road to Mymensingh. The existence of so many ponds made it very clear that fish culture was being practised extensively in Mymensingh.

Mohammed Kamaluddin, the owner of one such pond, gave a short account of the type of fish culture he practised, the advantages and difficulties of mola polyculture, and the role played by the species in providing nutrition to his family. Kamaluddin's farm was divided into two portions, one small and the other, larger. In the smaller portion, he cultivated the exotic catfish from Thailand (*Pangasius sutchi*) using intensive monoculture, while the bigger portion (comprising about an acre of land) was used for carp and mola polyculture. Primarily agricultural land, the area was converted for aquaculture. Kamaluddin said that his earnings from aquaculture were about 10 times of what he used to earn from agriculture. He said that adding mola in polyculture with carps or other species did not require any additional feed inputs than what was already being fed to the bigger species. Mola does not hamper the growth of the larger species, he pointed out. Once recruited, mola can be cultured without incurring recurrent costs for stocking, as it is a self-recruiting species.

One problem that Kamaluddin faced in polyculture with mola was the mass mortality of the fish during winter. Professor Abdul Wahab, the country manager of the project on SIS in Bangladesh, indicated that further research needs to be done to understand this phenomenon.

However, the other advantage of mola in polyculture is the easy availability of fingerlings to stock the pond in any eventuality like the abovementioned mass mortality. Mola, though perfect for polyculture with carps and giant freshwater prawns, did not survive in intensive polyculture, where the ponds are heavily stocked with species like the exotic catfish, Pangas.

NEENA KOSHY/ICSF



The mola fish species cultured in the ponds of Bangladesh is an affordable source of protein for the poor

If the ponds are managed well, a harvest of around 40-60 kg of mola is possible every month, said Kamaluddin. The harvest was usually sold in local markets. Since mola is cheap and is part of the traditional diet, the rural poor favour it. Kamaluddin also added that a threefold increase in

the intake of SIS by farming households has been observed after the introduction of SIS in freshwater polyculture.

The market demand for mola has been increasing, he added. In some cases, mola was sold for as high a price as 200 takka (US\$3) per kg, while carps were priced at 150 takka (US\$2) per kg. Retailers also purchase mola for the larger markets in Mymensingh. This increasing market demand is good news for the proponents and practitioners of mola polyculture. However, the flip side of the situation is that the increase in prices that normally follows an increase in demand could result in the rural poor being denied access to their main source of micronutrient supply, the SIS.





Workers at a pond in the Bangladesh Agriculture University, where research on polyculture using small indigenous species is being carried out

The inclusion of SIS in polyculture not only increases the availability of protein and micronutrients for the culturing family but also increases their incomes (see box on field trip). Thilsted pointed out that the fish farming community would not accept a project if it guaranteed only nutritional security, while negatively affecting the total output of those species that are major income earners. Adding SIS to polyculture offers nutritional advantage without

hampering total production; it actually allows for increased output of greater nutritional value.

The model of SIS in polyculture could also be replicated in the Great Lakes area of Africa, where various SIS like *daaga* are found. Such projects are pertinent to other areas that face similar issues of poverty, livelihood and food security, large-scale versus small-scale fish culture, and export-oriented fish production and production for household consumption.

#### For more



[www.fao.org/fishery/aquaculture/en](http://www.fao.org/fishery/aquaculture/en)  
**Aquaculture Gateway: FAO**

[www.enaca.org](http://www.enaca.org)  
**Network of Aquaculture Centres in Asia-Pacific**

[www.worldfishcenter.org/wfcms/HQ/article.aspx?ID=64](http://www.worldfishcenter.org/wfcms/HQ/article.aspx?ID=64)  
**WorldFish Centre: Expanding Sustainable Aquaculture**

[www.bau.edu.bd](http://www.bau.edu.bd)  
**Bangladesh Agricultural University**

# Information Updates

ICSF has recently made available new information resources on fisheries and fishing communities, which can be accessed free at the ICSF website

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**ICSF Guidebook: Understanding the Work in Fishing Convention, 2007, now available in Arabic, and also in four Indian languages—Telugu, Marati, Gujarati, Malayalam** (*see box for links*)

This guidebook explains the Work in Fishing Convention, 2007, adopted in Geneva, in June 2007 at the 96th International Labour Conference (ILC) of the International Labour Organization (ILO).

This publication, which is also available in French and Spanish, will be useful for fishworkers, non-governmental organizations, policymakers, trade unions, researchers and others interested, to understand the possible benefits and implications of the Convention for artisanal and small-scale fisheries in developing countries.

**MPA Case Studies**

Case studies on social dimensions of marine protected area (MPA) implementation were presented at the India MPA workshop, and are now available online. These case studies document and analyze the experiences and views of fishing communities living in, or near, different MPAs in India. They suggest how livelihood concerns can be integrated into MPAs.

The case study titled “The Gulf of Kutch National Park and Wildlife Sanctuary” focuses on how industrialization has led to pollution and habitat degradation in the area.

“Social Dimensions of Sea Turtle Protection in Orissa, India: A Case Study of the Gahirmatha (Marine) Wildlife Sanctuary and the Nesting

Beaches of Rushikulya and Debi” focuses on the legal framework for sea turtle protection. It documents the social consequences of turtle protection measures on fishing communities, and analyzes their experiences with various aspects of sea turtle protection.

“Fishing Community Issues in the Sundarban Tiger Reserve (STR)” provides an overview of the legal framework, and design and implementation of fishing regulations, and documents and analyzes the experiences of local fishing communities in the Sundarbans region of West Bengal, India. It explores ways to balance livelihood concerns with conservation.

The proceedings of the India MPA workshop, containing the prospectus, report and the consensus Statement, is also available online. The site has also been updated with news clippings and posters prepared for the workshop.

**Statements and Presentations**

The Statements page on the ICSF website has recently been updated with statements made by civil society organizations at the 28th session of the Committee on Fisheries (COFI) of the Food and Agriculture Organization of the United Nations (FAO).

The Statements were made on the Agenda Item 9 that focused on Securing Sustainable Fisheries: Towards responsible fisheries and social development. Statements were also made on implementation of the Code of Conduct for Responsible Fisheries (CCRF), and on Agenda Item 6 on Decisions and Recommendations of the Fourth Session of the Sub-

All ICSF ([icsf@icsf.net](mailto:icsf@icsf.net)) information resources can be accessed for free at [www.icsf.net](http://www.icsf.net)



committee on Aquaculture. These can be accessed online.

Two new presentations made by ICSF staff at different meetings have also been uploaded to the site: (i) "Rights-based Management: Role of Fisher Communities in MCS in India", by Sebastian Mathew, made at the GOI/BOBP-IGO National Workshop on Monitoring, Control and Surveillance, December 2008; and (ii) "Women in Post-harvest Fisheries: An Asian Situationer", presented by Chandrika Sharma, at the Southeast Asia Conference on Women in Fisheries, December 2008.

### **SAMUDRA News Alerts – Comment Feature Activated**

A new feature has been introduced in the *SAMUDRA* News Alerts, by which subscribers can comment on the stories carried in the Daily News Alerts. These comments will be compiled and made available on the ICSF website. Links to the comments will also be provided in the weekly digest.

### **Legal Website**

The international legal instruments resource website of ICSF ([legal.icsf.net](http://legal.icsf.net)), has been recently updated with the Optional Protocol for International Covenant on Economic, Social and Cultural Rights (ICESR). In addition, information on ratification and signatories has also been updated for all the binding Conventions. The section on related documents carries information on the latest reports and documents published by the secretariats of these legal instruments.

### **ICSF Guidebook: Understanding the Work in Fishing Convention, 2007**

#### **Arabic**

[icsf.net/icsf2006/uploads/publications/book/pdf/english/issue\\_8/ALL.pdf](http://icsf.net/icsf2006/uploads/publications/book/pdf/english/issue_8/ALL.pdf)

#### **Marathi**

[icsf.net/icsf2006/uploads/resources/usefulDocs/docs/english/%3Cr238555302829%3EILO%20Marathi.pdf](http://icsf.net/icsf2006/uploads/resources/usefulDocs/docs/english/%3Cr238555302829%3EILO%20Marathi.pdf)

#### **Telugu**

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#### **Gujarati**

[icsf.net/icsf2006/uploads/resources/usefulDocs/docs/english/%3Cr238555338750%3EILO%20Gujarathi%20Text.pdf](http://icsf.net/icsf2006/uploads/resources/usefulDocs/docs/english/%3Cr238555338750%3EILO%20Gujarathi%20Text.pdf)

#### **Malayalam**

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### **MPA Case Studies**

#### **The Gulf of Kutch National Park and Wildlife Sanctuary**

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#### **Social Dimensions of Sea Turtle Protection in Orissa, India: A Case Study of the Gahirmatha (Marine) Wildlife Sanctuary and the Nesting Beaches of Rushikulya and Debi**

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#### **Fishing Community Issues in the Sundarban Tiger Reserve (STR)**

[icsf.net/icsf2006/uploads/resources/usefulDocs/docs/english/%3Cr238387378484%3ESundarbans\\_report\\_2march\\_kg.pdf](http://icsf.net/icsf2006/uploads/resources/usefulDocs/docs/english/%3Cr238387378484%3ESundarbans_report_2march_kg.pdf)

#### **India MPA Workshop Proceedings: Social Dimensions of Marine Protected Area Implementation in India: Do Fishing Communities Benefit?**

[www.icsf.net/icsf2006/jspFiles/mpa/indiaWorkshop.jsp](http://www.icsf.net/icsf2006/jspFiles/mpa/indiaWorkshop.jsp)

### **Statements and Presentations**

#### **Agenda Item 6 on Decisions and Recommendations of the Fourth Session of the Sub-Committee on Aquaculture**

[www.icsf.net/SU/stmt/O](http://www.icsf.net/SU/stmt/O)

#### **Rights-based Management: Role of Fisher Communities in MCS in India**

[icsf.net/icsf2006/uploads/resources/presentations/pdf/english/1238566336136%3EBOBP-IGO\\_MCS\\_Workshop\\_Mathew\\_2.pdf](http://icsf.net/icsf2006/uploads/resources/presentations/pdf/english/1238566336136%3EBOBP-IGO_MCS_Workshop_Mathew_2.pdf)

#### **Women in Post-harvest Fisheries: An Asian Situationer**

[icsf.net/icsf2006/uploads/resources/presentations/pdf/english/1228912215761%3ESeafish\\_ICSF\\_nopic%5B1%5D.ppt](http://icsf.net/icsf2006/uploads/resources/presentations/pdf/english/1228912215761%3ESeafish_ICSF_nopic%5B1%5D.ppt)



## ECUADOR

### New law

On 17 February 2009, the National Assembly of Ecuador approved a Bill on food sovereignty, which aimed to ensure self-sufficiency in healthy, nutritious and culturally appropriate food for the people of the country. But the process received a setback on 20 March, when President Rafael Correa blocked several of the provisions of the new law, one of which stipulated that illegally acquired lands in coastal areas, including mangrove forests, should be handed back to the State. This about-face is reportedly due to pressure from Ecuador's aquaculture lobby.

Despite the official recognition of the right to food as integral to the right to life and health, one in five Ecuadorian children still

suffer from malnutrition. The new law on food sovereignty was meant to address this contradiction. It was the outcome of the deliberations of a Food Sovereignty Commission, composed of public functionaries and civil

to address issues of land and rural development through a process of wide-ranging public consultation.

The new law specifies that lands illegally occupied, mainly by the aquaculture industry, should be handed back to the

parliamentarian, is evidence of the pressure and influence exercised by the shrimp lobby, which does not want the illegally occupied lands to revert to the State. "We must not allow this illegal activity to be regularized", Ávila stated.

The new law defines food sovereignty as the "right of people to define their own food production, storage, distribution and consumption policies and strategies, in line with the right to adequate, healthy and nutritious food for the entire population, respecting their cultures and their diversity of food production methods, trade and the management of rural areas by *campesinos*, fishers and indigenous people, with women playing a fundamental role".

The main source of animal, vegetable, aquatic and fishery foods for food sovereignty should be from national production that is environmentally sustainable, inclusive and cross-cultural; with priority given to small- and medium-scale producers, so that dependence on external food supplies can be reduced. Artisanal fishing is defined as an activity "carried out by people using family labour, with low levels of investment, and generally undertaken in coastal areas and lakes".

Hopefully, the course of the next year will see the full institution of the new law and its provisions, particularly the restoration and rehabilitation of mangrove areas. Supporters of the new law say that the State should not give with one hand, and take back with the other.

For more:

Food Sovereignty website of Ecuador's National Assembly [http://asambleanacional.gov.ec/blogs/soberania\\_alimentaria/](http://asambleanacional.gov.ec/blogs/soberania_alimentaria/)  
C-CONDEM website <http://www.ccondem.org.ec/boletin.php?c=594>  
El Mercurio "Observaciones a ley de Soberanía Alimentaria" 21/03/2009 [http://www.elmercurio.com.ec/web/titulares.php?seccion=LpdyzLB&codigo=9DyJgOO2xi&nuevo\\_mes=03&nuevo\\_ano=2009&dias=21-icias=2009-03-21](http://www.elmercurio.com.ec/web/titulares.php?seccion=LpdyzLB&codigo=9DyJgOO2xi&nuevo_mes=03&nuevo_ano=2009&dias=21-icias=2009-03-21)

—compiled by Brian O'Riordan



society representatives. The Commission was given a year to formulate legislation

State for the rehabilitation of mangrove areas. This, according to Abél Ávila, a

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## ORGANIZATIONAL PROFILE

### Ecoceanos

Founded in 1998, the Ecoceanos Centre for Conservation and Sustainable Development is an independent civil society organization (CSO) based in Santiago de Chile, Chile. Its objectives include the conservation and sustainable management of coastal and oceanic ecosystems and resources; strengthening the informed and proactive participation of civil society in resource management; and the sustainable development of artisanal fishing and coastal communities and economies in the region.

Chile's economy and the well-being of its people depend highly on the freshwaters, marine resources and ecosystems along its 4,200-km coastline. Ecoceanos campaigns to raise awareness on marine issues, and to mobilize civil society in defence of sustainable and equitable development.

Ecoceanos functions at national, regional and international levels, and works closely with fishing, coastal and indigenous people's representatives. Over the last 10 years, Ecoceanos has campaigned against the privatization of fisheries and coastal resources through the implementation of the individual transferable quota (ITQ) system under the 2002 General Law on Fisheries and Aquaculture, and the transformation of the southern coastal areas into salmon enclaves.

In October 2008, the Presidential Decree that established the Chilean exclusive economic zone (EEZ) as a sanctuary for all whale species

was the outcome of a long Ecoceanos campaign, conducted with the National Confederation of Artisanal Fishers (Conapach) and with the Cetacean Conservation Centre (CCC). It resulted in popular support for an indefinite ban on hunting of all cetaceans in an area of 3.5 mn sq km in the Southeast Pacific.

A campaign in the Patagonian region, supported by artisanal fishing groups and CSOs, called for a moratorium on the expansion of salmon aquaculture and the grant of 1,170 new concessions in the Magellan region of southern Chile, so as to regulate the salmon farming industry and protect marine biodiversity, public health and the rights of coastal communities and artisanal fishers.

Ecoceanos is also pushing ahead with a campaign to regulate the Antarctic krill fishery, as part of the Antarctic Krill Campaign of the Antarctic and Southern Ocean Coalition (ASOC). The expanding krill fishery, targeted particularly by Norwegian companies, provides feed for Chile's growing salmon aquaculture sector.

Ecoceanos has also taken an active role in discussions aimed at establishing a new Regional Fisheries Management Organization (RMFO) for the South Pacific. In 2007, as part of its work with the Deep Sea Coalition, Ecoceanos helped secure a ban on bottom-trawling operations in the high seas of the Southeast Pacific.

For more: [www.ecoceanos.cl](http://www.ecoceanos.cl)



EXCERPTS

## The State of World Fisheries and Aquaculture-2008 (SOFIA)

Excerpts from *The State of World Fisheries and Aquaculture - 2008* (SOFIA) from the Fisheries and Aquaculture Department of the Food and Agriculture Organization of the United Nations (FAO):

The total world fish production for 2006 was about 143.6 mn tonnes, of which 92 mn tonnes was from capture fisheries and 51.7 mn tonnes from aquaculture. Capture fish production decreased from 93.2 mn tonnes in 2002 to a peak of 94.6 mn tonnes in 2004, declining to 92 mn tonnes in 2006. The estimated first-hand value of global capture fisheries production amounted to US\$ 91.2 bn, representing a 4.5 per cent growth over the value recorded for 2005. Asia, contributing to over 52 per cent of the global capture fisheries production in 2006, has the largest share. The top 10 countries are China, Peru, United States of America, Indonesia, Japan, Chile, India, Russian Federation, Thailand and Philippines.

Marine capture fisheries production was about 82 mn tonnes in 2006, with China, Peru and United States of America remaining as top producing countries.

China remains by far the largest producer, with reported fisheries production of 51.5 mn tonnes in 2006, of which 17.1 mn tonnes is from capture fisheries and 34.4 mn tonnes is from aquaculture. Asian countries accounted for 52 per cent of the global capture production.

Aquaculture is also heavily dominated by the Asia-Pacific region, which accounts for 89 per cent of production in terms of quantity and 77 per cent in terms of value. Capture fisheries and aquaculture supplied the world with about 110 mn tonnes of food fish in 2006; of this, aquaculture accounted for 47 per cent.

From a production of less than 1 mn tonnes in the early 1950s, production in 2006 was reported to have risen to 51.7 mn tonnes, with a value of US\$78.8 bn.

Freshwater environment contributes 58 per cent by quantity and 48 per cent by

value; marine environment contributes 34 per cent of production and 36 per cent of total value; and brackishwater production, while it represented only 8 per cent of production in 2006, it contributed 16 per cent of the total value, reflecting the prominence of high-value crustaceans and finfish. The top ten producers in terms of quantity are China, India,

But globally, the number of people engaged in capture fisheries declined by 12 per cent in the period 2001-06. The major increases in the total number have come from the development of aquaculture activities. In 2006, the estimated number of fish farmers are nearly 9 mn, with 94 per cent operating in Asia. This figure is indicative only, as some countries do not collect

that for each person employed in the primary sector, there could be four employed in the secondary sector (including fish processing, marketing and service industries), indicating employment of about 170 mn in the whole industry.

However, each jobholder, on average, provides for three dependents or family members; thus, taking account of dependents, about 520 mn people could be dependent on the sector, or nearly 7.9 per cent of the world population.

The number of fishing vessels powered by engines is estimated to have been about 2.1 mn in 2006, of which almost 70 per cent were concentrated in Asia. Almost 90 per cent of the motorized fishing vessels are less than 12 m long, particularly dominant in Africa, Asia and the Near East.

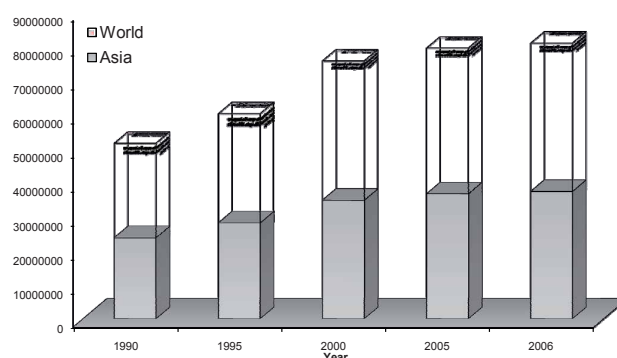
In 2007, about 28 per cent of the stocks were either overexploited (19 per cent), depleted (8 per cent) or recovering from depletion (1 per cent), and thus yielding less than their maximum potential owing to excess fishing pressure.

A further 52 per cent of stocks were fully exploited and therefore, producing catches that were at or close to their maximum sustainable limits, with no room for further expansion. Only about 20 per cent of stocks were moderately exploited or underexploited, with perhaps a possibility of producing more.

Most of the stocks of the top 10 species, which together account for about 30 per cent of world marine capture fisheries production in terms of quantity, are fully exploited or overexploited.

Fish and fishery products are highly traded, with more than 37 per cent (live weight equivalent) of total production entering international trade as various food and feed products. World exports of fish and fishery products reached US\$ 85.9 bn in 2006.

World Fishers and Fish Farmers



Vietnam, Thailand, Indonesia, Bangladesh, Chile, Japan, Norway and Philippines.

In 2006, an estimated 43.5 mn people were directly engaged, part-time or full-time, in primary production of fish either in capture from the wild or in aquaculture, and a further 4 mn people were engaged on an occasional basis (2.5 mn of these in India). They account for 3.2 per cent of the 1.37 bn people economically active in agriculture worldwide.

In the last three decades, employment in the primary fisheries and aquaculture sector has grown faster than the world's population and employment in traditional agriculture. Eighty-six per cent of fishers and fish farmers worldwide live in Asia, with China having the greatest numbers (8.1 mn fishers and 4.5 mn fish farmers). In 2006, the other countries with a significant number of fishers and fish farmers were India, Indonesia, the Philippines and Vietnam. Most fishers and fish farmers are small-scale, artisanal fishers, operating on coastal and inland fishery resources.

employment data separately for the two sectors, and some other countries' national systems do not yet account for fish farming.

While the number of people employed in fisheries and aquaculture has been growing steadily in most low-income and middle-income countries, employment in the sector has fallen or remained stationary in most industrialized economies. In 2006, the estimated number of fishers in industrialized countries was about 860,000 representing a decline of 24 per cent, compared with 1990.

In addition to fishers and fish farmers involved in direct primary production of fish, there are people involved in other ancillary activities, such as processing, net and gear making, ice production and supply, boat construction and maintenance, manufacturing of fish processing equipment, packaging, marketing and distribution.

Others are involved in research, development and administration connected with the fishery sector. No official data exist on the estimated numbers of people employed in these activities. It has been estimated

## WEBSITE

### Voices from the Fisheries <http://voices.nmfs.noaa.gov/index.html>

Oral history database documenting the human experience of the fisheries of the United States compiled by the National Marine Fisheries Services of the *National Oceanic and Atmospheric Administration* (NOAA).

The Voices from the Fisheries Database is a central repository for consolidating, archiving, and disseminating oral history interviews related to commercial, recreational, and subsistence fishing in the United States and its territories. Each story archived here provides a unique example of this connection collected from fishermen, their spouses, processing workers, shoreside

business workers and operators, recreational and subsistence fishermen, scientists, marine resources managers, and others.

Separately, each history provides an indepth view into the professional and personal lives of individual participants. Together, they have the power to illuminate common themes, issues and concerns across diverse fishing communities over time. The Voices from the Fisheries Database is a powerful resource available to the public to inform, educate, and provide primary information for researchers interested in local, human experience with the surrounding marine environment.

## BOOKSHELF

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### Overfertilization of lakes

THE ALGAL BOWL: OVERFERTILIZATION OF THE WORLD'S FRESHWATERS AND ESTUARIES David W Schindler and John R Vallentyne, Earthscan, London. pbk. 334 pp. 2008. ISBN 978-1-84407-623-9

In this book, two of North America's leading water scientists have joined hands to focus on eutrophication—the overfertilization of lakes with nutrients and the consequent changes—and massive algae bloom. A follow-up to the first edition, titled “The Algal Bowl: Lakes and Man”, the present work revises and updates the findings of the earlier, pathbreaking study. Five chapters of new research update scientific data, including the effect of eutrophication on

ocean estuaries.

Pointing to algal blooms and fish kills in lakes, the authors stress how the Algal Bowl can disrupt ecosystems, displace human populations and cause economic hardship, making potable freshwater and productive fisheries a thing of the past in many parts of the world.

Though focused mostly on North America, the book reveals the dangers of phosphates in freshwater systems anywhere in the world. Having explained the science behind eutrophication, the authors then go on to offer strategies and prescriptions to tackle the problem of protecting entire water systems from eutrophication and algal blooms.

## VERBATIM

Fishing is no longer about catching what you can using a skill; it is about selectivity and technology. And that is why much of it has disappeared.

—MIKE SMYLLIE  
IN 'HERRING: A HISTORY OF THE SILVER DARLINGS'

## FLASHBACK

### Deal with hunger and poverty first

Coastal and indigenous fishing communities undoubtedly have a long-term stake in the protection and sustainable use of biodiversity, given their reliance on coastal and marine biodiversity for livelihoods and income. It should not, therefore, come as any surprise that several decades before issues of conservation and sustainability of coastal and marine resources became part of the international agenda, fishworkers in many countries of the developing world were drawing attention to, among other things, the negative impacts of pollution, uncontrolled expansion of industrial fisheries and aquaculture, and technologies such as bottom trawling for shrimp, both on coastal biodiversity and on their livelihoods.

Against this backdrop, the commitment by governments to significantly reduce the current rate of loss of marine and coastal biological diversity by 2012 can only be welcomed.

Equally to be welcomed is the stress on participation of indigenous and local communities, on protecting the preferential access of artisanal and small-scale fishworkers to traditional fishing grounds and resources, and on ensuring that the programme of work directly contributes to poverty alleviation.

For artisanal and small-scale fishworkers, this could well mean opportunities to address issues relevant to both their livelihoods and biodiversity protection. More concretely, it could mean an opportunity to draw attention to, and regulate, the pollution of inshore waters caused by effluents and tailings from industries, mining activities and fishmeal plants. It could mean the opportunity to strictly regulate bottom trawling, particularly in tropical, multispecies fisheries. It could mean opportunities to regulate the destruction and pollution caused by industrial forms of aquaculture. It could also mean that the initiatives taken by fishworkers to regulate and manage their resources are accorded due legal, institutional, financial and other forms of recognition.

All this will, however, remain in the realms of wishful thinking if governments do not put in place an enabling legal framework that recognizes, protects and strengthens the rights of coastal fishing communities to access and use biodiversity in a responsible manner, to pursue sustainable livelihoods and to participate in decision-making and resource management processes at all levels. The very real danger of imposing prefabricated models of marine protected areas, which do not take into account local histories and knowledge systems, needs to be avoided at all costs. There is enough available experience to indicate that non-participatory conservation initiatives, which do not draw on and recognize local knowledge and management initiatives, are counterproductive not only in terms of protection of biodiversity, but also from the point of view of avoiding further exacerbation of poverty in communities well known for their economic and social vulnerability. As celebrated Canadian geneticist and environmentalist David Suzuki stressed in his keynote presentation to COP7, “If we don't deal with hunger and poverty, we can forget the environment; people have other priorities”.



—from the Comment in SAMUDRA Report No. 37, March 2004





## Endquote

### The Sea

**A** *single entity, but no blood.  
A single caress, death or a rose.  
The sea comes in and puts our lives together  
and attacks alone and spreads itself and sings  
in nights and days and men and living creatures.  
Its essence—fire and cold; movement, movement.*

*—Pablo Neruda (Translated by Alastair Reid)*



