



Report from the Fisheries and Aquaculture Workshop of the East Asia Seas Congress
8-9 December 2003

Saving the Fisheries of the East Asia Seas

Imagine in your mind the coasts of East Asia. Chances are you will think of fishing villages built on stilts over crystal clear waters, colorful fish swimming through a maze of corals, dark rich mangrove-lined rivers flowing into the sea, coconut trees fringing beaches where large, lumbering turtles come some nights to lay their eggs, bustling wet markets teeming with fresh fish, shrimp and cockle displays and open-air seafood eateries selling an amazing array of tasty, and often spicy, food from the sea. In archipelagic nations, such as the Philippines and Indonesia, the sea dominates.

Today, the fishing villages, beaches, coral reefs, mangroves, wet markets and seafood stalls are being replaced by ports, shopping malls, manufacturing industry, high rise apartments, tourist resorts, fish ponds and cages, and too often the waters are being fouled by the human sewage and industrial waste of coastal populations that are growing faster than those in the hinterland. All of these developments are taking their toll on the fisheries. To compound the problems of the fisheries, the coasts are also home to large fleets of fishing boats of all sizes and a proliferation of fishing that is over-exploiting the very resource that has long sustained the region's love for seafood.

This changing reality creates the current dilemma for fish and the people who rely on them. According to Dr Purwito Martosubroto, keynote speaker at the Workshop (and recently retired from the FAO Fisheries Department in Rome), "fisheries provide jobs for 12 million people in the region and food for almost the entire population of 1.5 billion people". The very population growth that has fuelled the dramatic transformation of the coastal regions in East Asia is also part of the huge growth in market demand for the products of the sea and the rise in fish prices projected by the WorldFish Center in its groundbreaking study "Fish to 2020".

The fisheries and aquaculture experts who met during the East Asia Seas Congress 2003 in Putrajaya, Malaysia drew attention to the numerous existing agreements and codes for improved management of national and regional fisheries resources. Prominent among these are the United Nations Convention on the Law of the Sea (UNCLOS), Agenda 21, the FAO Code of Conduct for Responsible Fisheries, and the recent commitments at the World Summit for Sustainable Development in Johannesburg to restore depleted fish stocks to maximum sustainable yields by 2015, plus national laws such as the comprehensive Fisheries Code of the Philippines. The experts urged governments to take these good instruments and act now if they wished to save the fisheries.

Senator Leticia Shahani co-chaired the fisheries session at the Workshop. She brought to the meeting a wealth of social development experience in the UN system and a 12 year term in the Philippine Senate where she authored, negotiated and got the 1998 Fisheries Code of the Philippines passed by the legislature, thus ushering in a new era in fisheries management. She said, "to protect our natural and cultural heritage in the East Asia seas, we must reduce fishing activities, build socially just and rights-based fisheries and aquaculture systems, promote locally feasible livelihoods for fishing communities and take urgent action to improve national policy frameworks for aquaculture".

To save the fisheries of the seas of East Asia, the first critical step must be to reduce all fishing activities to sustainable levels. This is a formidable challenge but there are some proven methods for doing it. Some of the actions needed are obvious, such as cracking down on illegal fishing by unlicensed cross-border raiders and all types of destructive fishing, including dynamite and cyanide fishing. Stopping illegal fishing is not easy. One of the innovative schemes for policing illegal fishing in the Philippines is the *bantay dagat* (literally "safeguarding the sea") scheme of volunteer fish wardens. Operating since 1979, this scheme is a good example of how local fishing communities can be technically and legally empowered to help protect the very resources on which they rely.

Policing illegal fishing is not the only way that coastal communities can help make fishing more sustainable. Given incentives, scientific and legal support, and political encouragement, they can also initiate and control new



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approaches to restoring fish stocks. Over the last three decades, more and more success stories are emerging of the power of "no take" marine reserves to bring back depleted and over-fished fish populations. In the Philippines, Dr Angel Alcala has created worldwide interest in his rigorous scientific studies on the work of the communities on Apo and the Sumilon Islands that documents the effects of quite small reserves. Dr Alcala said, "In 1974 on Apo Island, the villages set aside just 10 per cent of their coral reef area as a marine reserve. We have conducted an intensive scientific and social study on what has happened since and the results are remarkable. Not only has the density of fish in the 'no take' reserve increased dramatically from less than 5 kg per 1 000 sq meters to over 120 kg, but the catch outside the reserve has gone up and the reserve has created stability in the catches. On other unprotected reefs, the catch is unpredictable from year to year. The local *bantay dagat* has done a good job. As a result of the community's overall efforts together in the last 30 years, it has gone from being a sleepy village to a progressive town on Apo Island. The evidence is convincing others to follow suit in this region of the Philippines and more than 10 new reserves have been established in the last five years. The evidence I have seen here and elsewhere leads me to believe that in the end, it is the people who decide what reefs and species of fish will survive".

However, despite the promise of these local solutions, fishing is generally still increasing in intensity in most parts of East Asia. More ways are needed to reduce the numbers of boats, fishers and fishing gear in every country. Governments are urged to look at the long-term returns of buying out some fishing capacity and compensating the fishers to start in new occupations. Economic studies show that buy-outs can be "bankable" because of the good returns possible when the fish stocks are restored to sustainable levels. Again, as with the introduction of marine reserves, gaining the trust and cooperation of the communities will be an essential part of the solution.

When fish stocks are severely depleted or supporting habitats such as mangroves and coral reefs are ruined, then ecosystem interventions may even be needed to restock the species and restore the habitats for there to be any appreciable improvement in production. Preliminary efforts are underway to restore the stocks of giant clams and some species of sea cucumbers in the Philippines and Vietnam.

Many fishing communities of the region struggle to maintain a decent standard of living, not just because their fish stocks are declining, but also because they carry the additional burden of being geographically remote from mainstream education, health and other services such as those for family planning and HIV/AIDS prevention. Large families and disease burdens can place additional obstacles in the way of progress in these communities.

The lack of political voice and long-term secure access to fish resources for many fishing peoples is one reason the Fisheries and Aquaculture Workshop of the East Asia Seas Congress 2003 urged governments to build socially just, rights-based fisheries systems. New legal frameworks are needed to establish and protect user rights, but the pay-off is

that people would have the incentives to nurture their local fisheries resources for the future rather than over-exploit today in competition with other users. Often fishing rights already exist in an informal way, but these informal rights can be easily lost, e.g. when illegal fishers take over a fishing ground or when tourist and urban development encroaches on fishing grounds. There are now numerous good examples of fishing communities managing their own fisheries resources and habitats, often supported by local governments, academe and non-government organizations. At the base of these successes is some form of rights. In establishing rights-based systems, national governments can build on these grassroots movements by helping create the political will and just administration for small-scale fishing communities.

In summing up the outcomes of the Workshop, Senator Shahani said, "at the national level, and well above the local government unit level, government can promote trust, equity and gender balance. Finally, I have noticed in all my years working for the UN and for the Philippines, that fisheries often has few advocates in the Congress and among the politicians. We need a strong and sustained advocacy for fisheries. To this end, the "Fish for All" campaign, for which I sit on the Global Steering Committee, is one good example of how informed opinions of the sustainable fisheries options are being brought out to the widest audience of decision-makers".

Senator Shahani said that the workshop recognized that, in addition to reducing fishing activities and creating socially just fishing rights systems, it was necessary to promote locally feasible, alternative livelihoods for many people in fishing communities. "What these would be could range from small-scale aquaculture, livestock rearing and other agriculture enterprises, artisanal trades, tourism, etc. A serious movement to promote opportunities for partnerships between the private sector, government and local communities could go a long way to supporting investments in sustainable livelihoods for former fisherfolk".

Worldwide, many think that aquaculture will be the main way for meeting the increasing demand for fish in the future. Dr Mahfuz Ahmed of the WorldFish Center presented the results of recent studies by the Center that indicated that developing countries, especially those in East Asia, would be at the forefront of the increasing demand for fish. "All the fish production scenarios we modeled indicated that the price of fish will increase to 2020", said Dr Ahmed. "The only production sector that can help to keep down the price of some fish commodities will be aquaculture". However, the "Fish to 2020" report that he presented also warned that aquaculture carried many dangers in terms of its environmental and social impacts and these would need to be carefully managed.

Indeed, discussion during the Workshop brought out some of the opposing views held on aquaculture, in particular the controversy still surrounding shrimp culture. In general, the attendees recognized that socially and environmentally responsible aquaculture can improve food production, reduce the price of fish, alleviate poverty and sustain livelihoods. On the other hand, poorly planned and managed aquaculture



results in operations that fail to recover the full social and environmental costs, and should, therefore, be discouraged. This includes some forms of shrimp culture that have been used in the region. Several efforts to help make aquaculture, including shrimp farming, more sustainable were recognized, especially the regional and international agreements and, in particular, the FAO Code of Conduct for Responsible Fisheries (where Article 9 is on Aquaculture).

With all these factors in mind, the Workshop participants concluded that the single most urgent action that governments should take was to improve and revise national policy frameworks for aquaculture. Aquaculture development often seems to have raced ahead of sound scientific and technical understanding of culture methods and of local environment protection and governance requirements for this fast emerging sector of fish production.

The first step to more responsible aquaculture is to promote participation of local communities in aquaculture and to develop systems of stakeholder rights. If local residents were to participate, then tenurial rights over natural resources for aquaculture, such as land rights and rights over access to water, would have to be worked out. Local capacity for aquaculture participation and governance should be built through providing access to information on co-management opportunities and rights as well as access to technical information.

Zoning arrangements, such as those used in many integrated coastal management sites supported by the Partners in Environmental Management of the Seas of East Asia, offered promise of protecting the environment while permitting aquaculture development. In addition, a coastal management approach that facilitates community consultation and negotiations with local government could also prove beneficial for aquaculture development. Integrated coastal management offers additional promise for enabling safe aquaculture development as one of its prime objectives is to prevent degradation of coastal habitats. Thus, sound coastal management can help to create aquaculture enterprises over large areas by ensuring that coastal waters are clean enough for aquaculture and by rehabilitating degraded habitats. The East Asia Seas Congress 2003 heard details of the progress of integrated coastal management schemes and success stories, such as in Xiamen in China where proper zoning of aquaculture sites relative to other coastal area uses and improved water quality have paved the way for safer and more sustainable aquaculture production.

As an emerging sector, aquaculture is in need of government institutional and legal support. This support could be in the form of market incentives that reward responsible practices and resource use and imposes fees and penalties on socially irresponsible enterprises. Governments could also encourage large aquaculture enterprises and enterprises in other sectors using the water catchments to be "good citizens" through the adoption of socially responsible practices. Governments in the East Asia region should recognize the growing opportunities for South-South trade in low-value aquaculture fish species such as carp and tilapia and encourage such food security enhancing and economic opportunities in their regional trade negotiations. Frequently this dimension of intra-regional trade is overlooked as governments focus more on North-South trade deals.

Experience has shown that small-scale producers can be organized to achieve full entry into aquaculture, either through work with socially responsible non-governmental agencies or through cooperative arrangements. Often these organizational initiatives have arisen because of supporting research that enables entry of poor people and reduces the ecological footprint of aquaculture.

The Fisheries and Aquaculture Workshop also addressed fundamental enabling mechanisms for regional cooperation in the sector. Recognizing the collective and rich experience of the countries of East Asia in fisheries management, that the stocks of many species of valuable fish straddle national boundaries, and that many similar marine species are cultured throughout East Asia, the Conference participants urged governments to work together to increase the supply of fish through restoration of capture fisheries and development of socially and environmentally responsible aquaculture.

Regional cooperative management of fisheries and aquaculture can be improved by strengthening networks such as SEAFDEC and NACA to spread knowledge and lessons learned. In fisheries, the extent of shared fisheries



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resources needs to be better understood so that the shared stocks can be better jointly managed. The East Asian countries should meet regularly to set and maintain international product quality standards, joining together to assert the needs of the region with the WTO for fisheries products. Regional cooperation should also encourage a coordinated approach by development assistance agencies, including development banks to assist the East Asian region make the transition to responsible and more productive fisheries and aquaculture.

"Once our seas were teeming with fish but now the future of fish and fishing people is threatened", said Dato' Professor Mohamad Shariff, co-chair of the Workshop and an aquaculture expert and former President of the Asian Fisheries Society. "With political will and attention to some of the new findings of experience and research in the region, we can restore many fisheries to their former place in the seas of east Asia. I believe the experts at this meeting have formulated a good agenda for our political leaders. The agenda calls on us to reduce fishing activities around our coasts, build socially just and rights-based fisheries and aquaculture systems, invest in locally feasible livelihoods for fishing communities and take urgent action to improve national policy frameworks for aquaculture. With action on this agenda, our children may once again share our love for the fishes of the East Asian seas".



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