

## Rebuilding fisheries and coastal livelihood in tsunami affected areas

by  
*Daniel Pauly*

**M**any of the victims of the recent tsunami in South and Southeast Asia were fishers and their families, and much of the infrastructure that was destroyed was ports and boats and other fishing gear. It seems therefore obvious to many in the developed world that they should help in rebuilding the fisheries, for example, by funding the construction or purchase of replacement vessels. Indeed, I have recently received several phone calls asking my advice on how to go about such rebuilding. One of my callers even suggested that we should send surplus vessels from British Columbia as part of this rebuilding effort.

Before countries such as Canada commit themselves to such far-reaching decisions, a few important features of South and Southeast Asian fisheries need to be considered, notably that (except for the oceanic tuna fisheries), they consist of two fundamentally different and antagonistic components.

One of these is small-scale fisheries, employing tens of thousands of fishers, operating traps and other fixed gears along the coast. Open crafts are also used, some motorized and many not and usually of the size ranging from that of a kayak or row boat. The other component consists of large-scale, 'industrial' fisheries operating motorized and decked vessels, mainly bottom trawlers, along with purse seiners and other specialized crafts.

Some small-scale operators are still, in various places, 'traditional fishers' in the sense that they are members of families that have been fishing for many generations. However, in many parts of the tsunami affected region, the majority of fishers have entered the fisheries only recently. They are, in the main, landless farmers who have been driven into what is, in effect, an occupation of last resort.

In the tropics, nutrient recycling and biological

production occur near the coast and, thus, tropical fisheries differ from temperate ones in that they operate relatively close to the shore, where prawns and fish are concentrated at depths of between 10 and 50 metres. Small-scale fishers and industrial vessels thus largely exploit the same resource, leading to competition between these two components of the fisheries sector. This conflict has led to numerous acts of violence, ranging from the wilful destruction of traps and set nets by trawlers to the latter being set on fire by irate small-scale fishers.

The governments of the region are well aware of these conflicts. However, their fisheries policies, while stating an intention to assist in the 'sustainable development' of the small-scale fisheries, usually tend to favour the industrial sector, as manifest in boat-building, fuel and other subsidies, lack of enforcement of the regulations banning trawlers from shrimp-rich inshore areas, etc.

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The lending policies of regional development banks have tended to exacerbate this conflict: only the industrial fisheries provide opportunities for big, 'bankable' projects. Alternative, micro-lending schemes would thus help, and so would the implementation, on the ground, of stated policies designed to assist small-scale fisheries. In the long run, however, these policies will fail to lift the incomes of South and Southeast Asian small-scale fishers, who are usually desperately poor. There are simply too many small-scale fishers and too many new ones are recruited from coastal hinterlands, every year anew, for this sector to become sustainable.

This is true even if small-scale fisheries appear to have been sustainable in pre-industrial times, when traditional self-

management, and lack of technology and of globally integrated markets for seafood, imposed limits on the growth of fisheries.

The challenge is thus to rebuild fisheries while, at the same time, directing as much of the available funds and energy as possible to generating land-based job opportunities for young fishers. Emphasis should

thus be given to basic education and technical skills, as fishers in South and Southeast Asia are generally the worst educated in countries where illiteracy tends to be high, which limits their social mobility.

Education, whether basic or technical, would contribute to increasing their ability to leave a sector that cannot give them anything but a grim future.



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## The tsunami crisis and the Millennium Ecosystem Assessment

*by Jackie Alder*

The 'Assessment' in the Millennium Ecosystem Assessment (MA) may give the impression that this global initiative has little relevance to the recent crisis in the Indian Ocean.

However, the work of the MA, especially in Scenarios and Responses, can make a significant contribution in the medium to long-term to the rebuilding of sustainable ecosystems and livelihoods for many of the coastal communities affected by this disaster. While the Conditions and Trends volume highlighted the vulnerability of coastal communities to events such as increased storms and flooding due to climate change, the Scenarios volume highlighted the possible futures that coastal communities could have under different development policies. The Responses volume provides some guidance on the policy options that could be used in the coast. In the short-term providing the basic needs to these communities is of paramount importance. However, once these needs are met and the focus shifts to rebuilding communities, these people are in the unique position of being able to decide what future they would like to have, and the outcomes of the MA scenarios can give them some idea of those possible futures, while the Responses outcomes gives them guidance on how to move towards that future, one which we hope includes healthy ecosystems and sustainable communities.

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The *Sea Around Us* website may be found at [saup.fisheries.ubc.ca](http://saup.fisheries.ubc.ca) and contains up-to-date information on the project.

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