Fisheries management

Something has gone wrong

For rational exploitation of fisheries resources, the European Union should seek co-management with local fishing interests

For decades, the fishing grounds of the North Atlantic ocean have been subject to extensive and expensive institutional and governmental research and management by some of the most developed industrial countries. The area also has the greatest concentration of fishery scientists and the best-equipped research, management and enforcement systems on either side of the Atlantic.

Notwithstanding all that, this is the area where the world's greatest washout of fisheries management repeatedly occurs, in spite of the fact that fishery management has had ten years to learn the lessons of the cod fishery collapses in North American and adjacent, international fishing grounds. Every commonsensical observer must assume that there is something basically wrong in the prevailing fishery management systems and in the politicians', managers' and their scientific advisers' ways of thinking and performing.

Some 10 years ago, the government of Canada issued a moratorium banning fishing of cod, because of the deterioration of both catches and standing stock. The once mighty cod fisheries of Newfoundland and Nova Scotia collapsed, and 20,000 people lost their source of income. The whole debacle is well documented, and its consequences described in hundreds of articles and several books. And the cod is not yet back.

A decade later, nobody seems to know whether all this happened due to overfishing, or due also to some unspecified changes in environmental conditions. Whatever be the case, mismanagement is evident, because management was aplenty—it just misfired. Now it looks as if a similar scenario is replaying itself on the other side of the Atlantic Ocean, in the management of European fisheries through the notorious Common Fishery Policy (CFP) of the European Union (EU) .

In the autumn of 2002, the International Council for the Exploration of the Seas (ICES) recommended a complete closure of the northeast Atlantic whitefish grounds to save cod stocks from total collapse. Advised by the latter, Franz Fischler, the EU's Fisheries Commissioner, started talking about a total ban on fishing for cod, haddock and whiting, and substantial reductions in plaice and prawn quotas, or, alternatively, drastic cuts in total allowable catches (TACs), quotas and effort. Scottish, French, Spanish and other European fishermen and their respective associations have reacted strongly.

While they keep disputing both the management's diagnosis and medicine, they also embarked on various protest activities. The action has been two-pronged: resistance to the draconian management steps, and demand for assistance to fishworkers barred from exercising their trade. At the time of writing, the proposed restrictions have become reality, and the fishing industry and fishing communities around the western European coasts are facing extreme economic and social difficulties.

Reduced fishing

Fishermen's associations and industry protests have had some effect. Although the Commission gave full backing to the ICES stock assessment, it ditched the idea of a moratorium and, instead, the governments involved agreed on a deal that outlined a longer-term North Sea cod recovery plan. It greatly reduces fishing effort (days at sea) on cod, haddock and whiting, on the one hand, and an increased support aimed at alleviating

socioeconomic harm to fishermen, on the other.

Unsurprisingly, the deal angered fishermen as much as it dismayed conservationists. The latter consider it anything between political fudge and a betrayal of the future of Europe's fish stocks. Fishermen are afraid that the reduced effort and quotas will not keep them afloat, and that the proposed support would be inadequate.

Fishermen's representatives' criticism of the EU's management encompasses several issues. For example, they say that the EU is obsessed with "one size fits all" approach to regulation; that a fishery cannot be managed at the same time by effort and catch restrictions; and that the advice, concocted from national research data under the auspices of the ICES, lacks the scientific validation needed for underpinning legal management steps.

Whatever the causes, and whatever is going to be the outcome of what the EU now calls "alarming state" of the stocks of the North Atlantic whitefish, European fishing people are going to experience detrimental social and economic consequences. A fisherman prevented from going fishing in a feasible manner has got several options, writes Hamish Morrison, the chief of a Scottish fishermen's federation: to permanently withdraw his boat from the fleet, to temporarily lay-up, to move to an alternative fishery, to go bankrupt, or to go poaching.

Evidently, the cod alarm helped to accelerate the reform of the CFP. On 20 December 2002, following tough negotiations, the Council of Ministers finally reached an agreement. Among the accepted Commission's proposals were: the introduction of multi-annual management plans, a new fleet capacity reduction system and targets (3 per cent in 2003-4), and an elevated level of the European Community support for scrapping of vessels and for displaced fishermen, and doing away with support for permanent export of vessels. Support for construction of new vessels will also be eliminated, but becomes fully operational only after a two-year transitional period.

New legislation

The agreement marks the end of a two-year consultation and discussion process. Based on this agreement, the Council approved amendments to the EU's fisheries structural funds regulation and passed a completely new regulation governing conservation of EU fisheries resources, including a regulation to establish a higher level of fisheries management for fishing of important deepsea stocks in Community waters, observer programmes, vessel monitoring, effort controls and a designated landing ports scheme.

In many Third World countries fisheries are not really managed by their governments, either because there are no rules, or if any, because they are not enforced. Not every fishery, however, that is not managed, *de facto* or *de jure*, is in a bad shape. The North Atlantic fisheries, however, hardly suffer from a lack of management. If anything, they are overmanaged. In any case, something must have gone wrong with their management. If, after all those years of EU's management, the recommendation is a moratorium, and after exhausting negotiations, the resulting deal limits the groundfish fleet's operation to 15 days / month, and reduces the quota by 45-55 per cent, one must recognize a case of lingering mismanagement .

But, mismanagement is a parentless baby. Scientists blame political managers, managers blame the industry, the industry blames both and the environment. But fisheries management is a system comprising all the above and more. It is like an engine in which all the parts must work in a synchrony, while being fed with the right fuel, and lubricated with the right oil. It must have adequate scientific information and analysis, which must include understanding of the role of environmental factors. It needs managers who would use the above to form workable rules, acceptable to industry, and otherwise enforceable. Enough if one of those goes wrong, the whole management machinery misfires.

Fisheries management requires knowledge of fishery biology and ecology, population dynamics and historical data of the fishery and of environmental and associated stock fluctuations in its area, on the one hand, and negotiations, legislation, technology and enforcement, on the other. Fisheries management, however, is also about distributing the wealth derived from the fishery resources and allocating benefits. Hence, it reflects the political and economic ideology of the managers. Although, fisheries management aims at maintaining fish stocks at sustainable levels, it cannot directly manage fish populations and their environment. All it can manage is people's actions, and their equipment and activities. In practice, it manages mainly fishermen. Doubtless, in the case of the North Atlantic fisheries, important political factors from outside the fisheries domain played a major role in skewing management decisions.

There are many reasons why a richly equipped and well-staffed management system can go awry. One is the science it is based on. Use of figures obtained from mathematical models that do not reflect realities of the system produces a flawed assessment of the stock and hence of the recommended allowable catch or effort. The various stock assessment methodologies that form the basis for fixing the TAC use mathematical models fed mainly with catch and effort data, and sometimes with results of fish sampling and acoustic monitoring. But both the accuracy of such figures and the validity of the models themselves are often questioned, and rightly so. None of these models are able to express environmental factors and influences. Practically the only important variable in most models is the fishing mortality, for natural mortality is usually assumed to be a certain constant—a fallacy in most marine fisheries, while fluctuations in recruitment, problematic to monitor, are rarely accounted for.

However inadequate, those models produce results, which, however flawed, represent the 'best available science' in the hands of managers. Consequently,or for other reasons, authorities are taking wrong management steps that are questioned not only by fishing people, but also by those scientists who spend time on board fishing vessels and see many things that the mathematical models and their operators are oblivious of. No doubt, the 'best available science' should be fully accepted only if it is adequate for fishery management. Thus, scientific recommendations put forth to managers should always be critically assessed by scientists totally independent of the recommending institutions and the managing authorities.

Lack of experience

The inadequacy of the prevailing fisheries management stems also from other problems. Many of the managers involved lack the experience, social touch and economic and political skills needed for

good fishery management, and are liable to take inappropriate decisions. But, when skippers, experienced old salts, and other observant fishermen start feeling that what the management says or does does not fit what they see and catch at sea, and what their experience and common sense are telling them, the failure of management is almost certain.

Where scientists do not recognize and internalize that what they have derived from statistical data fed into models is only a part of the picture, and that to have a full picture, they must consider also natural environmental fluctuations and fish abundance cycles, as well as verbal information from fishermen, and information from scientists observing and sampling on board fishing vessels, the way to mismanagement is wide open. But even the best scientific advice will not do if the resulting management steps disregard dominant cultural features and the vital socioeconomic and political needs of the fisherfolk and their communities. Fishing people will never live with rules, if they perceive them as unjust, and not fitting the reality as they see it, or favours one group or branch of the fishery over another.

And when management is out of step with the industry, especially where large numbers of fishing vessels and whole populations of fisherfolk are affected, it simply cannot succeed. Fishermen will do everything to beat its regulations; they will cheat, poach, land or sell over-the-side 'black' fish, and discard marketable fish to make space for larger and more expensive specimens under limited quotas. Enforcement under such conditions becomes unfeasible or so expensive as to be impractical. All this has been happening in the northern Europe's fisheries for years under the CFP ineffective management. Now, to be left with something to manage, it needs draconian steps.

If the EU, or for that matter, any other fishery managing authority, wants to attain rational exploitation of the resources it is in charge of, it should seek co-management with local fishing interests. Successful co-management depends, among others, on choice of partners. Local, area-based small and medium-scale fishermen and boatowners would be the best partners, because they would always be interested to sustain reasonable catch levels and, hence, sufficient fish stocks. The wrong partners would be owners and operators of large-scale fishing vessels, such as superseiners, factory-trawlers and other industrial fishing fleets, who are always interested in maximizing their catches, overexploitng a stock in one area, and moving on to another region, sea or ocean.

Good management would make sure that a flag, whether national, foreign or 'flag of convenience', does not become a licence to fish out stocks from under the noses of local fishermen. Good management would refrain from selling national quotas away to foreign, corporate or transnational interests. It would never let such fleets fish on home grounds of locally based small-scale fisheries. Where national and transnational fishing rights overlap, as in the case of EU, special arrangements must be made and fishing grounds allocated among inshore local, and offshore, national and other European fisheries. Bureaucratic obsession with uniformity should not become a rule. A network of policies adjusted to the different areas and stocks, and to traditional national and local rights may become one—or even the only—way out of a failure. This may complicate things, but we live in a very complex world.

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