

## The tragedy of the commons, contd

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**Talks are taking place in Canada this week aimed at rescuing the world's fragile fish stocks. The simplest solution is tougher rules limiting fishing—but politicians have a way of caving in to fishing lobbies**



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"LET your hook be always cast. In the pool where you least expect it, there will be fish," wrote Ovid. These days, alas, one can't be so sure of a nibble. Thanks to rampant overfishing, the world's stocks of cod, tuna and countless other sea-dwellers have been dwindling for decades. But what to do about it? This weekend, Canada began hosting five days of international talks aimed at finding an answer.

Signs of growing scarcity are everywhere: fish are getting smaller, as are catches. Some fishing grounds, such as Canada's Grand Banks and Europe's North Sea, are so seriously depleted that they may never fully recover; North Sea stocks of cod have shrunk to about 10% of 1970 levels. Even the last of the world's waters to be exploited—in the South Atlantic and Indian Ocean, and round Antarctica—have succumbed to the rapaciousness of vast fishing fleets. All over the world, governments are wrestling with the problem, trying to balance what's best for the sea against what's best for their fishing industries. Only last week, Ireland introduced a scheme to reduce the number of fishing boats because of a shortage in marine stocks. The week before, Hong Kong's quasi-parliament had debated similar measures.

The plight of the oceans is described in a recent report by the UN's Food and Agriculture Organisation (FAO). Its tone is reserved, but the numbers contained within it seem to suggest that modern fishing is really analogous to mining: fish are pulled from the sea faster than they can be replenished. The proportion of global stocks classed by the FAO as over-exploited, depleted or recovering grew from 10%

of the total in the mid-1970s to an alarming 25% by the early 1990s, and has levelled off since then. But only a tiny sliver of that is recovering. And fishing grounds that are “fully exploited” (ie, producing catches that are already at or very close to their maximum sustainable production limit) have risen to around 50% of the total, from the mid-40s ten years ago; much of this is teetering on the edge of over-exploitation. Scientists estimate that the number of large fish in the oceans has fallen by perhaps 90% since the 1950s.

The problem may only get worse as demand grows. Fish is a wonderful source of protein, not only for the growing populations of poor countries but also for the rich world’s health-conscious consumers. So total world production (both marine and inland) increased steadily from 19.3m tonnes in 1950 to 100m tonnes in 1989 and 134m tonnes in 2002. On current projections, it will rise to 179m tonnes by 2015. Ultimately, this could be bad for business: theory suggests that the maximum sustainable yield that can be cropped from a fishery comes when the biomass (amount of living matter) of a target species is about 50% of its original level. Most fisheries are already well below that.

Umpteen agencies busy themselves with monitoring, suggesting and complaining about this, and various international agreements have been drawn up: in 1982, the UN Convention on the Law of the Sea set standards for responsible fishing; 13 years later, the FAO drafted a (non-binding) Code of Conduct for Responsible Fisheries; and the 2002 World Summit on Sustainable Development set goals for restoring depleted fish stocks. However, these efforts have failed to turn the tide. Most governments studiously ignore them.

One reason for this is the age-old “tragedy of the commons”, whereby anyone with access to a shared valuable resource has an interest in over-exploiting it, and it is in nobody’s interest alone to maintain it. Another reason is the tendency of politicians to cave in spinelessly to the demands of the fishing industry, just as they do when faced with angry farmers. The European Union’s common fisheries policy, for instance, is no less absurd than its agricultural namesake. Attempts to alter it—by, for instance, creating no-fishing zones off some member countries’ coasts—have been horribly watered down against the advice of independent experts, most recently last December. Even in Hong Kong, supposedly one of the world’s freest markets, fishermen are subsidised.

Some think the best way to tackle the fishing crisis is to encourage the growth of fish farming—a blue revolution in this century to match the green revolution of the last. To some extent, this is already happening: marine and inland farming now account for more than 30% of total fish production, up from around 26% in 1998 and single figures 30 years ago.

Fish farming’s supporters argue that it could meet the growing shortfall as wild fisheries become more and more exhausted. But fish farming has its downsides too. Most farmed fish must be fed with other fish that have been caught in the sea: between 15 and 25 kilos of fish are needed to produce one kilo of farmed tuna, the World Wildlife Fund found in a recent study; this week, the environmental group called on European Union states to ban the use of non-Mediterranean fish feed in such farms, on the grounds that it might spread exotic diseases. Critics also argue that farmed fish is fatty, polluting and stuffed with antibiotics. If the past history of agriculture is any guide, “aquaculture” should eventually play a leading role in meeting world demand for fish. Whether this can be done in a way that does not pollute the marine environment unacceptably remains to be seen.

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Others argue that the focus for the near term should be on beating the fishing fleets at their own game. Today’s vessels can find their prey using sonar and satellites, meaning that a higher proportion of what is in the sea can be caught quickly and easily (though much of this is unwanted “by-catch” which is usually thrown back). Some policy wonks think that satellites should now also be used to track those boats and ensure they are not breaking quota agreements. However, a better first step might be a system of long-term quotas that are transferable between countries, similar to the recently established global carbon-trading scheme.

Such a system may well be discussed at the talks in Canada, but the political will to act has so far been decidedly lacking. Some politicians now even argue, conveniently, that the chief culprit in years to come

will not be fishing fleets, but climate change: glaciers are melting, which is reducing the ocean's salinity, which in turn is starting to cause a drop in plankton, depriving fish of a key food. Perhaps. But for the time being, the problem remains too many trawlers chasing too few fish.

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