

Bitter Tidings

For sustainable fisheries

Report prepared by Marcel-Pierre CLÉACH, Senator

The report prepared by Marcel-Pierre CLÉACH for the OPECST was commissioned by the Bureau of the Senate on "science's contribution to the evaluation of halieutic resources and to fisheries management".

Principal conclusions and proposals

I - Bitter tidings: a crisis report

Fishing represents the last large-scale hunting-gathering activity. It continues to play a **fundamental role in human sustenance**, providing the world population with 20% of its animal proteins and representing the main animal-protein source for some one billion men and women.

The demand for fish and seafood is greater each year, growing faster than the world population and accompanying the rise in the standard of living.

But the growing appetite for fish places **ever greater pressure on the wild marine resources and raises the question of this exploitation's sustainability** and a possible shift to aquaculture, as man has abandoned hunting and gathering for breeding and farming.

On a blue planet, 70% of which is covered by the oceans, arriving at the limits of halieutic exploitation means arriving at the limits of the Earth's very ecosystem.

It is almost certain that we have already reached this limit.

Therefore, the future of fishing and of the halieutic resources is an essential aspect of

sustainable development and of our legacy for future generations.

However, **the oceans are being increasingly altered by human activity**. Outside the two poles, there is no longer any virgin ocean left. On the contrary, 40% of the world's oceans and seas are subjected to ex-



tremely high anthropic pressure. To borrow the term coined by Paul Crutzen, the oceans have entered the "Anthropocene" period.

Climate change provokes acidification, desertification and species displacement. The seas suffer from rising **pollution**, essentially washed down from the continents, that threatens marine life and its capacity to serve as a human food source.

Among these disturbances, fishing now occupies a dominant position. There are few marine zones in which it does not exert an influence that exceeds all natural factors.

Managing fishing and the halieutic resources represents an ever greater scientific challenge.

Since the 19th century, researchers have tackled this problem. They have forged the idea according to which man could sustainably maximize his exploitation of the oceans. But this positivist vision of man in nature is increasingly confronted with the limits of knowledge and of effective management capacities.

Man has failed to moderate his exploitation or manage the resources so as to avoid an ever greater number of collapsed stocks. This has led to a rising awareness of the extreme complexity and the fragility of marine ecosystems that remain little-known.

It is not always enough to stop fishing in order to regain the abundance of yesteryear; indeed, very often, an irreversible change occurs within the ecosystem and man is incapable of turning back the clock. Furthermore, this collapse can take place unexpectedly. The eventual disappearance of the world's fisheries is no longer purely hypothetical.

In fact, **the fisheries situation is serious. At the global level, marine catches have stagnated for some twenty years, despite an ever greater fishing effort.** Numerous indicators even tend to show that they have begun to decline. Fishing has spread to all of the world's oceans and today targets almost all species, ever further down the food web, ever deeper in the ocean, and ever further from the coast.

There no longer exists any virgin stock capable of supporting a new increase in catches; on the contrary, it is the over-exploited stocks that are on the rise.

Stagnating or falling catches combined with an ever greater fishing effort: this is the fundamental equation of **an economic sector in the midst of a profound crisis**. Overcapacity is both the engine of over-exploitation and the fruit of a "race to the fish" that we have been unable to stop. At the global level, an estimated \$51 billion is lost each year, out of a turnover of \$85 billion.

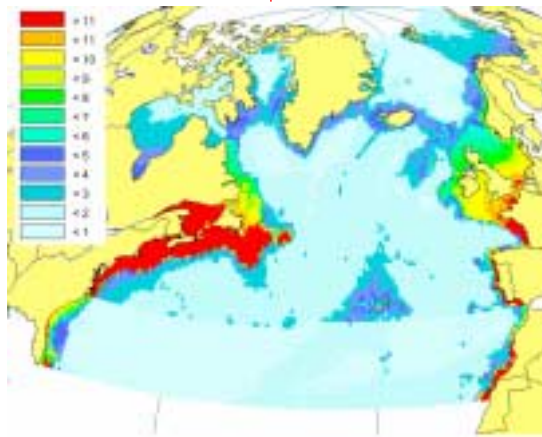
At the EU level, the European Commission itself deems **the Common Fisheries Policy a failure**, having proved incapable of sustainably managing the stocks, avoiding the fleet's overcapacity, and solving the sector's poor profitability. Technological progress is faster than reductions in capacity. The TACs and quotas are almost always higher than those recommended by scientists. Monitoring is weak.

In France, despite very great restructuring over the past twenty years, **the fishing industry moves from one crisis to the next**, ever more dependent on govern-

ment subsidies, though unable to protect jobs or find any encouraging prospects for the future.

Faced with the serious economic situation of the sector and the biological state of the fish stocks, **a raising of awareness is necessary. Courageous measures are needed.**

Aquaculture is all too often presented as a miracle solution.



The biomass of demersal fish in 1900 (above) and in 2000 (below) in the North Atlantic.
Source: Christensen *et al.* (*Fish & Fisheries*, 2003).



Mindestgrößen jeweils für:
Ganze Fische
Fische ohne Kopf (K)
Filets (F)

Sprotte: 11 cm

While aquaculture currently provides 43% of fish and seafood destined for human consumption and while it will prove essential by the year 2030 to continue to meet demand, this cannot be at any cost.

In many respects, aquaculture as it exists today increases the fishing pressure on wild species and contributes to the destruction of the natural environment.

Only a significant research effort will allow us to overcome these obstacles and avoid the world population seeing its consumption of fish decline.

The development of aquaculture will constitute a food revolution, for it will lead to the consumption of species that are currently unknown or uncommon and, above all, it will eventually account for the greater part of fish and seafood consumption.

However, before the year 2030, aquaculture will provide no way of avoiding the necessity of finally managing the world's fisheries in a rigorous manner, for, while it will undoubtedly be able to meet the rise in demand, it will not replace the wild-fish catch.

II - For a sustainable form of fisheries management

Seriously managing the wild fisheries will entail a profound change in mentality, for we must abandon the idea of infinite space and unlimited resources.

At the end of the study, **your rapporteur proposes five main lines for action:**

1 - Reopen the dialogue between fishermen, scientists and political decision-makers.

Though today largely broken, **this dialogue is essential, for nothing is possible without a certain consensus.**

This amounts to an evolution in behaviour that cannot be brought about by decree, but rather by strong administrative and financial incentives to cooperate.

2 - Building political decision-making tools.

The oceans remain too little known and research too indispensable for fisheries management not to **make halieutics a true priority** within such bodies as IFREMER and the IRD. Science will provide a large share of the solutions. The challenge is great, with an **eco-system-based approach** now being needed. However, if appropriate support is not provided, this approach will simply be a reassuring illusion and serve as a loophole toward an improbable mastery of nature.

The Marine Protected Areas offer an excellent opportunity to increase our respect for the sea and for those whose livelihood depends on it. As conservation, development and management tools, MPAs must be strongly encouraged.

3 - Make fishermen the primary actors of responsible fishing.

Fishermen would like to, can and must become the primary actors of fisheries management. Nothing is possible without or against them. They must participate in, adhere to and, to a large extent, decide on the measures that will ensure the stocks' preservation and the future of their own economic sector.

There are two essential preconditions. The first is **reducing capacities.** The world catch has ceilinged out, but fishing capacity continues to increase by around 4% per year, due to advances in technology. Therefore, any serious management system necessitates the extensive and continuous regulation of the fishing effort.

The second precondition is **abandoning the unfortunately wide-spread culture of fraud and free-riding** that encourages actors to profit from others' management efforts. Greater self discipline must be promoted.

Finally, to be responsible, fishermen must become the owners, at least to a certain extent, of their resources. **The taboo of Individual Transferable Quotas must be done away with.** ITQs must be experimented with, if only to crystallize a change in mentality and to help the industry regain its economic profitability.



4 - Authorities who exercise their prerogatives.

In France, as in other countries, **the authorities must stop - in the fishermen's own best interest - to consider the resource subsidiary to the social assistance of the fishing industry.**

Scientific assessments must no longer be ignored.

States have the greatest responsibility. Thanks to their exclusive economic zones, they control 90% of the world's halieutic potential. France's marine territory is the second largest in the world.

The states' mission is to **monitor effectively and to sanction without fail. Their failure to exercise this "royal" prerogative is clearly at the origin of the industry's crisis.**

The case of the **Mediterranean bluefin tuna** is but the most obvious example of this failing on the part of authorities: disdain for scientific assessments in favour of short-term profits, insufficient monitoring, and insufficient sanctioning.

What is more, states will have to **vigorously fight piracy, both at sea and on land**, including that carried out by their own nationals.

Finally, **the French Parliament** will have to be more active regarding this issue, by creating **a joint committee** of the Senate, the National Assembly and the European Parliament.

5 - Better-informed and more responsible citizens.

Targeting consumers and recreational fishermen entails **information campaigns**, with the goal of indicating to consumers which fish-and-seafood products they should favour in order to preserve the halieutic resources. These educational measures must be encouraged within the framework of a cooperative effort between scientists and the fishing industry.

Cooperative initiatives could also be encouraged in partnership with small-scale

fishermen carrying out a form of fishing that is more respectful of the resources.

In addition to educational and cooperative measures, the authorities must favour the creation of an **ecolable** for fishing, which informs and improves the safety of the consumer. This has become an economic and competitive necessity for the sector. A purely national, French approach would perhaps not be the best option; rather, **a "Frenchification" of the internationally famous MSC label from England or a European label would be preferable.**

Your *rapporteur* also deems it useful to mobilize the citizenry via the widespread distribution – thanks to both the media and NGOs, and as in several other countries - of a **"fish-meter"**. This graduated ruler allows consumers and recreational fishermen to verify that a given fish is of minimum size and has been able to reproduce at least once (see below).

Finally, the impact of **recreational fishing must no longer be underestimated**. For several species, sport fishing is as important as professional fishing. With regard to threatened stocks, recreational fishing must be just as rigorously regulated. **Much stricter regulations must be implemented concerning marine-fishing seasons, devices and catch sizes**, both at sea and on shore during the spring tides. **An exam-based sea-fishing licence will eventually need to be created.**

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If courageous measures are undertaken based upon reopened dialogue between fishermen, scientists and political decision-makers, it is possible to ensure the fishermen's future and the availability of wild fish as a food source for future generations.

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