

# The pressure of fisheries on the ocean

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**Fisheries are one of the strongest – if not the strongest – sources of pressure on ocean ecosystems. Other uses of the oceans also impact marine life, for example marine transport through the engine noise it generates, which impacts whales and other marine mammals, through discarded ballast**



waters, a rich source of invasive species, or through the occasional oil spill.

But fisheries are designed to kill marine animals whether they are landed and subsequently consumed by people or animals such as pigs, chicken, or farmed salmon, or discarded

as unwanted bycatch, of which about ten million tonnes are thrown overboard annually. And not only are fishing gears designed to kill fish (and whatever else co-occurs with fish), but they are good at it, and are getting better every year.

Thus, the steam trawlers that began to be deployed around the British Isles in the 1890s were 20 times more efficient at catching fish than sail-powered boats of the same tonnage, while same-sized contemporary trawlers are 20 times more efficient than the steam trawlers of lore.

Globally, tens of thousands of industrial vessels – trawlers, purse seiners, long-liners, motherships, etc – are deployed by the world's fishing nations, relentlessly criss-crossing the oceans and setting up their gear to catch every fish concentration they encounter.

They do this in the high seas, which cover 60% of the world ocean but from which less than 10% of the world catch originates, and in their Exclusive Economic Zones (EEZs), but more importantly in the EEZs of other countries, which they access legally by paying a nominal fee, or illegally in the case of pirate operations.

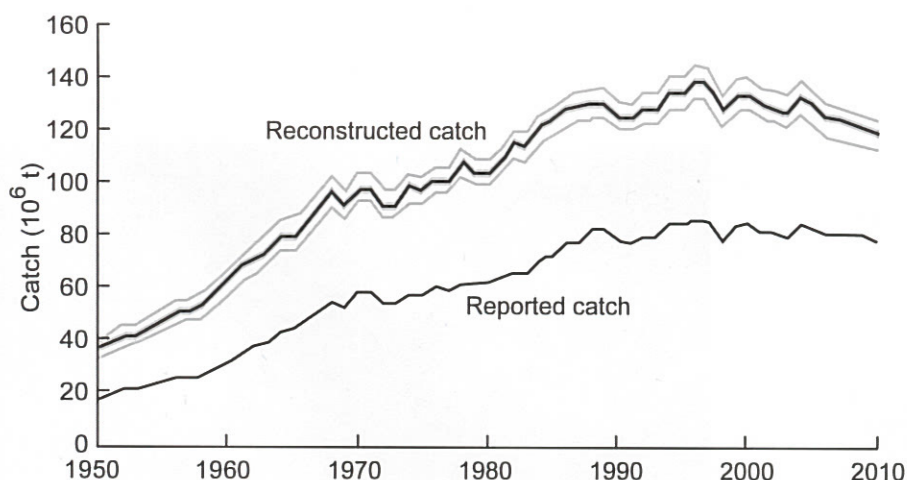
The world catch from the sea is about 120 million metric tons per year, down from over 130 million in 1996, the year of global peak catch. However, it is not because we do not fish enough; rather because we fish too much. The notion that, past an optimum level, more fishing causes catch to decline is not intuitive: after all, if you invest more in manufacturing, or in agriculture, you produce more. However, fishing vessels are not an input contributing to more fish being 'produced': it is nature which produces the fish; fishing boats just collect the bounty. Thus, if the bounty declines, managers ought to allow fish populations to recover, rather than subsidizing fisheries that cannot thrive when exploiting depleted fish populations.

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After lots of debates about issues of the role of subsidies and excess fishing capacity, the EU passed legislation which is supposed to help rebuild stocks, ie the permitted catch quotas are supposed to be low, so that the fish populations can rebuild some of their previous abundances and hence again generate high catches.

But the measures required to implement this legislation are being fought against tooth and nail by the fishing industry and their lobbyists, who are used to being able to rely on EU and/or national governments' subsidies when the fish stocks fail them.

With Brexit, there will be no EU Parliament to try to help UK fish populations, but also no Spanish and French lobby groups to mess things up. The UK can thus opt to rebuild their stocks, and thus reduce the pressure on the sea around Britain. This would also help these fisheries weather the effects of global warming, which will also buffet fish stock populations around the UK. Either way, it will be tough.



Two versions of the world's marine fisheries catch (1950-2014). The Reported catch is based on self-reports of the member states of the Rome-based Food and Agriculture Organization of the United Nations (FAO). The Reconstructed catch corrects for catches usually omitted in official reports, ie catches by artisanal, subsistence and recreational fisheries, along with the catch of illegal or otherwise unreported fisheries, and discarded bycatch.