

Overfishing began with the Victorians

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- HOPES that short-term cuts in fishing will quickly replenish Europe's fish stocks are likely to be dashed - because overfishing goes back to the Victorians.

This week, ministers trying to reform the European Union's Common Fisheries Policy [will hear that 88 per cent of Europe's stocks are overfished](#), but more than half of these could recover to 1970s levels if fishing lets up for a few years. Yet this assumes that stocks were healthy 40 years ago.

That may be wrong. A team led by Ruth Thurston at the University of York, UK, calculated the amount of fish, such as cod, British trawlers caught between 1889 and 2007 per unit of "fishing power". This is a measure based on factors such as the boat's horsepower and the size of nets. They found that this dropped 17-fold in this period, suggesting that stocks had already fallen by over 90 per cent by the 1970s (*Nature Communications*, [DOI: 10.1038/ncomms1013](#)).

Overfishing for so long may have damaged marine ecosystems too much for them to recover quickly.

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'Profound' decline in fish stocks shown in UK records

By Richard Black Environment correspondent, BBC News



Landings into UK ports in the 19th Century were four times higher than today

Over-fishing means UK trawlers have to work 17 times as hard for the same fish catch as 120 years ago, a study shows.

Researchers used port records dating from the late 1800s, when mechanised boats were replacing sailing vessels.

In the journal Nature Communications, they say this implies "an extraordinary decline" in fish stocks and "profound" ecosystem changes.

Four times more fish were being landed in UK ports 100 years ago than today, and catches peaked in 1938.

"Over a century of intensive trawl fishing has severely depleted UK seas of bottom living fish like halibut, turbot, haddock and plaice," said Simon Brockington, head of conservation at the Marine Conservation Society and one of the study's authors.

"It is vital that governments recognise the changes that have taken place (and) set stock protection and recovery targets that are reflective of the historical productivity of the sea."

Victorian values

In the late 1880s, the government set up inspectorates in major fishing ports in an attempt to monitor what fish were being landed.

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Philip MacMullen Seafish

"The records are pretty reliable," said Callum Roberts from the UK's York University, another of the study authors.

"The Victorians were very assiduous about collecting information; and while some of the landings might have been missed from smaller ports, the larger ports were covered very efficiently," he told BBC News.

Around the same period, naturalist Walter Garstang was beginning to analyse "fishing power" - essentially, the capacity of a fleet to catch fish.

The biggest change over the period was from sail to engine power.

"With sail power, boats could only go at fixed times and only in certain places with a smooth sea bottom," Professor Roberts noted

"But when you got engines, that meant they could fish in any conditions of wind or tide and sea bed."

As waters near the coast became depleted, industrialisation also meant the UK fleet could travel further in search of new grounds - a phenomenon that took off after 1918.

But despite the growing power and range, the amount of fish caught for each unit of effort has gone drastically down, with 17 times more effort required now to catch the same amount of fish as compared with the late 1800s.

'Old news'

Philip MacMullen, head of environmental responsibility at the UK's industry-funded sustainability organisation Seafish, suggested that accenting the historical picture could obscure more recent improvements.

"It could be correct but I don't know, and I don't think the data support the findings," he said.



Fish such as plaice have been fished further and further afield

"But it's old news. Fifteen years ago we started understanding how badly management was working, and 10 years ago we started doing something about it."

Seafish points out that in the last decade, stocks of some species such as cod have shown increases.

But Professor Roberts counters that the long historical timeline in his study shows the recent improvements to be small in scale.

"If you get a 50% increase from 2% of a species' former abundance, you get to 3% of its former abundance, so you shouldn't celebrate too hard," he said.

"That's why this perspective is important."

Whereas UK fishermen tend to blame the EU's Common Fisheries Policy (CFP) for their economic problems, the authors of this study say it proves that depletion stems from mismanagement well before the CFP came into existence.

"There's nothing basically wrong with the CFP and not much wrong with the scientific research they receive," commented Dr MacMullen.

"But what happens to that advice when it goes up to the Council of Ministers - it's completely mis-managed."