

MARINE MIGRATION

With rising ocean temperatures reshaping the ecosystem of the English Channel, **Bob Ward** suggests that shoppers and supermarkets should take sustainability into their own hands.



Climate change is adding to the pressures from overfishing and removing some of our favourite sea food from Dorset's waters and shops.

Specially designed lerret boats were used to catch mackerel with seine nets off the coast of Dorset for many centuries, but the abundance of the fish has severely declined in recent decades.

Earlier this year, Waitrose announced that it would stop stocking North East Atlantic mackerel because they could no longer be caught sustainably. The supermarket took action after the UK along with Norway, Iceland and the Faroe Islands decided to ignore the advice of scientists to drastically cut catches of mackerel because of a decline in numbers.

In September last year, the International Council for the Exploration of the Sea (ICES) recommended that North East Atlantic mackerel catches in 2026 should be cut by 77% compared with last year to help allow its populations to recover. It also recommended that

there should be no catches of horse mackerel because its stock is severely depleted.

ICES is an intergovernmental network of almost 6,000 scientists from over 700 marine institutes in 19 member countries, including the United Kingdom. It warned that current stocks of mackerel are at their lowest level for more than 20 years. ICES pointed out that the annual quotas for mackerel granted by individual countries since 2010 has resulted in catches that have exceeded the level advised by scientists by 39%, on average.

However, the governments of United Kingdom, Norway, Iceland, and the Faroe Islands decided in December not to listen to the experts and instead set total allowable catches of North East Atlantic mackerel 72% higher than the threshold suggested by ICES.

While overfishing is the main driver of declining stocks of mackerel, climate change is also having a growing impact on the species.

The most recent assessment by ICES noted that mackerel in the North-east Atlantic seem to be migrating northwards into cooler waters, making it more difficult to estimate the size and sustainability of stocks. This poleward movement by many plant and animal species to occupy the same climatic zone as the Earth warms has been recorded on land and in seas around the world.

A study published in 2023 by Spanish researchers found that North East Atlantic mackerel have been migrating further north to reproduce in response to the warming oceans. They prefer water temperatures of between 9 and 16 degrees Celsius to spawn. Mackerel are usually seen close to shore in Dorset during the summer months. They start to migrate to shallower inshore waters in May to feed on microscopic zooplankton and small fish, particularly sand eels.

In autumn they migrate usually southwards to the Bay of Biscay, Celtic Sea and Irish waters to spawn between March and June. The warming seas mean North East Atlantic mackerel are often not migrating as far south, and start spawning later. Horse mackerel also follow the same pattern but seem to be struggling more to adapt to the higher water temperatures.

The combined impacts of overfishing and climate change mean that mackerel stocks in the English Channel could become as depleted as those of cod. Estimates of cod populations in the southern North Sea and English Channel have been so low since 2017 that scientists fear they will not recover. The ICES experts have recommended that there should be no catches of cod from any part of the North Sea and English Channel in 2026 because of the critically low levels of stocks.

Again, climate change is making the impacts of overfishing more severe. Cod prefer cool waters of less than 9.6 degrees Celsius to spawn. But warming waters now threaten to eliminate the species from Dorset's waters.

A team of researchers from the UK and Norway warned three years ago that climate change could cause Atlantic cod to disappear from the English Channel over the next few decades as the species moves northwards.

However, the tendency for fish species to migrate north in response to climate change also means that some southern species are appearing in our waters in greater numbers. Atlantic bluefin tuna can now be seen off Dorset's coast after largely disappearing during the middle of the last century. The species primarily inhabits and spawns in temperate and subtropical waters of the Atlantic Ocean, Gulf of Mexico, and the Mediterranean Sea. They migrate north to feed.

An international team of researchers earlier this year published the results of a study projecting that bluefin tuna will respond to climate change by moving further north for both spawning and feeding. The species used to be present in British seas until the end of the last century when overfishing caused stocks to decline. It is not clear that populations have recovered, as unsustainable levels of catch continue, but the species is now more likely in our waters due to climate change.

'But warming waters now threaten to eliminate the species from Dorset's waters.'

Mackerel, cod and tuna are not the only fish species that are being affected by climate change. A recent study indicated that British waters are becoming increasingly suitable for European seabass, sardine and anchovy, but more hostile for wolf-fish and saithe, also known as coalfish. But overfishing continues to be the main driver of the abundance of these species.

Other sealife is also responding to the warming waters. The common squid was once limited to the English Channel but is now found in increasing numbers in the North Sea

Dorset shoppers can help our favourite species by paying attention to where our fish come from. The Marine Stewardship Council, and international non-profit organisation, provides a certification scheme to help consumers when choosing which fish to buy. It only certifies fish with its blue label that have been caught in places where catches are currently sustainable. Most supermarkets now stock fish that have been certified in this way.

The Marine Stewardship Council has not provided blue labels for North East Atlantic mackerel since 2019, and does not certify any cod that is caught in the North Sea or English Channel.

And the people of Dorset can also contact their local MP to ask them to put pressure on the Government to stop ignoring scientific advice about the size of catches before our favourite fish species are wiped out forever.

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