

Contribution of the United Kingdom to 17th round of the Informal Consultations of the State Parties to the UN Fish Stocks Agreement (ISP-17): Sustainable fisheries management in the context of climate change – Discussion paper

Climate change is one of the biggest challenges of our time. Its effects are increasingly apparent, with 2023 the warmest year on record and ocean heat content also reaching the highest-level recorded¹. Climate change has already begun to cause irreversible damage to the planet and our way of life². There is clear evidence demonstrating the accelerating pace of warming in the oceans in recent decades and the impacts that will need to be faced should this continue.

Many climate change impacts have a long-term, slow-onset nature, resulting in multi-dimensional cascading effects with substantial environmental, social, and economic consequences³. But there is growing research to suggest that climate events such as heatwaves can sometimes have more dramatic and immediate consequences, such as coral bleaching events, harmful algal blooms and fish die-offs. This presents a particular challenge for fisheries management, as it is difficult to predict exact consequences and build these into either short or long-term planning.

This paper sets out the UK's perspective on the potential substantial impacts of climate change on fisheries and fisheries

Climate change has notably increased the frequency of marine heatwaves, with approximately double the number of events occurring today in comparison to the 1980s. The frequency and duration of marine heat waves are projected to continue to increase.

As well as directly impacting the atmosphere and the ocean, physical changes brought about by climate change can cause significant health and safety, social, and economic impacts to fisheries. For example, increased extreme weather events and changes to the magnitude or frequency of storms as a result of climate change pose a direct risk to fisheries, disrupting fishing effort and posing a physical danger to fishers, vessels and gear, fishing communities and infrastructure⁷.

The physical and/or chemical changes to our seas give rise to impacts upon the habitats and

In the UK we have learned that measures which seek to mitigate the effects of climate change can also pose challenges for fisheries management owing to a competing use of the marine space. In the UK Offshore wind rollout is a major component of delivering our net zero commitment. The British Energy Security Strategy¹⁴ sets out our ambition to deliver 50GW of offshore wind by 2030, with 5GW through floating offshore wind. The UK is not alone in this ambition, with the Global Wind Energy Council anticipating over 380GW of offshore wind capacity to be added over the next decade globally¹⁵.

The development of the offshore wind sector is already affecting fishing activity. Where it has not been possible to avoid fishing grounds, fishing activities have been displaced, with fishing effort being redistributed to other fishing grounds. In the future it could conceivably be lost entirely if fishers leave the sector. This is anticipated to have associated social, economic, and environmental effects especially for coastal communities¹⁶. The challenge for fisheries management to take account of these effects is even greater in the context of other measures taken to support the recovery and resilience of marine ecosystems which may affect the distribution of fishing, such as MPA designation.

A comprehensive climate change risk assessment in 2021 attempted to rank European fisheries and fishery-dependent coastal communities in terms of the threat posed by future climate change. Scores for Hazard, Exposure and Vulnerability were combined to assess the relative climate 'Risk' to 380 fishing fleets and 105 coastal regions. Fisheries in the UK were highlighted as having a particularly high risk-profile. Climate risk was greatest in the north of England, while fisheries in northern Scotland and the south of England exhibited much lower risk. Indeed, six of the ten regions with the highest climate risk in Europe, including the overall top region (Tees Valley and Durham), were in the UK.

Through the UK's Marine Climate Change Impacts Partnership (MCCIP) we are improving our understanding of the impact of climate change in our waters. MCCIP engages with a wide range of scientific authors to supply policy makers and the public with updates on the current and predicted impacts of climate change.

MCCIP is undertaking work to develop understanding of marine ecosystem impacts under projected future climate scenarios, helping to address risks identified in the UK's third

funded THUNNUS UK and CHART programmes¹⁷. Information from the fishing industry on the impacts of climate change across species distribution in the UK is integral to support adaptive and flexible management.

Large-scale and long-term changes in fish abundance and distribution in response to climate change have also been simulated through modelling. Habitat suitability modelling indicates conditions around the UK are likely to become more favourable for species such as

appropriate, as well as adapting to any future impacts of climate change. In November 2022 the UK's four national fisheries authorities published a Joint Fisheries Statement (JFS) that included commitments that *“policy authorities will work in partnership with the seafood sector to support their adaptation to the impacts of climate change and co-develop climate-adaptive management techniques to support sustainable fishing of stocks and aquaculture impacted by climate change, thereby contributing to meeting*

