

Commercial Fisheries

Climate Change and Commercial Fishing in the North East of England

The Issue

Through IMCORE research, commercial fishing in the North East was seen as an industry at risk from the impacts of coastal climate change. The North Sea is a highly productive fishing ground due to its bathymetry and nutrient mixing. Economically and socially the impacts of climate change on commercial fisheries should be identified and adopted to.

Background

There are many possible impacts of climate change on the North East Coast and those related to commercial fishing are highlighted in this document. An increase in sea temperature is the main impact of climate change that could affect commercial fisheries in the North East. Other impacts could be species extinction at a local level, alterations in predator / prey assemblages directly affecting fish populations, disruptions to the food chain and difficulties for fishermen in accessing fishing grounds due to inappropriate weather conditions. It was decided that developing a case study in proposing possible adaptation strategies for local fishermen was important.



Current Status

Fishermen who were engaged in this case study recognise that there is some change in species being caught but from experience say that it is a natural fluctuation and not related to climate change. MCCIP annual report card (www.mccip.org.uk/arc) and Cefas (www.cefas.org.uk) both demonstrate the research being carried out on the impacts on commercial fishing. They state that in the North Sea, due to increasing temperatures many species are shifting their distribution northwards and reproductive levels are decreasing particularly in relation to cod probably the most important commercial fish species such as cod. It is important to note that although the present changes in the North Sea are consistent with warming temperatures and increasing acidification the links to climate change are not absolutely defined.

IMCORE (Innovative Management for Europe's Changing Coastal Resource) is a **trans-national, innovative and sustainable approach** to reducing the Ecological, Social and Economic impacts of climate change on the coastal resources of North West Europe . 17 partners from universities, research centres and local authorities from 9 North West European counties working together to produce capacity for good practice in the climate change adaptation process.

More information on the project, the partners and the outputs to date are available online at www.imcore.eu

Information Gathering

Meetings were held with fishermen in two important fishing ports in the North East, Amble and Hartlepool. These meetings allowed the process of the project to be outlined to fishermen and it allowed them to voice their opinions in an informal setting.

Net Gain (North East MCZ designation project) meetings were an important link to gaining first hand information from fishermen. Information was also gathered from reliable sources such as UK Climate Projections (UKCP09), Marine Climate Change Impacts Partnership (MCCIP) annual report card and Charting Progress 2 —The state of the UK seas (produced by Defra).

Data from these sources is fairly reliable but some is based on modelled sources. Together they describe a variety of possible impacts on marine and coastal areas that can be related to commercial fishing in the North Sea.

Key Considerations

Commercial fishing in the Europe can be quite regulated and in the UK, fishermen are under pressures from EU regulations, national restrictions and even public campaigns. Fishermen in the North East are overwhelmed with the turnaround of legislations and are finding it difficult to spend time on issues such as climate change. Those fishermen that were engaged were very receptive and willing to listen about how climate change may impact their industry but with pressures of a shrinking industry there is little time, want or need to develop adaptation strategies.

Next Steps

The free time that fishermen have to take to develop workshops is limited thus it is recommended that a short leaflet be sent to fishing organisations in the North East that outlines the possible impacts of climate change on the industry. This will be available to fishermen if necessary in addition to a more specific document outlining in detail how impacts may affect fishermen and how they can develop adaptation strategies for these impacts should the need arise.

Recommendations and lessons learned

The fishermen in this case study were very receptive but not entirely convinced that the impacts of climate change are harming their industry. Unfortunately time and resources were limited in this case study to carry out a comprehensive study on how, over time, climate change has impacted north east fisheries.