

Science for Environment Policy

Policy settings key to debate over Dutch Wadden Sea

There is an ongoing debate over exploitation of the Dutch Wadden Sea, over issues including gas extraction and cockle fishing. According to a review analysing interactions between scientists and policymakers during these debates, the productivity of such discussions is substantially influenced by the policy setting, i.e. the level of government involved and the key decision-makers.

The Dutch Wadden Sea is subject to multi-level governance – national and EU-level legislation – including the Birds¹ and Habitats² Directives, and trilateral agreements between the Netherlands, Germany and Denmark. Multiple stakeholders including policymakers, environmental organisations, scientists, fishers and gas extraction companies contribute to the debate over its protection and exploitation.

Proposals for gas extraction in the region have led to a long-running debate, which started in the 1970s. The Dutch government eventually allowed restricted activities, as long as these were monitored. At the same time, mechanical cockle fishing in the Wadden Sea was seen as a threat to wading birds' food supply. After environmental assessments, protests and attempts to regulate fishing activities, the practice was banned.

A number of studies have been carried out on the role of scientists in policymaking in this region. The authors reviewed 15 of these studies, in order to provide scientists and policymakers with guidance on improving their interactions and to meet the challenges faced in the Wadden Sea. Of the 15 studies, ten were published as peer-reviewed papers and five were the subject of PhD theses.

Following their analysis, the authors conclude that scientists have played an important role in the gas exploitation and cockle fishing controversies. In the case of gas exploitation, research by scientists suggested that gas exploitation should be prohibited because it may cause subsidence, leading to a decade-long moratorium. In the cockle fishing debate, stakeholders on different sides of the debate each used scientific interpretations to support their arguments. Scientists were therefore willingly or unwillingly part of a coalition in favour of or against the fishery, and were also involved in media debates.

The rankings of experts, suggesting that cockle fishing was having a greater negative impact than gas exploitation, turned out to be crucial to the discussion.

The authors say that government and other stakeholders can contribute to more productive interactions with scientists by shaping adequate policy settings including, for instance, whether national or local government are involved, who the key decision-makers are, and what policymakers expect to achieve. Important lessons from the authors' analysis include:

- Dominant policy discourses influence how scientific knowledge is used and interpreted by stakeholders. Independent mediators can play a role.
- Science-policy interactions are structured by the policy setting, which in the case of the Wadden Sea, centred on national government decisions, EU directives and court rulings.
- If scientific evidence is established as a condition for making a legitimate argument, as in the cockle and gas industry debates, this affects science-policy interactions and directs focus towards scientific knowledge.
- The roles of scientists in science-policy interactions are defined by the policy setting, as well as by their own decisions about whether to cooperate with stakeholders – leading to questions about independence and legitimacy of co-produced research.



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1. <http://ec.europa.eu/environment/nature/legislation/birdsdirective/>
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