



The importance of oil and gas platform foundations for a key commercial fish species, the Atlantic cod

Ibanez-Erquiaga, B.; Baktoft, H.; Petersen, J.K.; Svendsen, J.C.

Publication date:
2021

Document Version
Publisher's PDF, also known as Version of record

[Link back to DTU Orbit](#)

Citation (APA):

Ibanez-Erquiaga, B., Baktoft, H., Petersen, J. K., & Svendsen, J. C. (2021). *The importance of oil and gas platform foundations for a key commercial fish species, the Atlantic cod*. Abstract from DHRTC Technology Conference 2021, Kolding, Denmark.

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

The importance of oil and gas platform foundations for a key commercial fish species, the Atlantic cod

Ibanez-Erquiaga B, Baktoft H, Petersen JK, Svendsen JC

There is growing evidence that oil and gas platforms may provide productive habitats for fish communities, partly because of reef effects associated with the foundations, but also because the areas within and surrounding the platforms may act as *de facto* marine protected areas with limited or no ongoing fishing. For example, the Atlantic cod (*Gadus morhua*), which constitutes an important target for North Sea fisheries, but its populations are considered to stand below sustainable thresholds, have been preliminarily associated with these structures. However, there is still a poor understanding of the mechanisms behind platforms' effects, and scarce assessments of the ecological outcomes in relation to fish ecology and fisheries. This makes it difficult to predict possible fisheries scenarios associated with different decommissioning and abandonment options.

The project aims to provide an understanding of the role that platforms are playing for fish and fisheries in the Danish North Sea, using cod as a case study. The experimental approach involves estimating catch variation along distance-to-platform gradients, and spatiotemporal 3D mapping of cod individuals nearby an oil platform. This knowledge seeks to inform decision-making processes related to platform decommissioning in the North Sea by evidencing how these structures are acting as artificial reefs, potentially providing refuge and substrate to different species.

We expect to evidence the potential importance of oil and gas platforms for Atlantic cod in the Danish North Sea. Considering that fishing is banned within 500m around the platforms, these structures could be functioning as fish sanctuaries and fish hubs, supplying juvenile fish to other areas of the North Sea. Provided the intense trawling in the North Sea, platform decommissioning could contemplate a partial scheme in which some structures are left to provide refuge for fish communities. Our information will help in the design of future decommissioning and abandonment plans.

