

Multiple use of sea space between offshore wind and fisheries

There are many good examples of co-existence between offshore wind and fisheries.

Fishing inside wind farms is allowed in Denmark, France, the Netherlands and the UK (Table 1). Belgium will also allow it in its new concession zone for offshore wind farms.

But not all types of fishing can take place inside or near wind farms. Bottom trawling is generally not allowed - and where it is experience shows that bottom-trawlers tend to avoid offshore wind farms due to safety risks.

Table 1 - Fishing within wind farms - summary

Type of fishing	BE	DE	DK	FR	NL	UK
Transit fishing	yes ¹	no	yes ³	yes	yes ²	yes
Passive fishing	yes ¹	no	yes ³	yes	yes ²	yes
Bottom trawling	no	no	no	yes ³	no	yes

1. Only in new concession zones (2020 onwards).
2. 2-year policy evaluation period for access and passive fishing for boats below 24m length has recently ended. New policy in draft.
3. Case-by-case specific.

The most serious risk for fishermen is to snag their gear on a cable. The subsea cables in and from a wind farm are buried under the seabed when a wind farm is built. But they can get exposed due as a result of current and seabed erosion. A fishing vessel and its crew could get in danger if they unintentionally lifted a cable from the seabed.

Consulting fishing groups pre-construction

In **Denmark** wind farm developers have to consult the local fishing groups and discuss potential actions to accommodate their requests, especially concerns they might have for the construction phase of the wind farm. The developer has to reach out to the relevant commercial fishermen and try to organise the construction activity in a way that does not affect commercial fishing more than is necessary.

In **France** fishing groups are heavily involved in the process of developing offshore wind farms. They're involved in studies that developers do on the impact of offshore wind farms

on fisheries. They help in the evaluation of the fishing resources and in the developers surveys of the marine area. The fishing 'groups also feed in to socioeconomic evaluations that define any measures that need to be taken to avoid or reduce and, if necessary, to compensate for the impacts of the project on the fishing industry. It's because these provisions are in place that France allows fishing inside wind farms.

- At the **Iles d'Yeu et de Noirmoutier** wind farm the developer met the requirements of the fishing industry. It adjusted the layout of the wind farm, aligning (instead of staggering) the turbines, with widening the passage corridors (from 900m to 1,600m). It also reduced the number of lines of turbines from 8 to 5 and aligned the intra array cables with the wind turbines lines;
- At the **St. Brieuc wind farm** there has been extensive engagement with the fishing groups since 2011, and their interest has been considered in the design and planning of the project.

Compensation for losses during construction phase

Offshore wind farm developers generally compensate fishermen for the disruption during construction activities (usually 2 years). Once wind farms are operational, then fishing in nearby waters generally resumes.

The UK gives guidance on compensation in a "Best Practice Guidance for Fishing Industry Financial and Economic Impact Assessments". This explains how to calculate financial impacts as a result of areas being closed or restricted for fishing. The details have been negotiated between the fishing and wind industries and are based on science-based evidence and alternative employment opportunities.

Jobs and growth opportunities

Offshore wind developers also offer alternative employment to fishermen in some cases. Their experience of the marine environment is invaluable, especially during construction and sea surveys:

- Sea Source is a co-operative owned by the fishermen of Kilkeel in Northern Ireland. It offers marine services and offshore asset management, including guard vessels, asset protection, marine observation and data collection. Profits are fed back into the co-operative, which in turn make their way directly to the fishing communities.

Offshore wind should unlock significant opportunities for just transition among fishing communities. Today's 77,000 jobs in offshore wind will rise to 200,000 by 2030 if governments deliver on their NECP commitments. And each 1 GW of new offshore wind generates €2.1bn of economic activity: each new turbine generates on average €16m activity across the economy.

Offshore wind and biodiversity

Offshore wind farms are good for **fish stocks**. The biodiversity around wind turbines attracts more fish due to the increased availability of food and shelter that wind farms offer against bottom trawling¹. There are more fish around wind turbines than in the surrounding areas outside the wind farms, and they are in better health. Their stomach content shows a much more diverse food spectrum. There are also signs that induced spawning of cod occurs in wind farms².

There have even been **seals** spotted seeking fish within UK wind farms. This shows that impacts on mammals are limited to just the construction phase and that there is a good presence of fish within wind farms³.

Belgium has studied for more than 10 years the effects of offshore wind farms on fisheries and found that there are no negative impacts⁴.

Offshore wind farms are also good for **aquaculture**. The most suitable species are bivalve, oysters and seaweed. Belgium and the Netherlands are the leaders here. The offshore wind farm Luchterduinen in the Netherlands hosts oyster aquaculture⁵ and wind farms in Belgium (Princess Amalia, Mermaid) are assessing the aquaculture of mussels.

¹ In 2011 the [first long-term study](#) of the effects of offshore wind farms on fisheries found a **higher number of species inside the wind farm area** compared to areas outside the wind farm.

² The German [Alfred Wegener Institute](#) (Helmholtz Center for Polar and Marine Research) and [Wind MW](#) are currently conducting a project in Helgoland about how offshore wind farms increase fisheries and nature conservation. It is also demonstrating how the Meerwind Süd/Ost wind farm can be used for fisheries and marine aquaculture. The focus is on commercially important species like Cod, Crab, Blue Mussel and Oyster. For The findings on cod spawning mean that offshore windfarms can help to stop the downward trend of cod population in the North Sea.

³ <https://www.newscientist.com/article/dn25927-hungry-seals-tour-offshore-wind-farms-looking-for-food/>

⁴ Article from Flanders Research Institute - [SOURCE](#); Full study - [SOURCE](#)

⁵ <https://www.vanoord.com/sustainability/nature-communities/rich-north-sea>

