

— FLOATING OFFSHORE WIND: UNDERSTANDING POTENTIAL IMPACTS TO MARINE MAMMALS

Floating offshore wind looks set to develop rapidly, but it's still in its early stages. What questions should the industry be asking around marine mammal impact assessment?

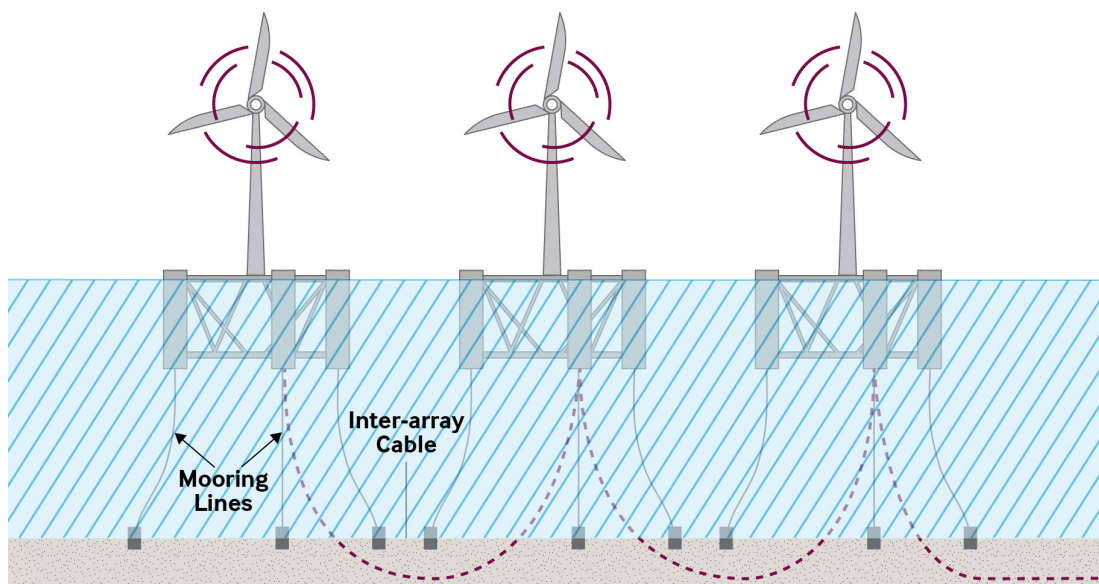
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The differences between floating and fixed offshore wind will mean different considerations regarding the impact on marine mammals, and how we assess these. What's needed is a robust understanding of the nature of how marine mammals interact with floating wind turbines, and the application of the expertise we have already gathered.

With only limited data on floating offshore wind available, there are, of course, some unknowns in terms of potential impacts and regulation – and how these will evolve in the future. In this article, Dr Tessa McGarry, a leading voice in marine mammal assessment in the UK, discusses possible challenges and solutions for floating offshore wind. The first part looks at entanglement risk, but if you would like to read more about other types of potential impacts, **scroll down to request an extended version of this article.**

Types of entanglement risk

One key difference between fixed and **floating offshore wind farms** is the absence of a fixed foundation structure e.g. monopiles, replaced instead with a floating subsea structure that is anchored to the seabed via mooring lines and suspended cables. As floating offshore wind develops globally, the industry is looking to understand if such structures are likely to adversely affect marine mammals.



Entanglement risk is divided into two types:

Primary entanglement – would be the result of animals directly entangling with the various below surface elements of the wind turbine e.g. cables or mooring lines. Given the size, tension and spacing of these structures and the ability of many marine mammals to locate by sonar, this type of risk may be relatively small.

Secondary entanglement – refers to items such as “ghost” fishing gear or other lost, abandoned or otherwise discarded fishing equipment, already extant in the marine environment, becoming tangled around the moorings and cables. Animals, including marine mammals, fish and sea turtles, may suffer injury or mortality; even if the animal were able to break free there may be physical damage (e.g. tissue damage from abrasion or impairment of their respiratory systems).

Understanding the potential risks and effects of entanglement on marine mammals is uncertain due to lack of data. What does this mean for developers, regulators and stakeholders? In reality, because floating offshore wind is a relatively new discipline, consultants will focus on *risk-based* assessments until more empirical data is available to inform the industry. The potential for entanglement is a key area for future research.

Read more: [this article from our team discusses challenges around consenting \(AKA permitting or approvals\) for floating offshore wind](#)

One mitigation option is adaptive monitoring to inspect and remove nets and similar detritus from the wind farm area – with intensity of monitoring tailored to the risk at an individual floating offshore wind farm, and over time. **Technological advancements in remote monitoring** can facilitate such programmes.

Other types of potential risk to marine mammals

If you would like to read more about other types of impact to marine mammals that should be considered in floating offshore wind development – and the mitigation available – these are discussed in an extended version of this article. Click below to request your copy.

[Request extended article](#)

RPS marine mammal expertise for floating offshore wind

RPS' marine mammal team guides clients through the consenting process, from the very start of the project design phase to getting consent and advising post-consent. They support the entire offshore wind lifecycle, designing surveys, conducting impact assessments, writing chapters of project Environmental Statements (ES) and performing data analysis, as well as developing post-consent monitoring plans, reporting on compliance and liaising with regulators and stakeholders.

RPS provides permitting / consenting / approvals support to offshore wind projects globally from our hubs in the UK, the US, Australia and South Korea. Our teams have many years of experience in offshore wind, providing technical assessments for major projects. They comprise EIA project managers and subject matter experts (including expertise in, for example, benthic habitats, fish and shellfish, marine mammals, ornithology, coastal processes, commercial fisheries, etc). The breadth of our expertise means we can take a holistic and seamless view across the whole project. As the floating offshore wind industry looks to grow with high standards, expertise and a consistent approach, we're proud to be able to say that we can offer our clients all of these things in-house.

If you have questions about marine mammal assessments and mitigation for floating offshore wind, please [contact Tessa McGarry](#).