European Green Deal Challenges and opportunities for EU fisheries and aquaculture

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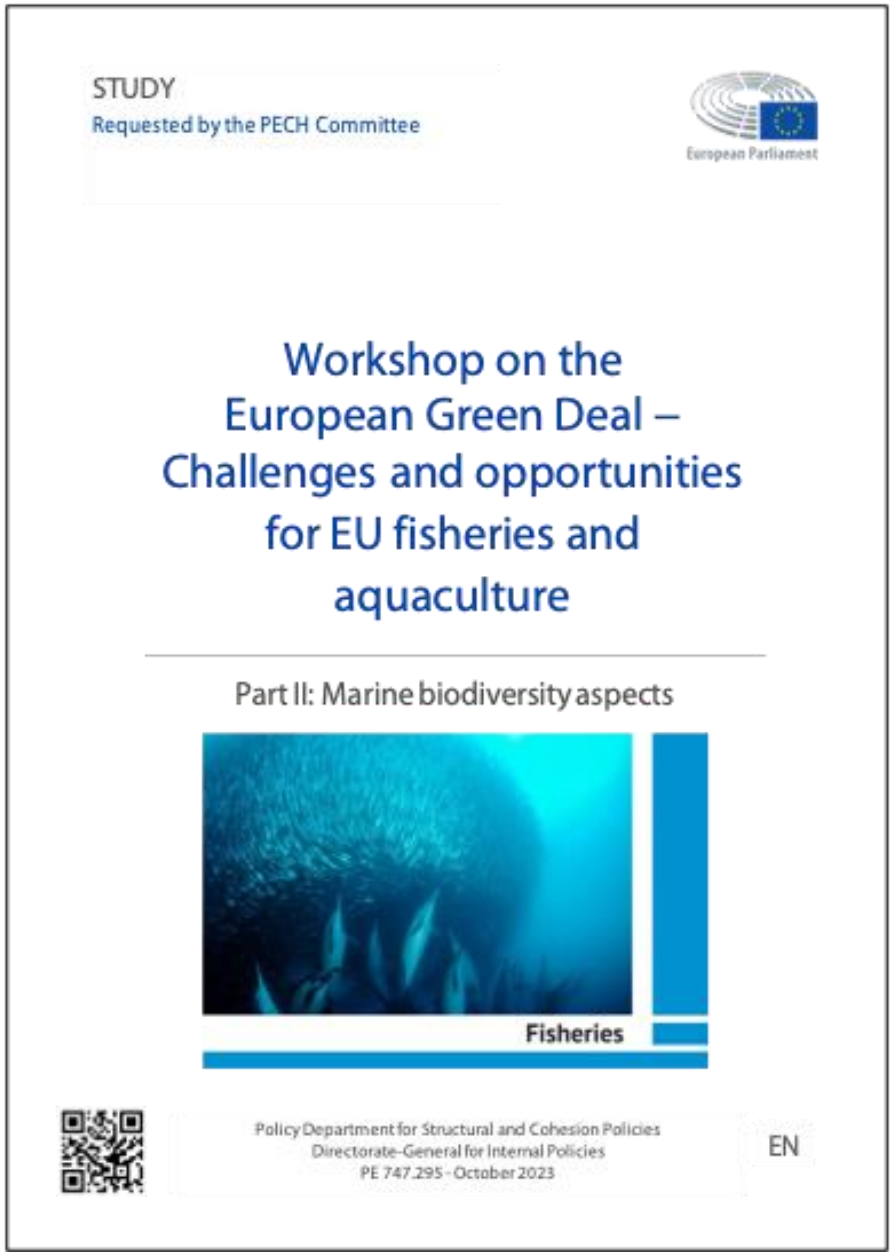
NWWAC/PELAC WEBINAR ON EU FISHERIES AND THE IMPACT OF OFFSHORE RENEWABLE ENERGY DEVELOPMENTS

Objectives of the study

Define the challenges and opportunities for EU fisheries concerning Marine biodiversity aspects of the European Green Deal.

Provide concrete policy recommendations relevant to EU decision-making

Source: https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2023)752437



Past experiences

Offshore call for tender	Consortium	Connection to the national electric grid
Saint Brieuc (Fixed) 2011-2013	Iberdrola, res	Rte
Saint Navaire (Fixed) 2011-2013	Iberdrola, res	Rte
South Bretagne (Floating) 2021-2023	TotalEnergies, Qair	

Key questions

What are the potential effects of the different policy initiatives published in the European Green Deal in terms of marine biodiversity aspects?

Are there potential incompatibilities when combining the different policy initiatives?

- “If we were to close areas to specific activities, like MPAs and offshore wind farms, could we combine them?” (ie place wind farms in the middle of MPAs)

Can fishing vessels operate close to or inside offshore wind farms?

What about the potential spatial squeeze?

European Green Deal Policy Initiatives

EU Biodiversity Strategy for 2030:

- EU-wide network of protected areas covering **30% of the EU's sea waters protected by 2030**, with a third strictly protected.
- Currently covering close to **450 000 square kilometres** (9% of EU marine areas), the network of marine protected areas (MPAs) has to be tripled to reach the 30% objective.

EU Strategy on Offshore Renewable Energy:

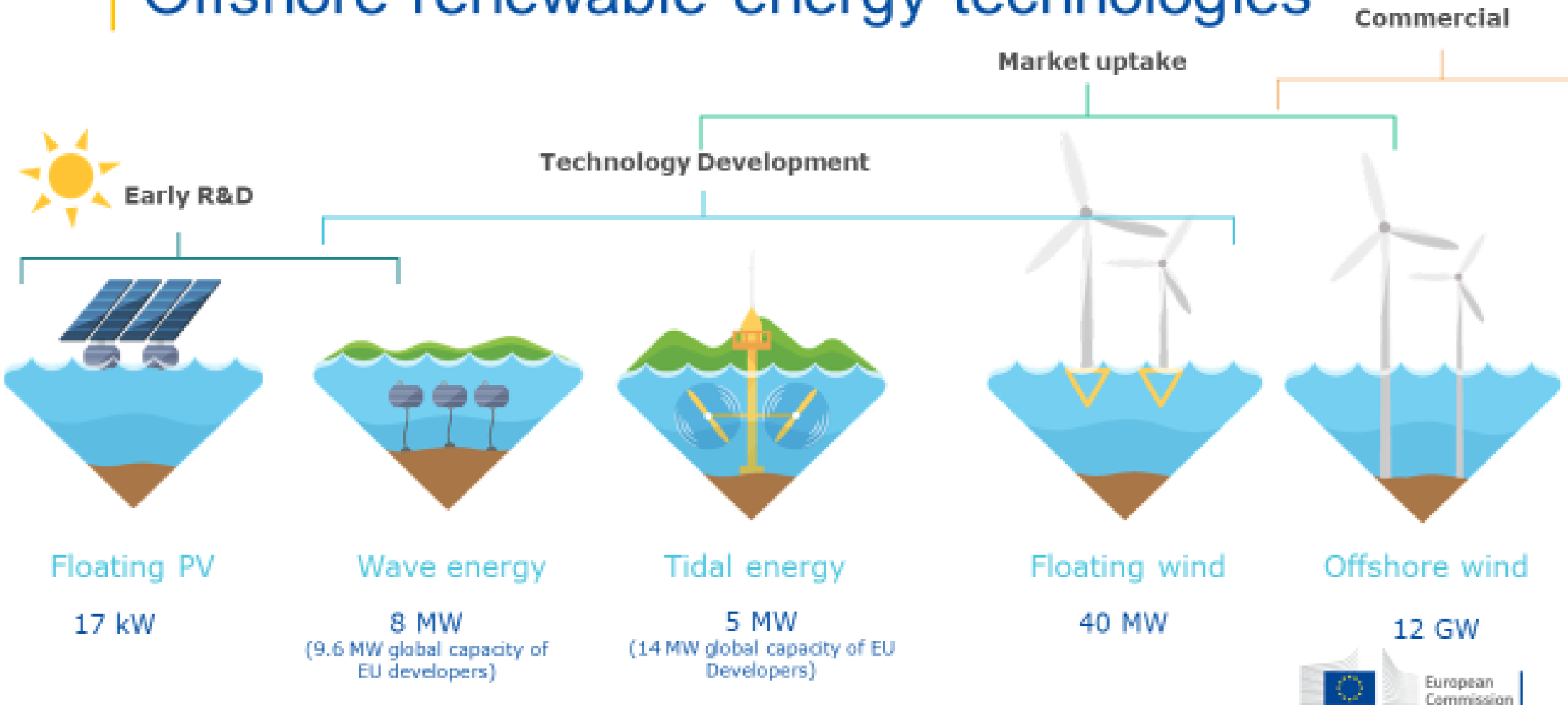
- EU offshore wind capacity to reach **60 GW by 2030** and **300 GW by 2050**
- Requirement of **50 000 to 60 000 square kilometres** of offshore wind farms at the European level, without counting the security buffer area surrounding each wind farm and the corridors needed to connect these wind farms to the electric grid.

National ambitions for 2030

Denmark	10 GW
Germany	30 GW
Netherlands	21 GW
Belgium	4 GW
France	3,6 GW
Ireland	5 GW
Spain	3 GW
Portugal	0,4 GW

United Kingdom	*50 GW*

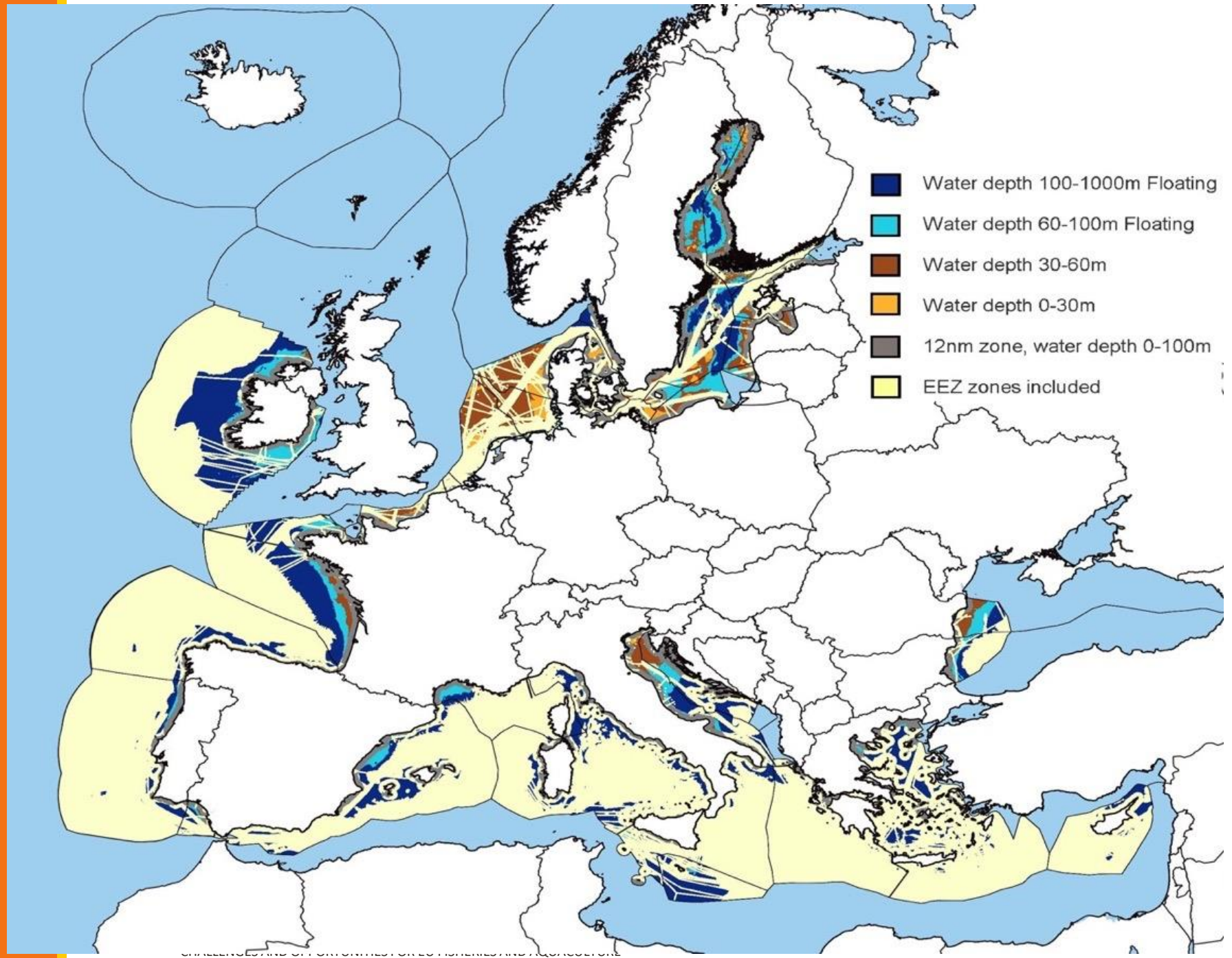
Offshore renewable energy technologies



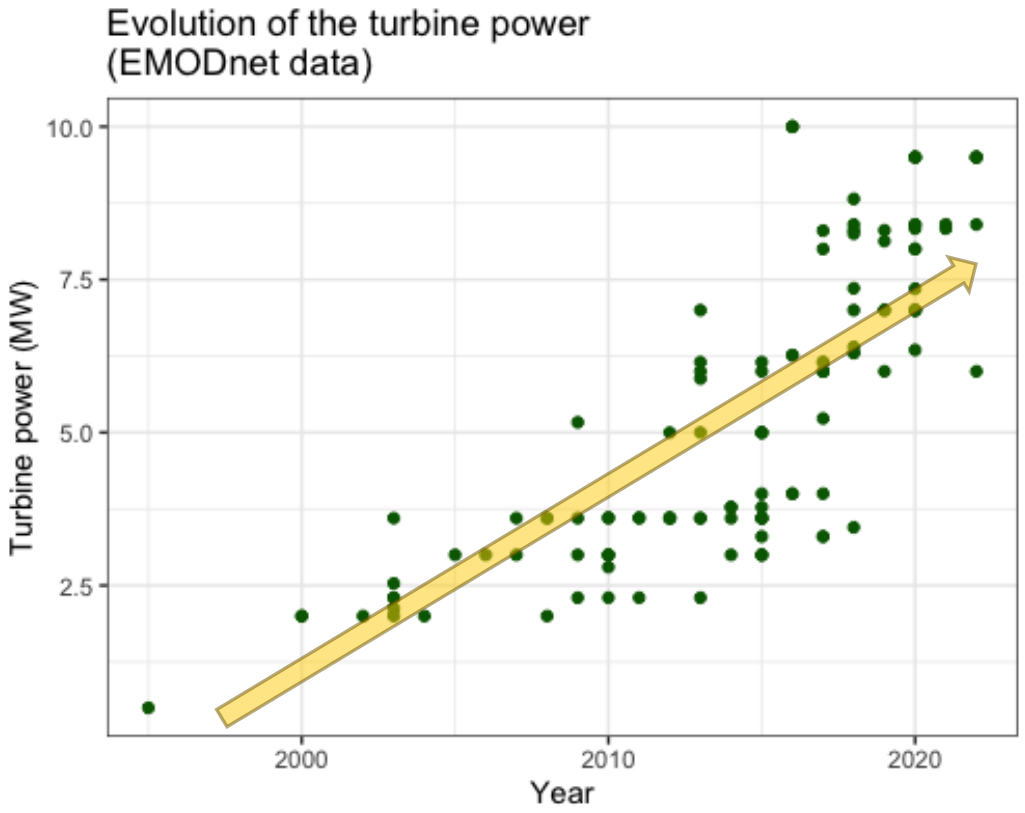
JRC 2019

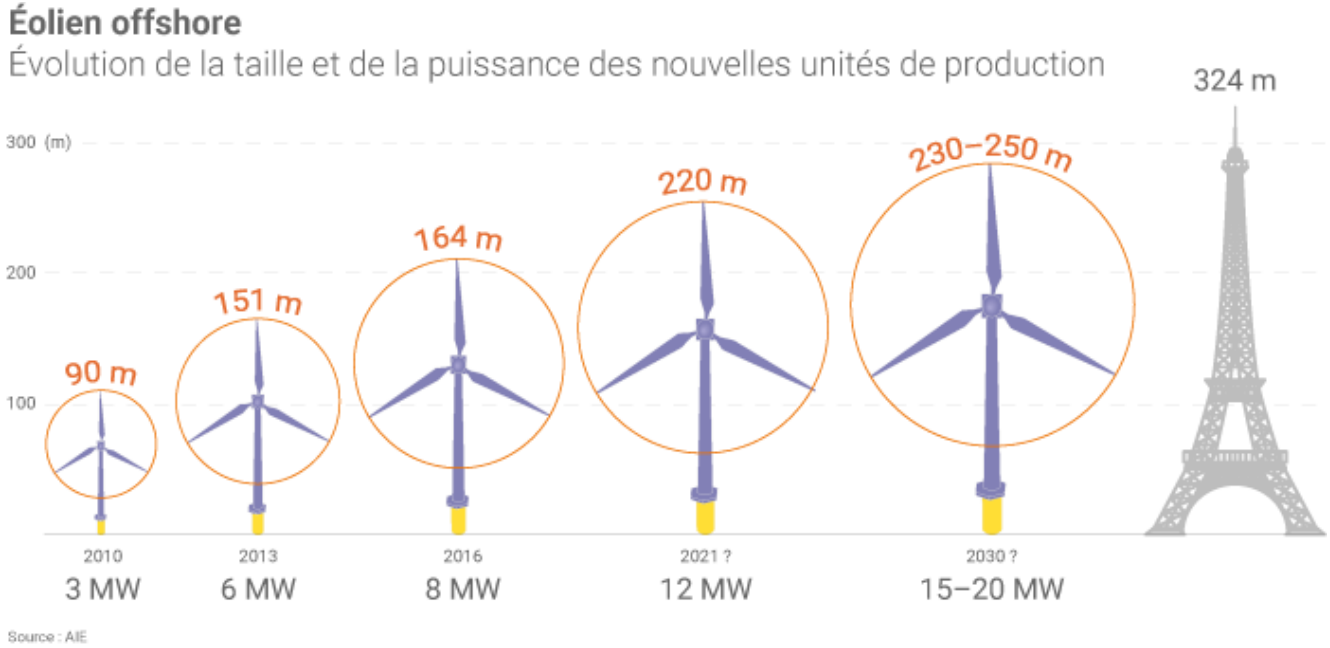
Offshore wind technical potential in sea basins accessible to EU27 countries

Source: JRC 2019

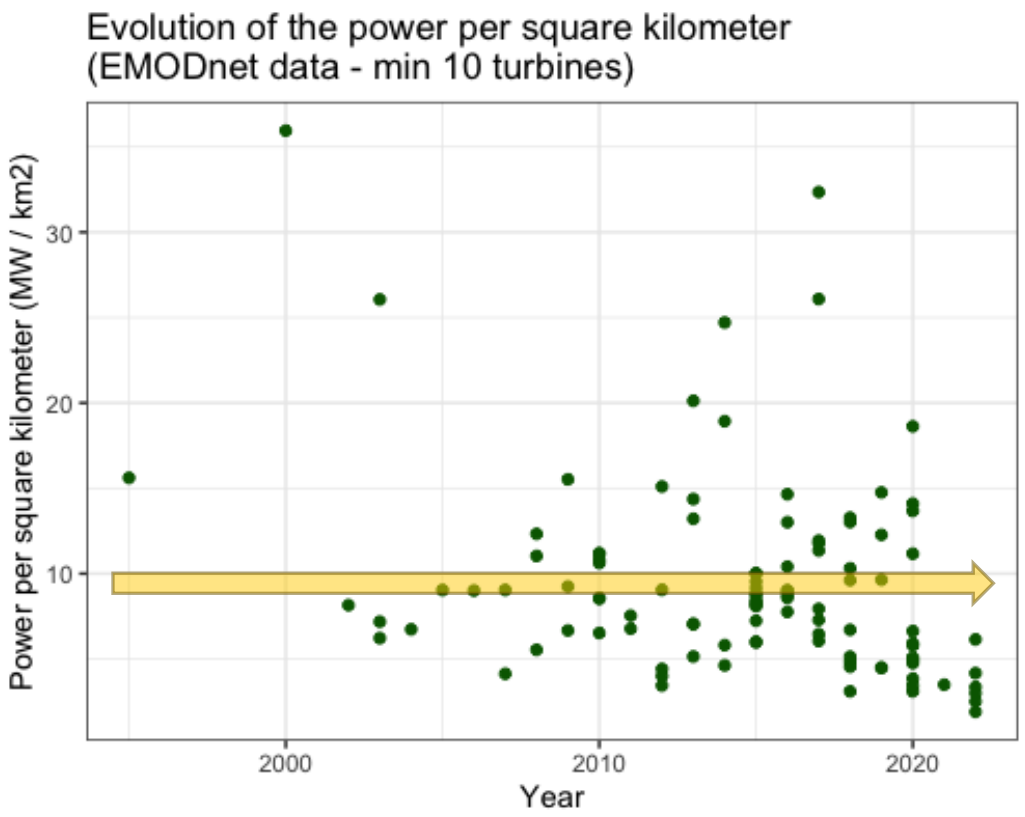


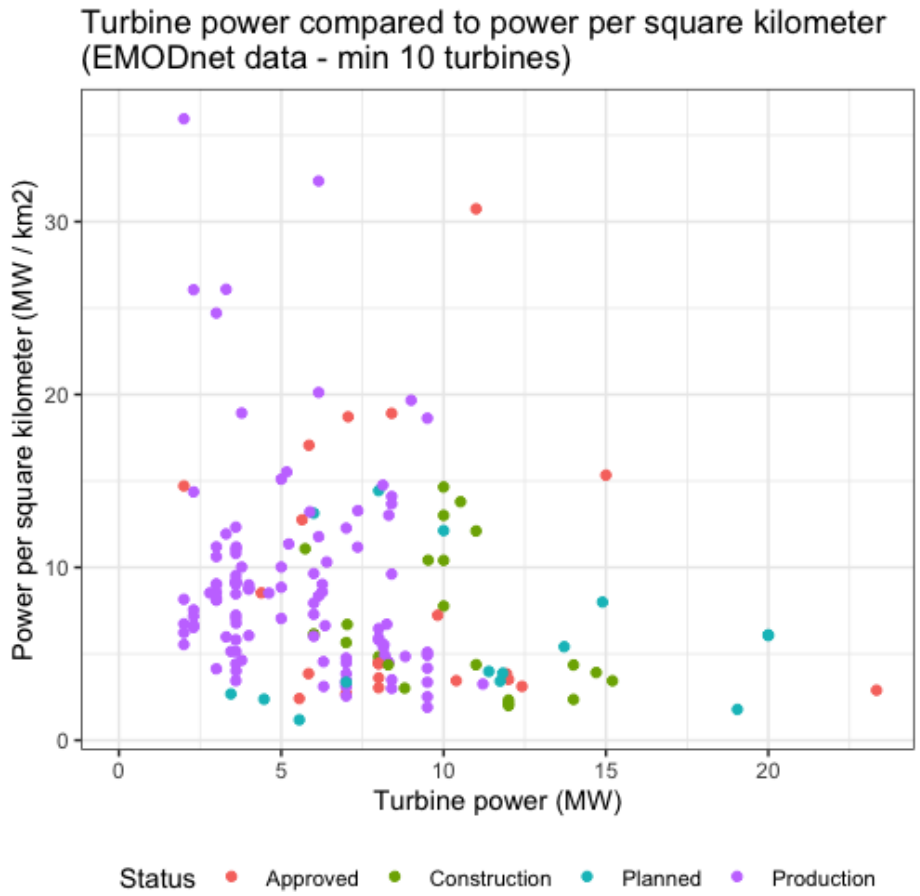
Will technology help us? - I





Will technology help us? - II





The wake effect

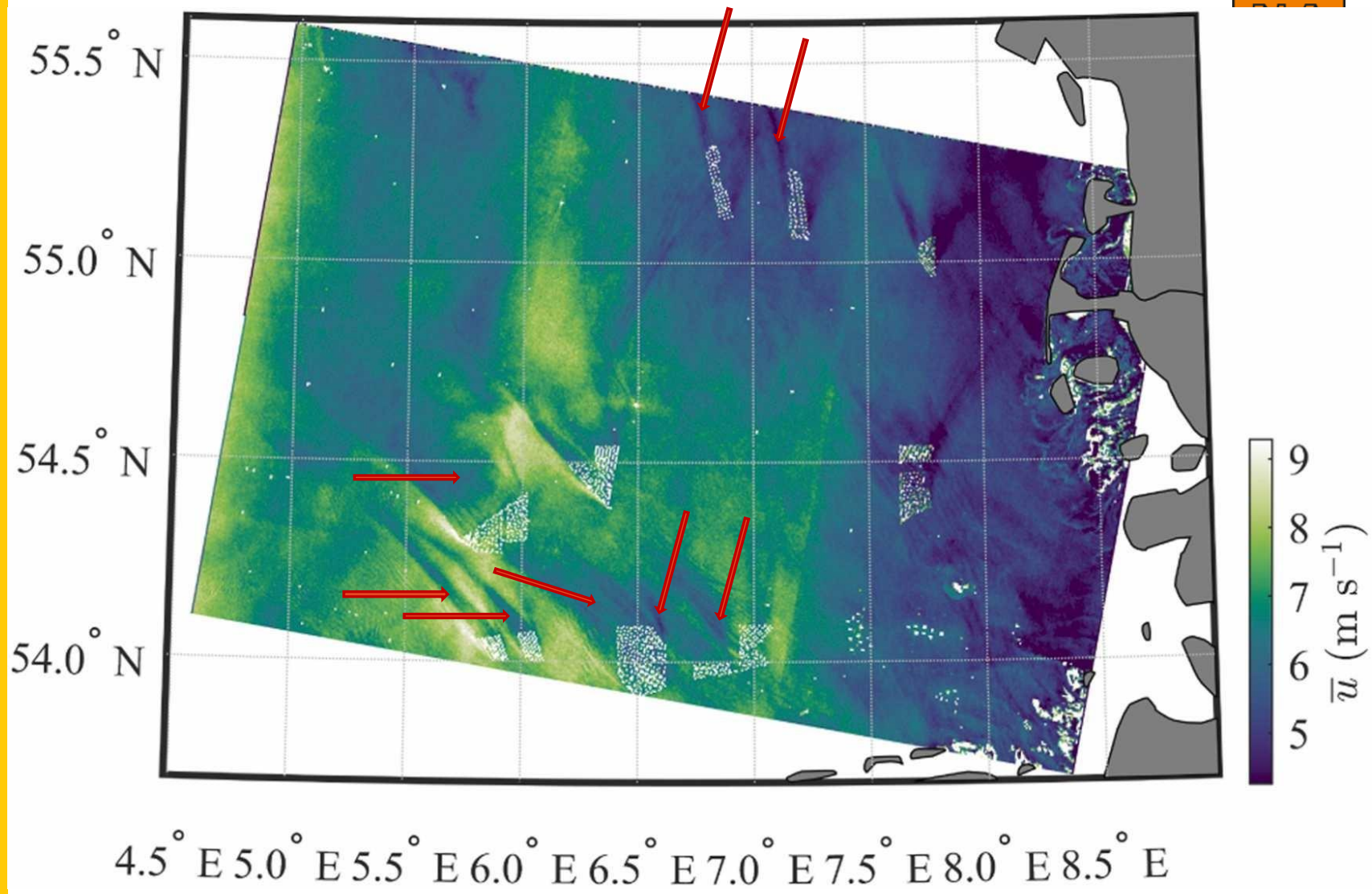
Source: Hasager, C. B., Nygaard, N. G., Volker, P. J. H., Karagali, I., Andersen, S. J., & Badger, J. (2017). Wind Farm Wake: The 2016 Horns Rev Photo Case. Energies, 10(3), 317. https://doi.org/10.3390/en10030317

The wake effect: Offshore wind farms can 'steal' wind from one another

Source: Eirik Finserås, Ignacio Herrera Anchustegui, Etienne Cheynet, Cristian Guillermo Gebhardt, Joachim Reuder,

Gone with the wind? Wind farm-induced wakes and regulatory gaps

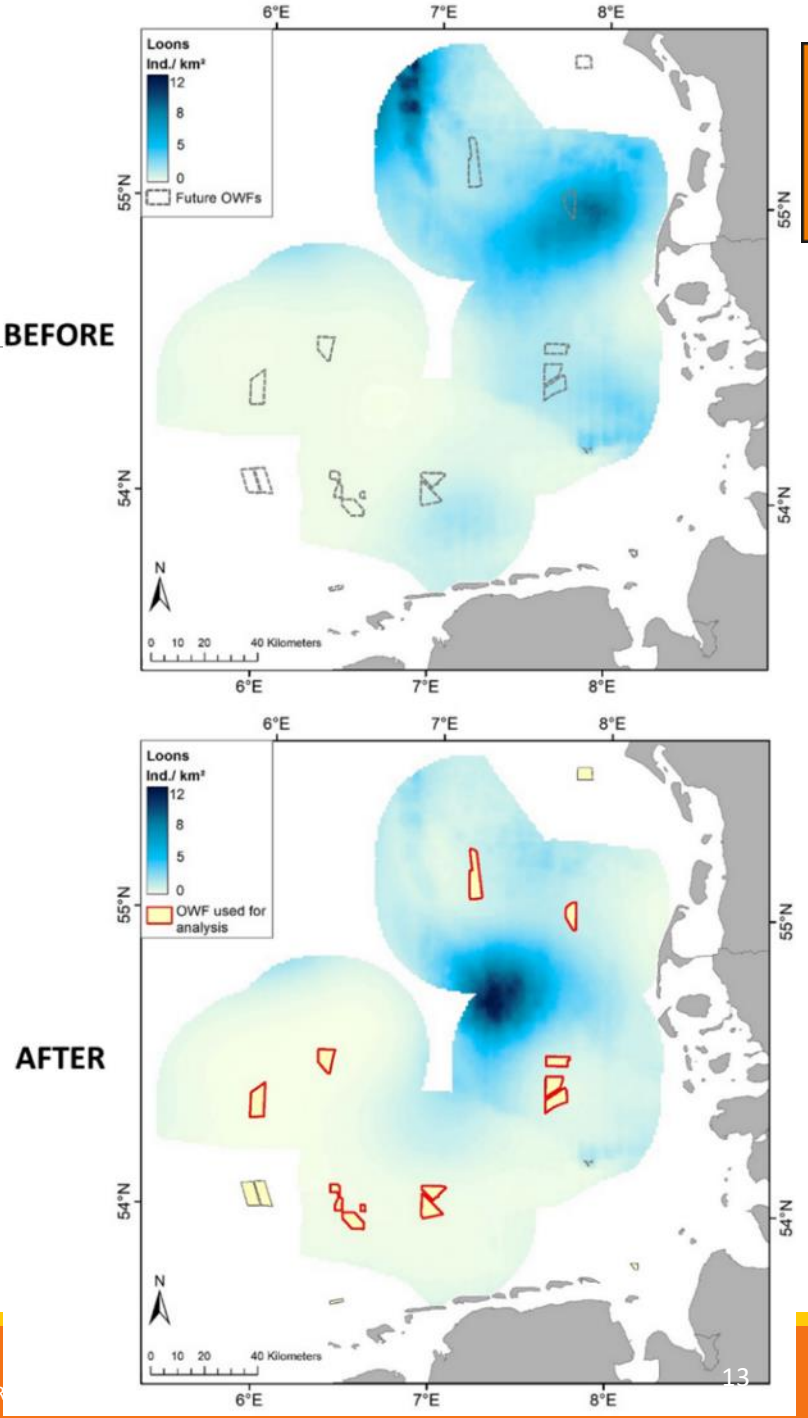
Marine Policy, Volume 159, 2024, 105897



Offshore wind farm installations, spatial protection measures and fishing activities

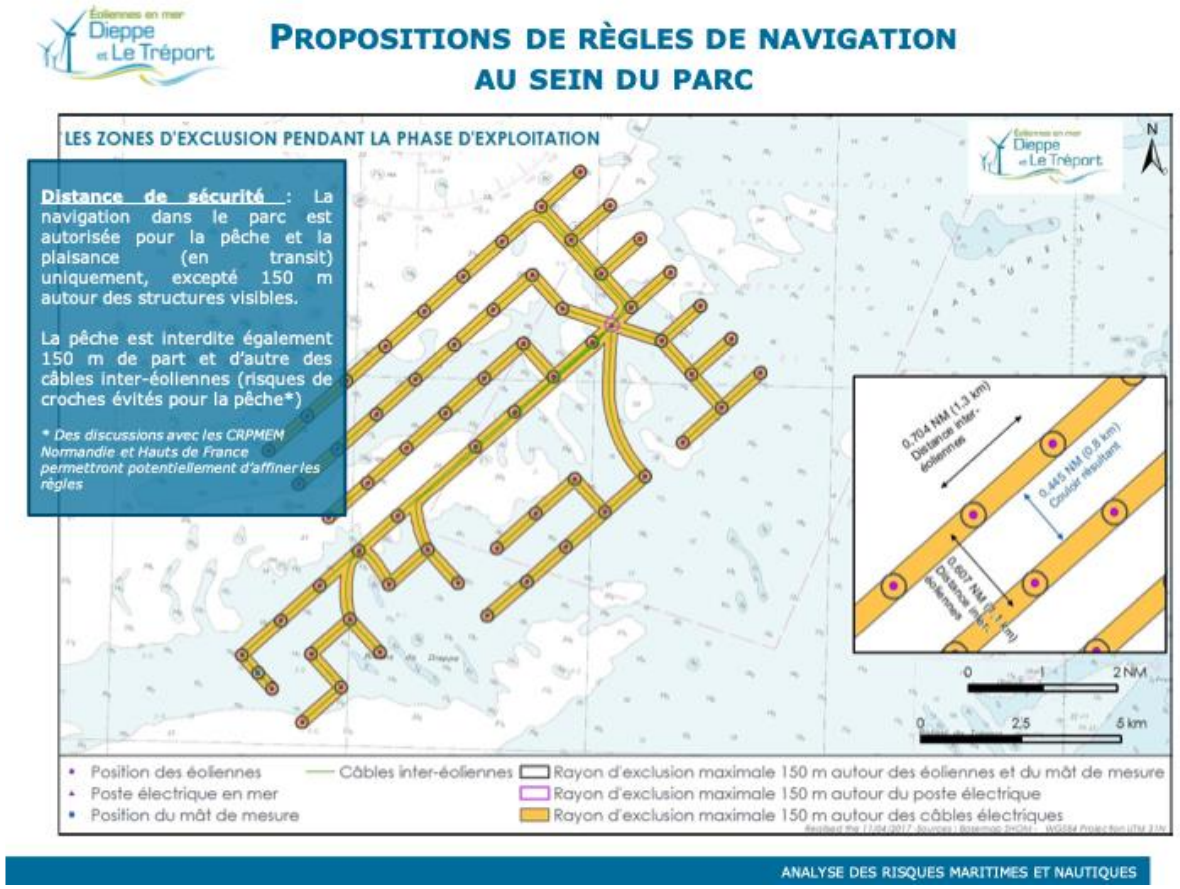
The impact pathways of offshore wind farms on marine biodiversity are complex and often **incompatible** with conservation objectives

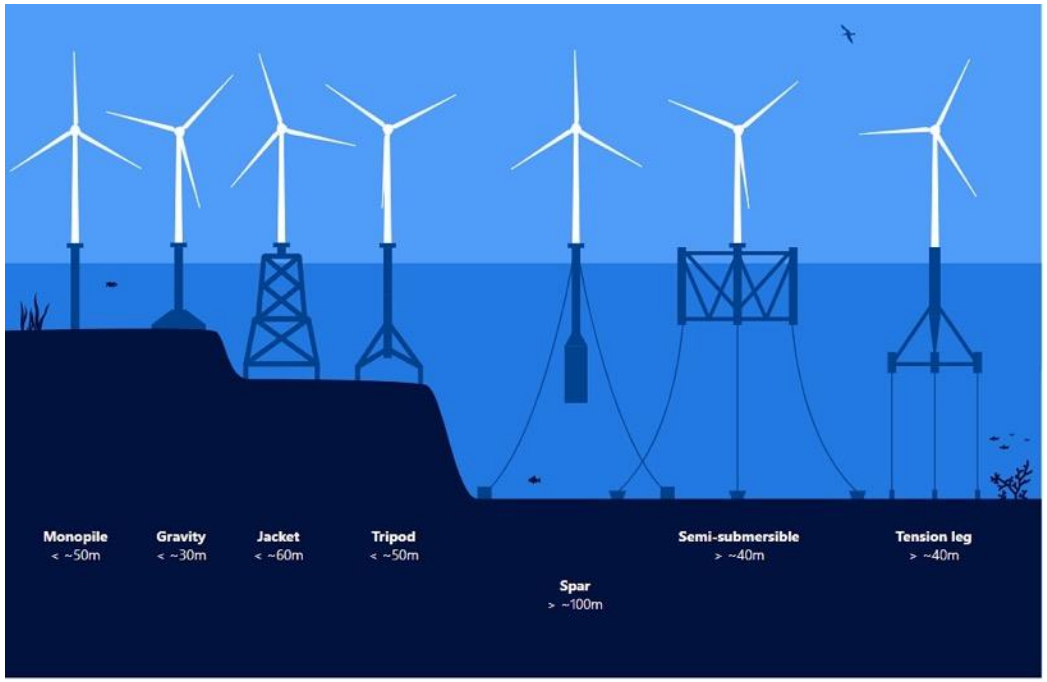
- Change in local conditions: wind, temperature, noise, oxygen concentration
- Habitat effect: new artificial habitats with potential increase of local biomass
- Corridor effect: favour the spread of non-native species
- Strong impact on migrating sea birds



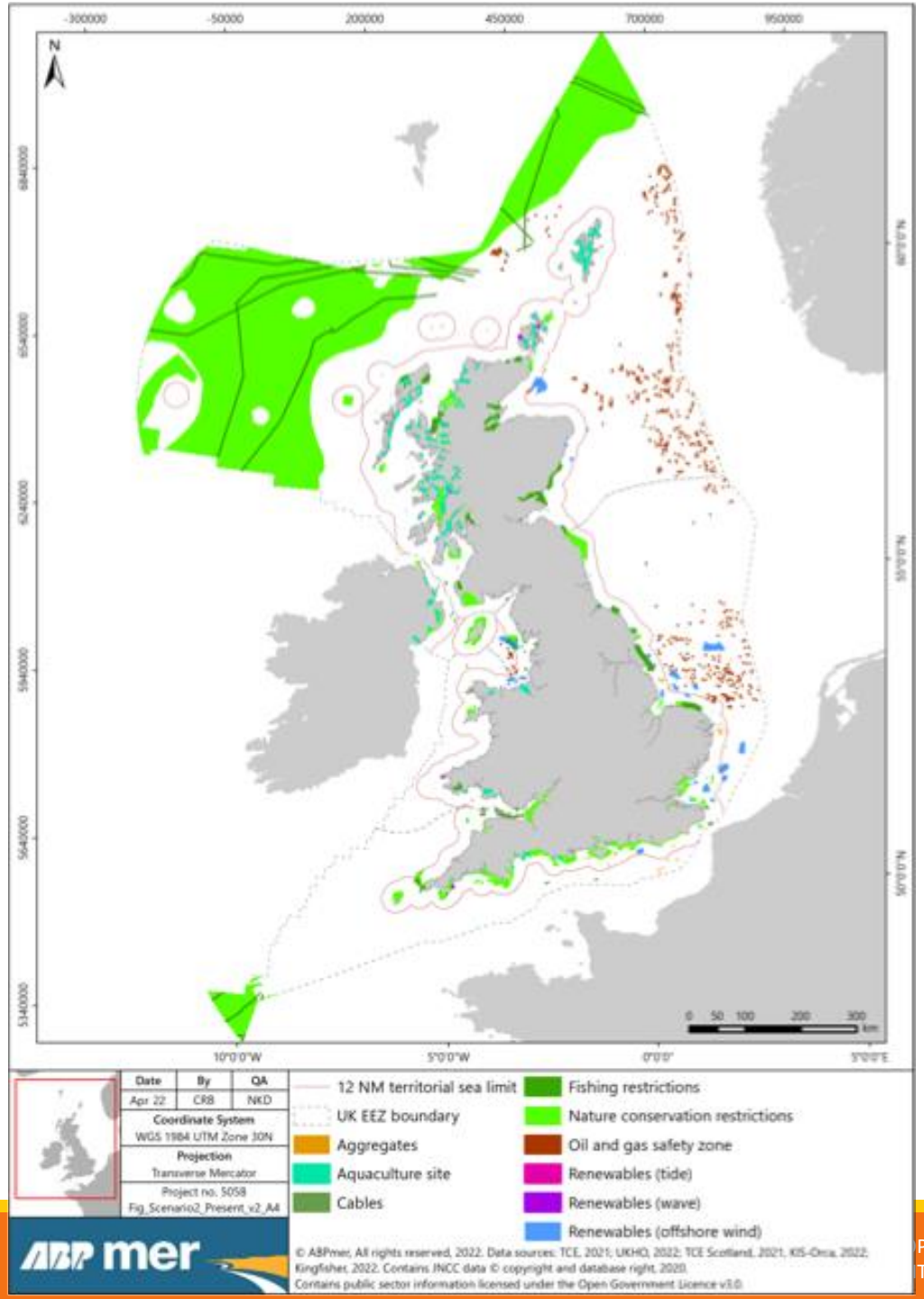
Modelled distribution of loons (migrating birds) before and after the construction of wind farms. From Garthe et al. (2023)

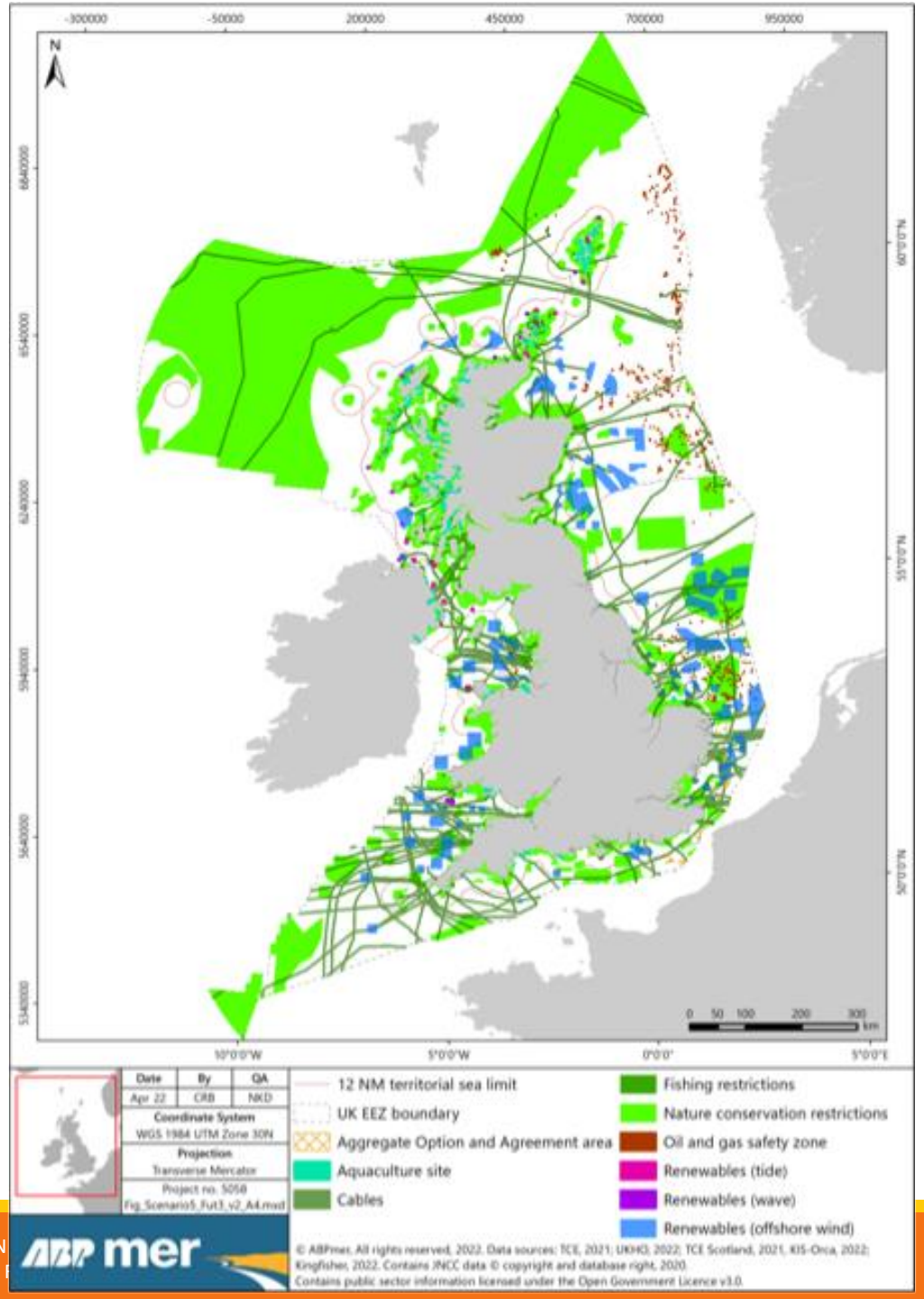
Co-locating offshore wind farms and fishing activities





Spatial squeeze?





Source: ABPmer, (2022). Spatial Squeeze in Fisheries, Final Report, ABPmer Report No. R.3900. A report produced by ABPmer for NFFO & SFF, June 2022.

Avslag på 13 havsvindparker i Östersjön

In a nutshell

The European Green Deal sets ambitious objectives, some mirroring international commitments (Convention on Biological Diversity) or internal objectives (Net Zero objective).

Some policy initiatives will significantly affect the fishing sector, notably the EU Strategy on Offshore Renewable Energy. Some implementation scenarios clearly show a potential for a substantial reduction of available space for fishing vessels (aka the spatial squeeze).

Co-locating offshore wind farms and fishing activities presents technical, institutional, and organisational challenges.

Thank you for your attention.

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