



Ministry of Agriculture,
Nature and Food Quality

Development of the Dutch North Sea Strategy 2030

Managing the unfinished transition

Ton IJlstra

Projectleader North Sea Strategy 2030



What's up?

DEVELOPMENT

- › Climate change necessitates an energy transition
- › There seems to be no scarcity of maritime space for the location of windturbineparks
- › Windenergy at sea thus becomes the new kid on the block

REFLECTION

- › Climate change has probably great adverse effect on marine environment
- › Huge quantities of windturbines will make marine space scarce
- › Traditional userfunctions (fisheries, shipping, sand and gravel dredging) lose their space



Managerial headaches

- › How/where to find suitable space for windturbines?
- › How much space now and/or in the future?
- › Which regime should apply to windparks?
- › Application of multi-functional use?

GO WITH THE FLOW!





Go with the flow

1

The Dutch situation

2

How to accommodate
traditional use

3

New opportunities?

4

What is in it for the
environment?

5

International embedding?

The Dutch situation

2006 First 2 windparks

2013 Policyplan offshore wind 2023

2016 Start North Sea Strategy 2030

2018 Policyplan offshore wind 2030
(aims at appr. 11 GW)

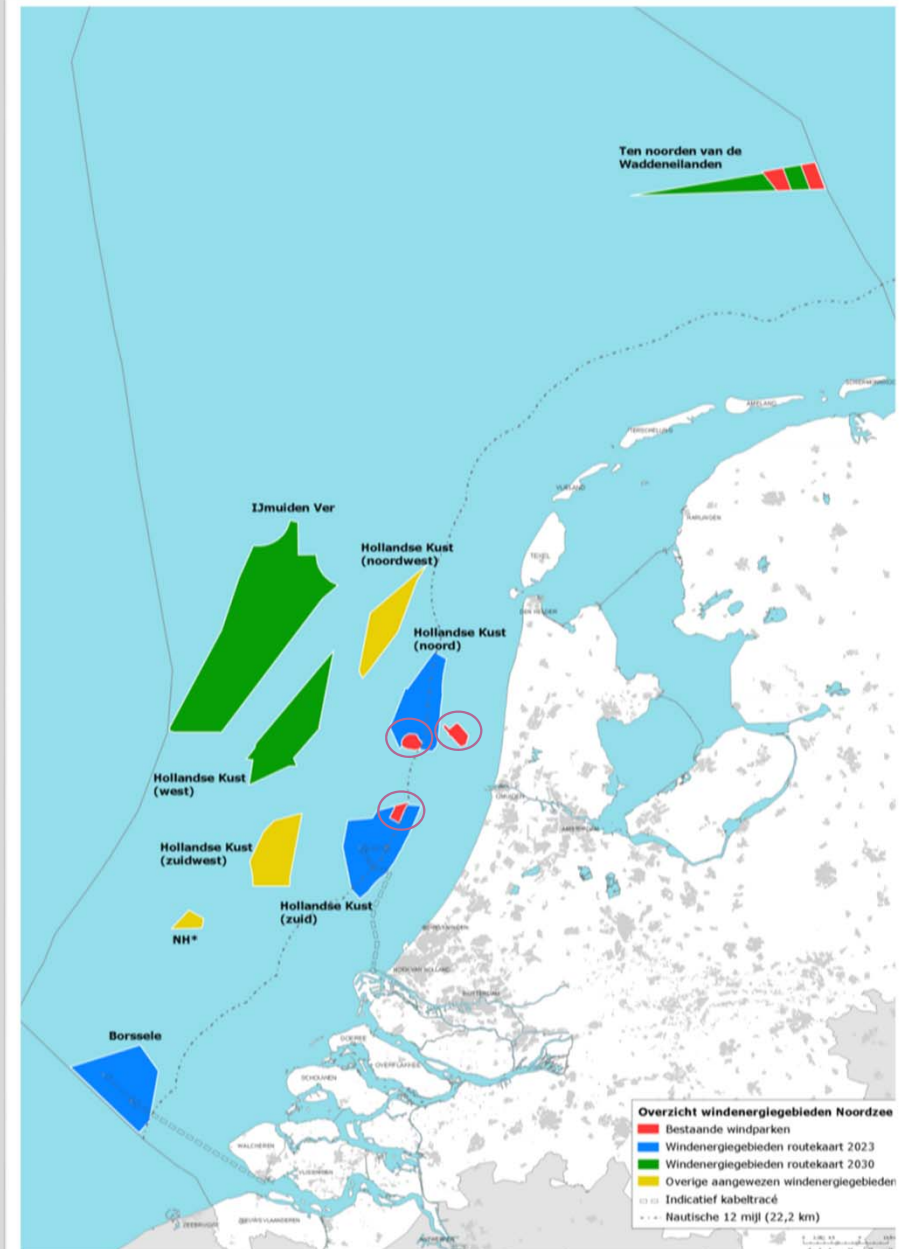
2018 Report Planning Agency:
offshore wind may need up to 25%

2018/19 Domestic negotiations on
stepping up sustainable energy effort

2021 Maritime plan (MSP Dir.)

Wind Energy areas 2018

Based on Routekaart 2030





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Fishermen and wind farms struggle to share the sea

Rising demand for clean energy means growing conflict between fishermen and offshore wind.

By **KAIT BOLONGARO** | 12/14/17, 12:22 PM CET | Updated 12/29/17, 8:01 AM CET

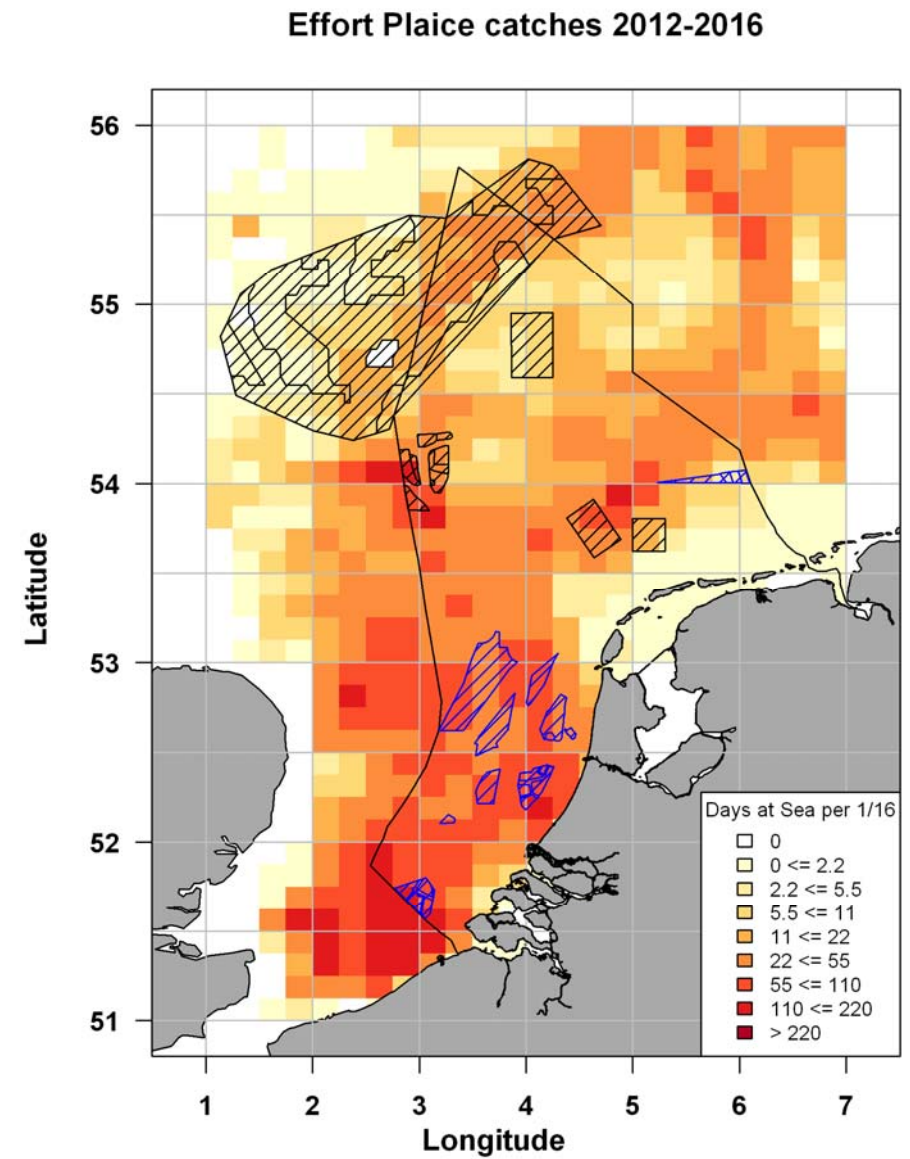


An offshore windfarm near the Heligoland archipelago in the North Sea | Tobias Schwarz/AFP via Getty Images

Politico, December 2018

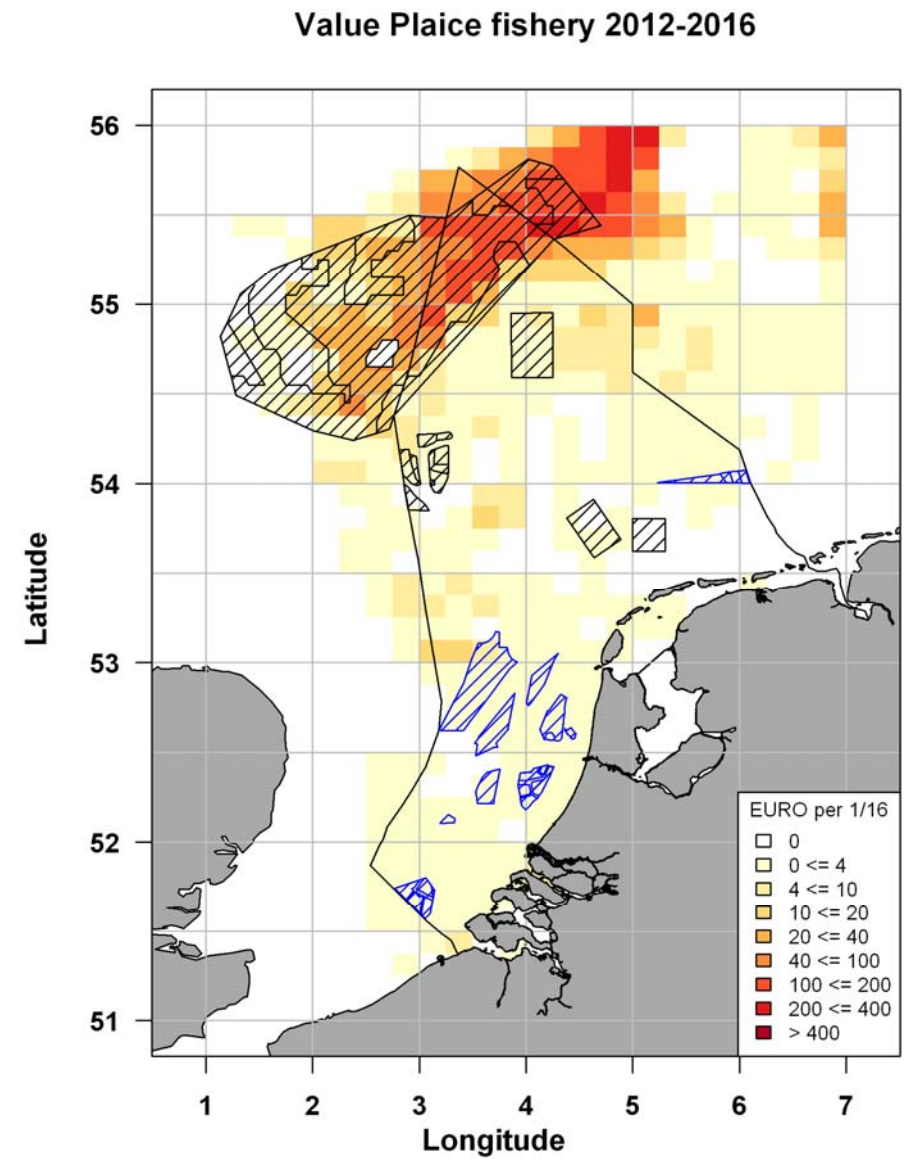


Effort Plaice catches 2012-2016





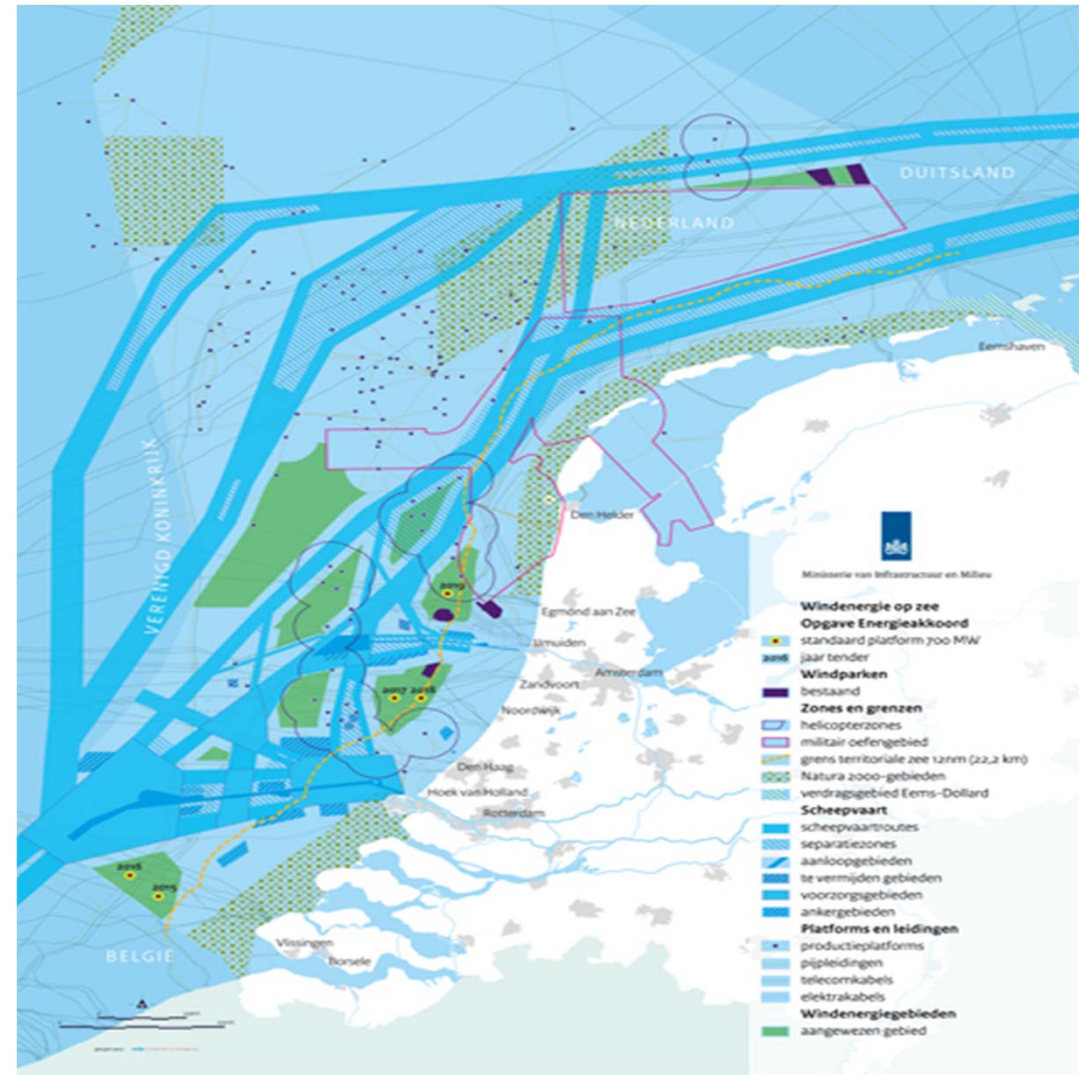
Value Plaice fishery 2012-2016





Accommodating old school energy and shipping

Oil and gas installations in or near windenergy sites and shipping routes





Overlap potential N2000 birds directive site Brown Ridge with Windturbine area





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Seaweed farms Dutch North Sea area



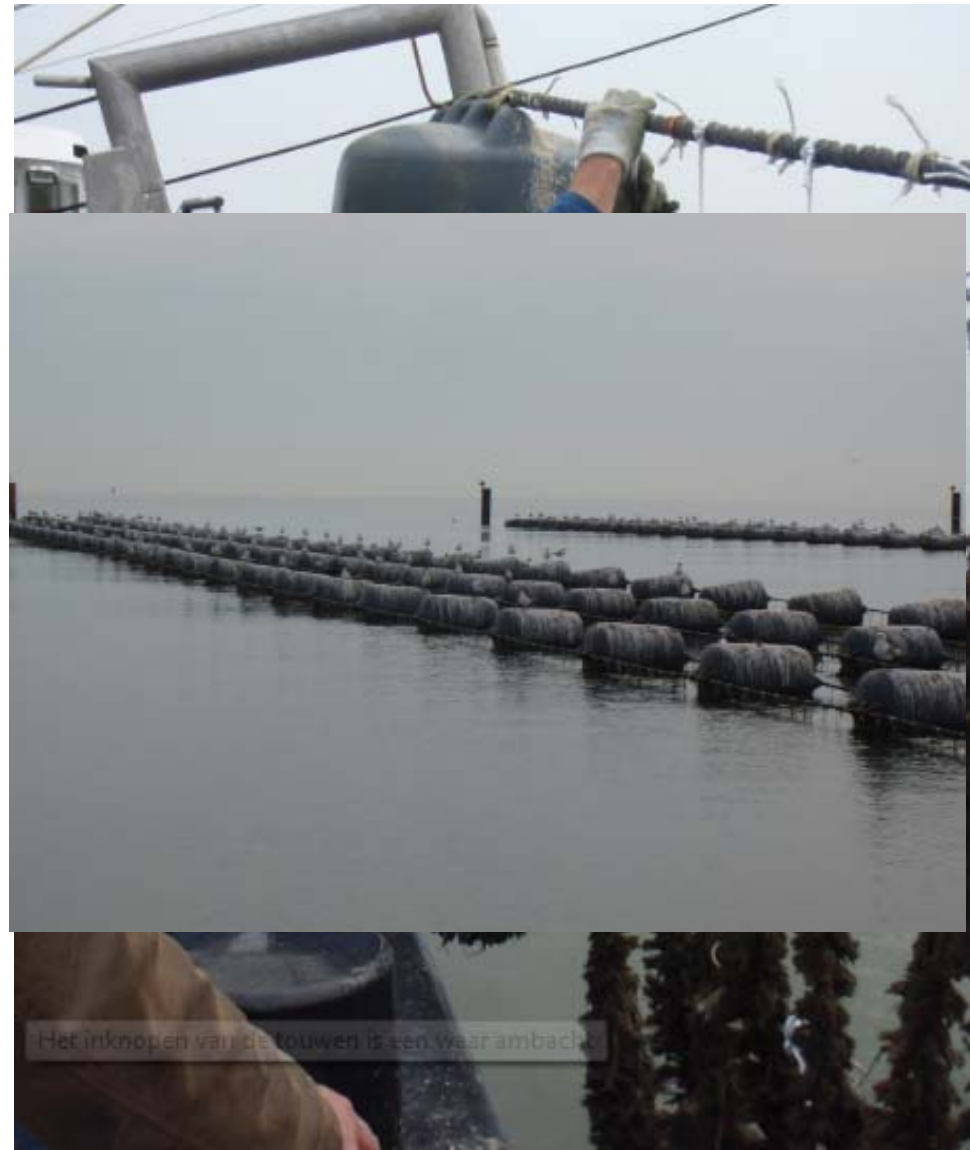
Artist
impression





Various types of aquaculture (e.g. mussel-seed)

(Picture from the Wadden Sea)





Solar energy at sea



Is this the future? Dutch plan vast windfarm island in North Sea

Advanced plans by Dutch power grid aims to build power hub possibly at Dogger Bank whose scale would dwarf current offshore sites

(Multifunctional) islands

The Guardian, 29 December 2017



▲ Windfarm island as envisaged by TenneT, the Dutch equivalent of the UK's National Grid. Photograph: TenneT



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What is in it for the environment?

Offshore wind farms act as marine preservation areas

“Offshore wind farms act as marine preservation areas where fishing and trawling is prohibited, which helps to reduce pressure on fish stocks,” said Giles Dickson, chief executive of industry group WindEurope.





At present ecological user space is restricted because of birds and because of noise

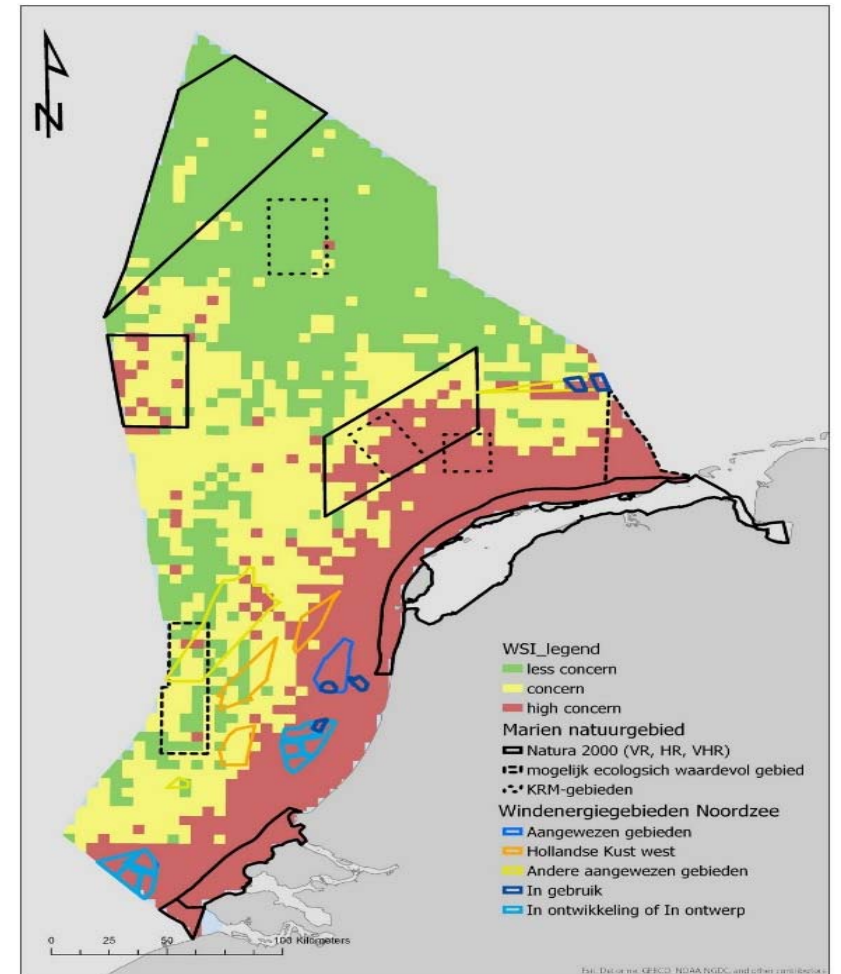


Wind turbines
clearing our skies of toxic birds since 1980



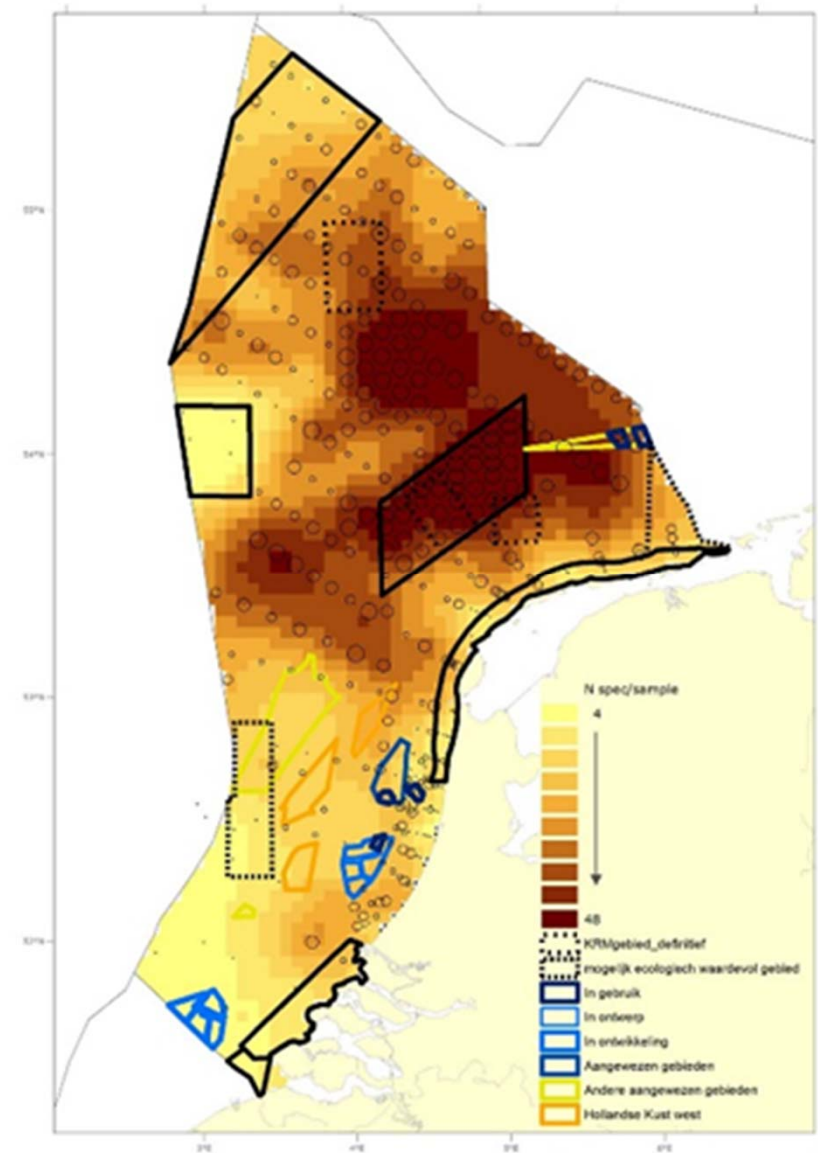
Birds sensitivity map

Map shows birds concentrations





Benthos / biodiversity and actual location of windturbineparks





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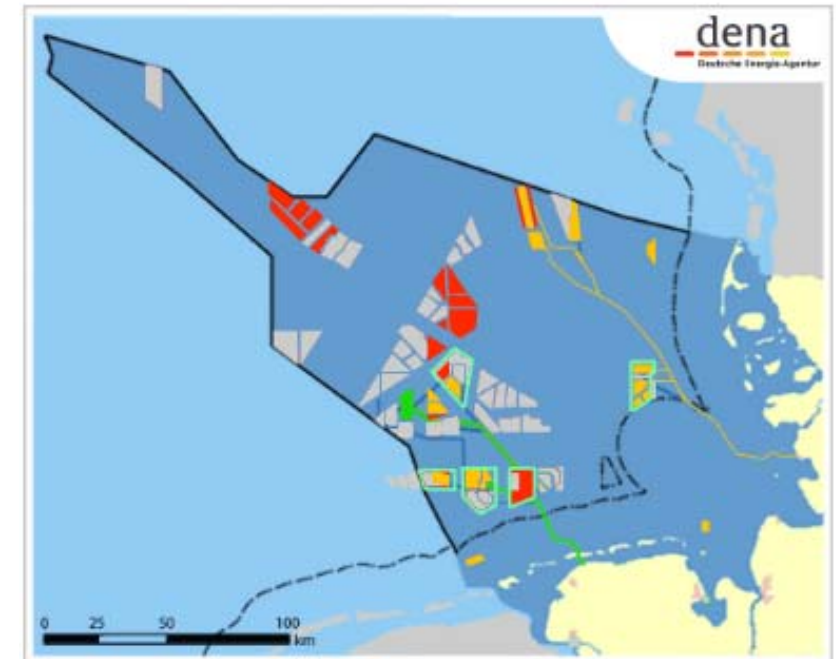
International embedding?

Offshore UK wind farm zones



UK and German plans for offshore wind

Recent plans from Denmark for offshore wind



Legende

Windparks:	Grenzen:
online	— Festlandssockelgr./Awz
genehmigt	+— 12 sm Zone
im Genehmigungsverfahren Landesgrenze
nicht OFW-Mitglied	-.-.- Tiefwasser Reede
	— Energiekabel genehmigt
	— Energiekabel geplant
	— Energiekabel in Betrieb
	— Vorranggebiete Windenergie

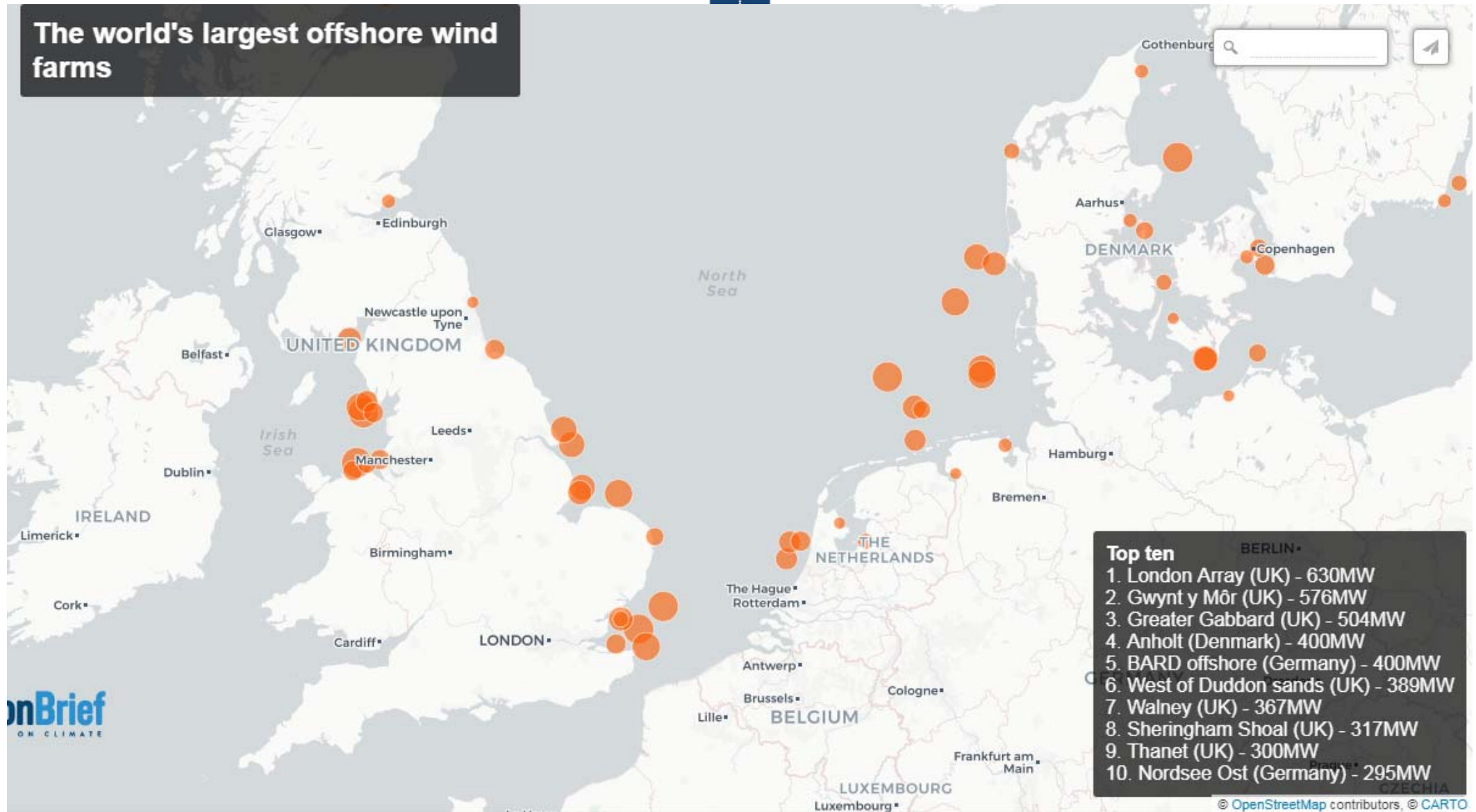


Denmark recent information

- a new offshore wind farm (800 MW, 2024-2027).
- large scale screening of potential locations for new offshore wind farms (for 10 GW).
- Making a decision in 2022 regarding additional offshore wind before 2030.
- ...
- Initiation of analyses to establish an optimum framework for offshore wind going forward.



The world's largest offshore wind farms





BUSINESS NEWS

JUNE 6, 2017 / 4:42 PM / A YEAR AGO

Germany, Belgium, Denmark and industry pledge huge EU offshore wind expansion

Reuters Staff

2 MIN READ



LONDON (Reuters) - Germany, Denmark and Belgium joined with 25 companies on Tuesday to back a pledge to increase Europe's offshore wind capacity almost fivefold in the next decade.



International component



The offshore windfarms and artificial island could be located at Dogger Bank, which has shallow waters and high wind speeds



Guardian graphic | Source: Tennet



Political declaration process

**Political Declaration on energy cooperation
between the North Seas Countries**

(Cooperation in the field of energy, and not in that of integrated management)





Conclusions

- › Integrated management has become a battle for marine space
- › Energy transition / offshore wind farms have taken priority over traditional uses
 - Land-sea relationship needs attention: employment and economic development!
- › Solutions concerning the allocation of fisheries activities have to be thought of:
 - Confining fisheries to a restricted space
 - A smaller fishing fleet
 - More sustainability in bottom trawling is necessary
- › Plenty of new opportunities for enterprises and regions
- › Environment : at risk or opportunity for restoration?
- › International cooperation: energy cooperation takes off, but what about spatial allocation questions?
- › Also important: Involvement of all stakeholders, science,

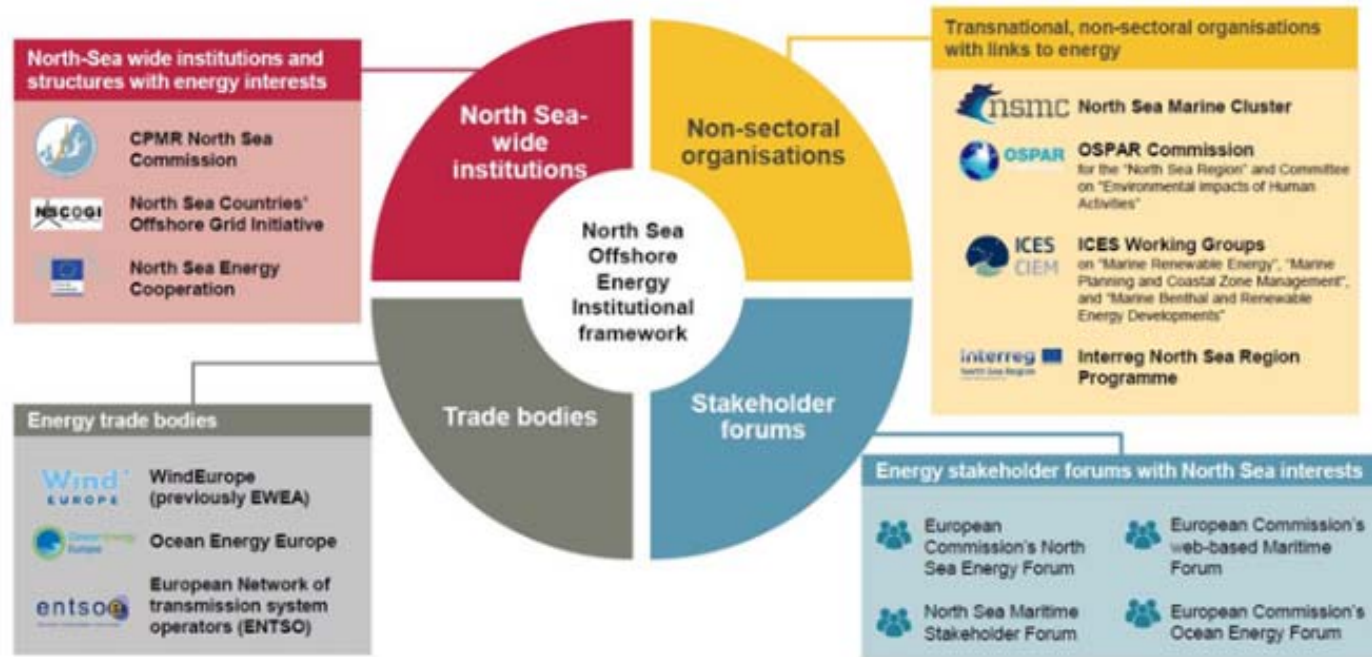


Figure 4: North Sea energy institutional framework.

North SEE



This jockeying for space pushed the European Commission to develop a pan-EU plan to share the seas. Under the [Maritime Spatial Planning Directive](#), Brussels has given EU countries until 2021 to design a maritime spatial plan, which outlines where each sector can operate.

**DIRECTIVE 2014/89/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 23 July 2014
establishing a framework for maritime spatial planning**







[Business News](#)

June 6, 2017 / 4:42 PM / a year ago

Germany, Belgium, Denmark and industry pledge huge EU offshore wind expansion

The EU has a target to cut its greenhouse gas emissions by 40 percent compared with 1990 levels by 2030



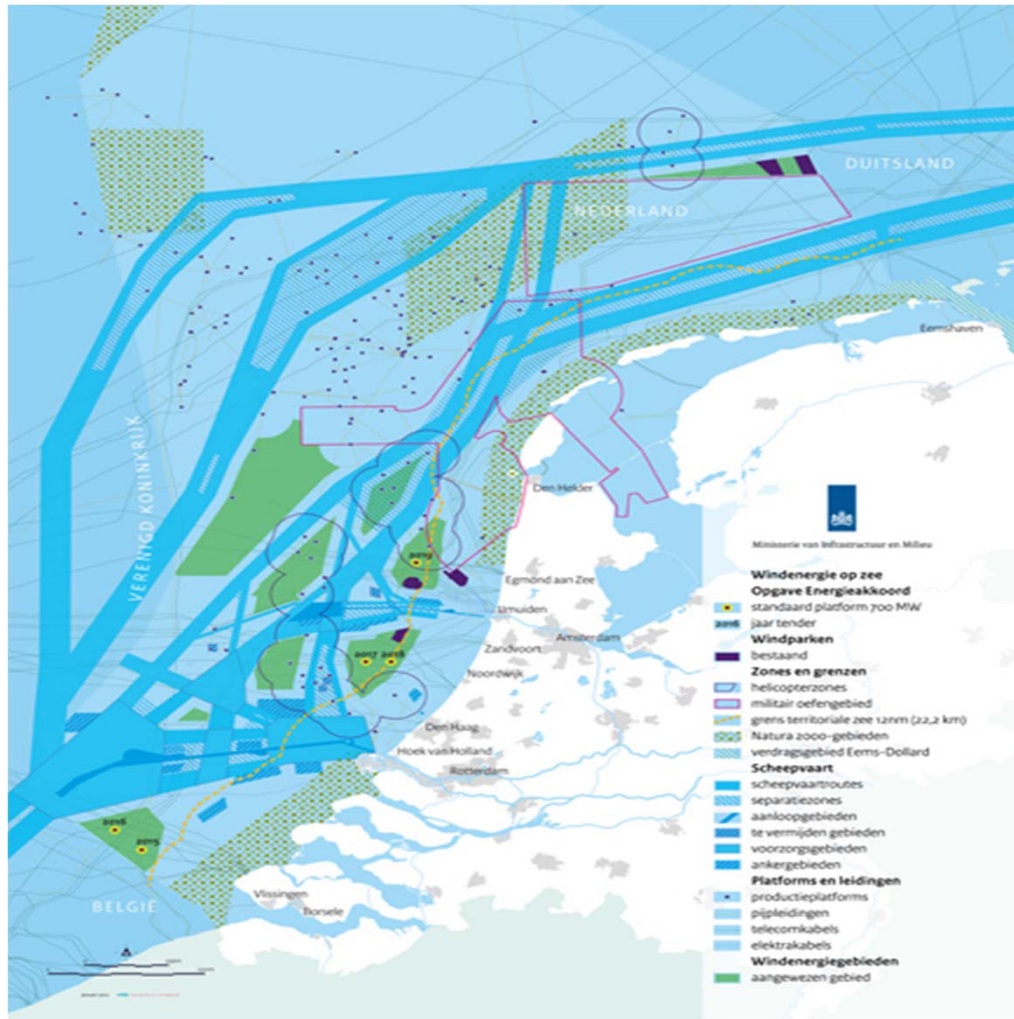
A large offshore service vessel is positioned in the sea, working on a wind turbine. Several other wind turbines are visible in the background under a blue sky with scattered white clouds.

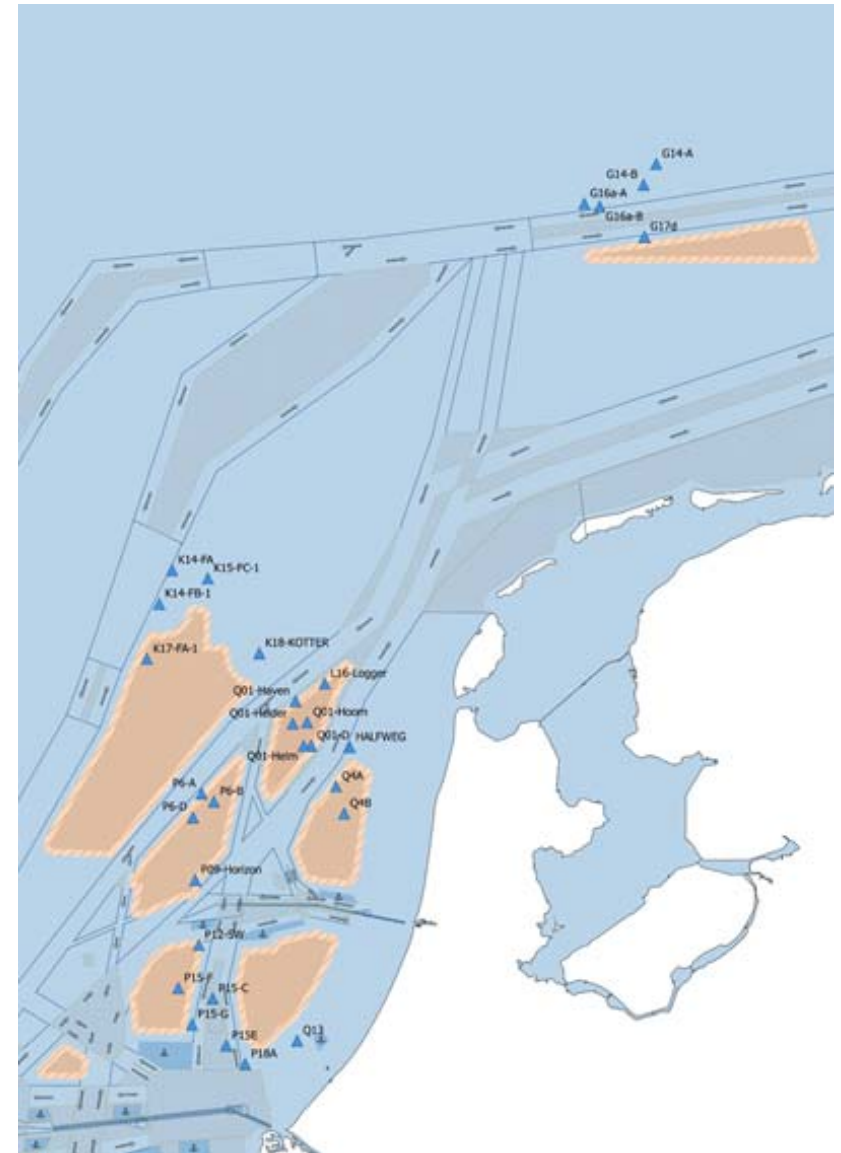
North England looks to the wind to power growth after Brexit

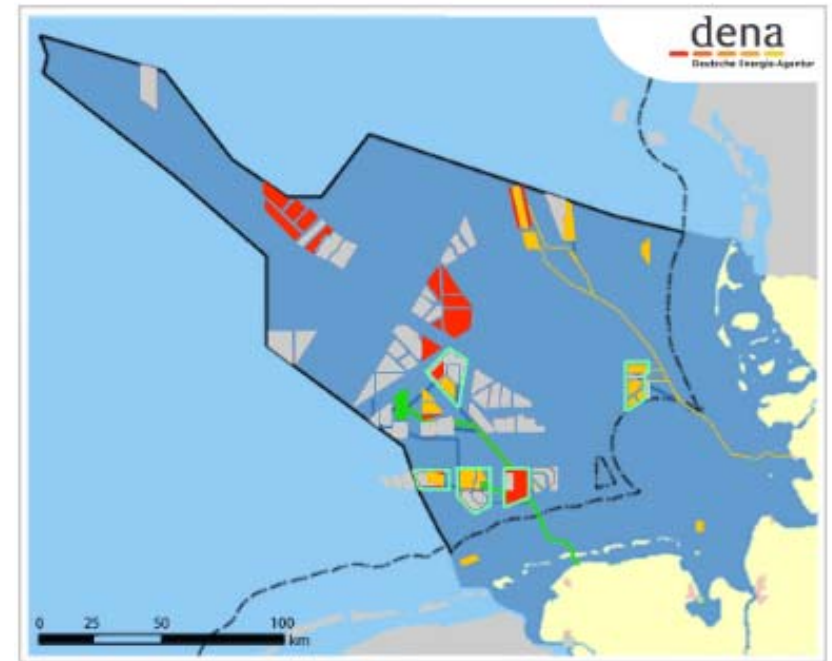
Energy industry offers manufacturers hope as UK shifts weight from services.











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