Offshore Energy Planning Provisions and Transnational MSP in the North Sea Region: The NorthSEE project

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North SEE
A North Sea Perspective on Shipping, Energy and Environmental Aspects in Maritime Spatial Planning

Project findings & Energy Workshop, Aberdeen 3-4th October 2018

Scottish Government
Riaghaltas na h-Alba
gov.scot
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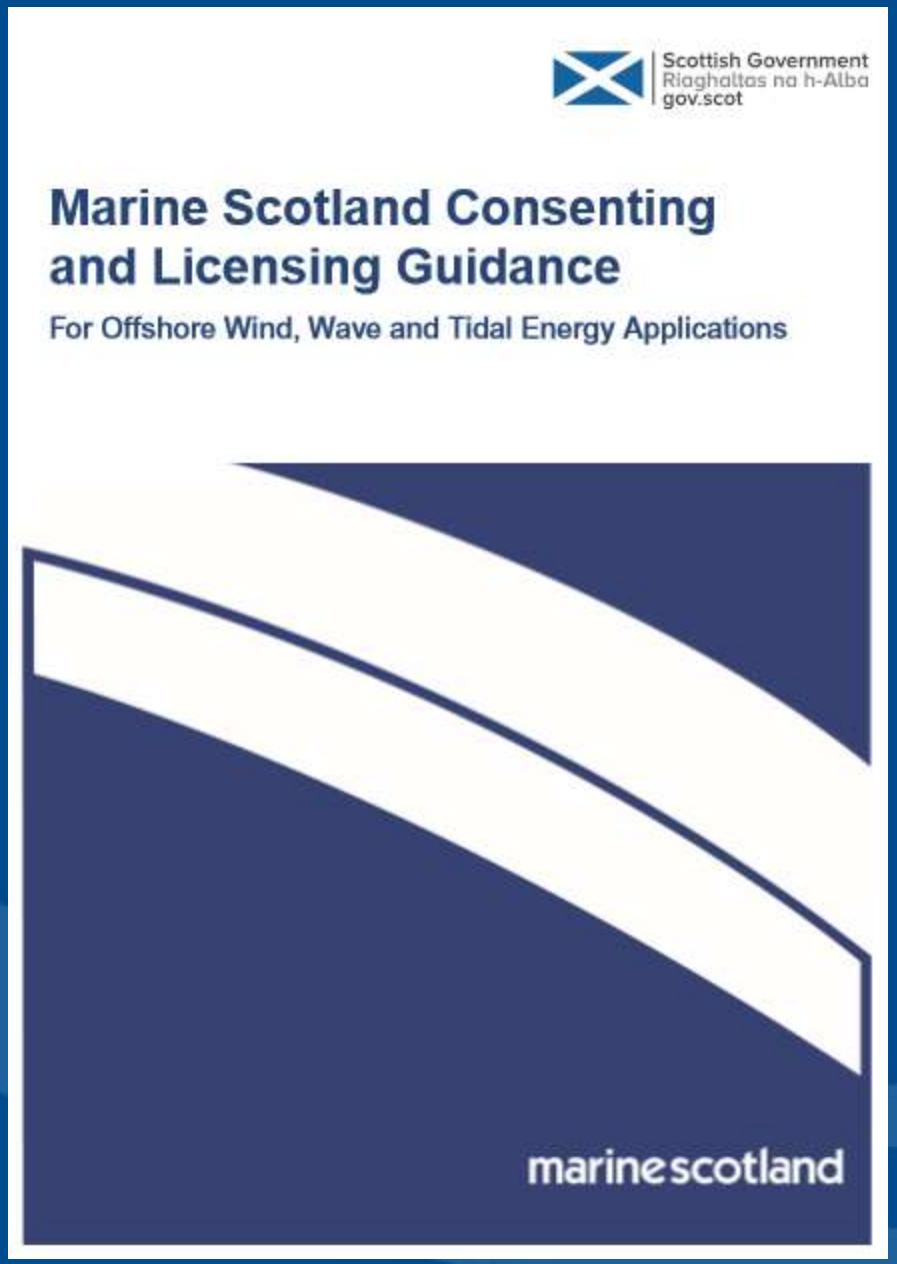
Marine Scotland Consenting and Licensing Manual

https://www.gov.scot/Publications/2018/10/4852



NorthSEE Project

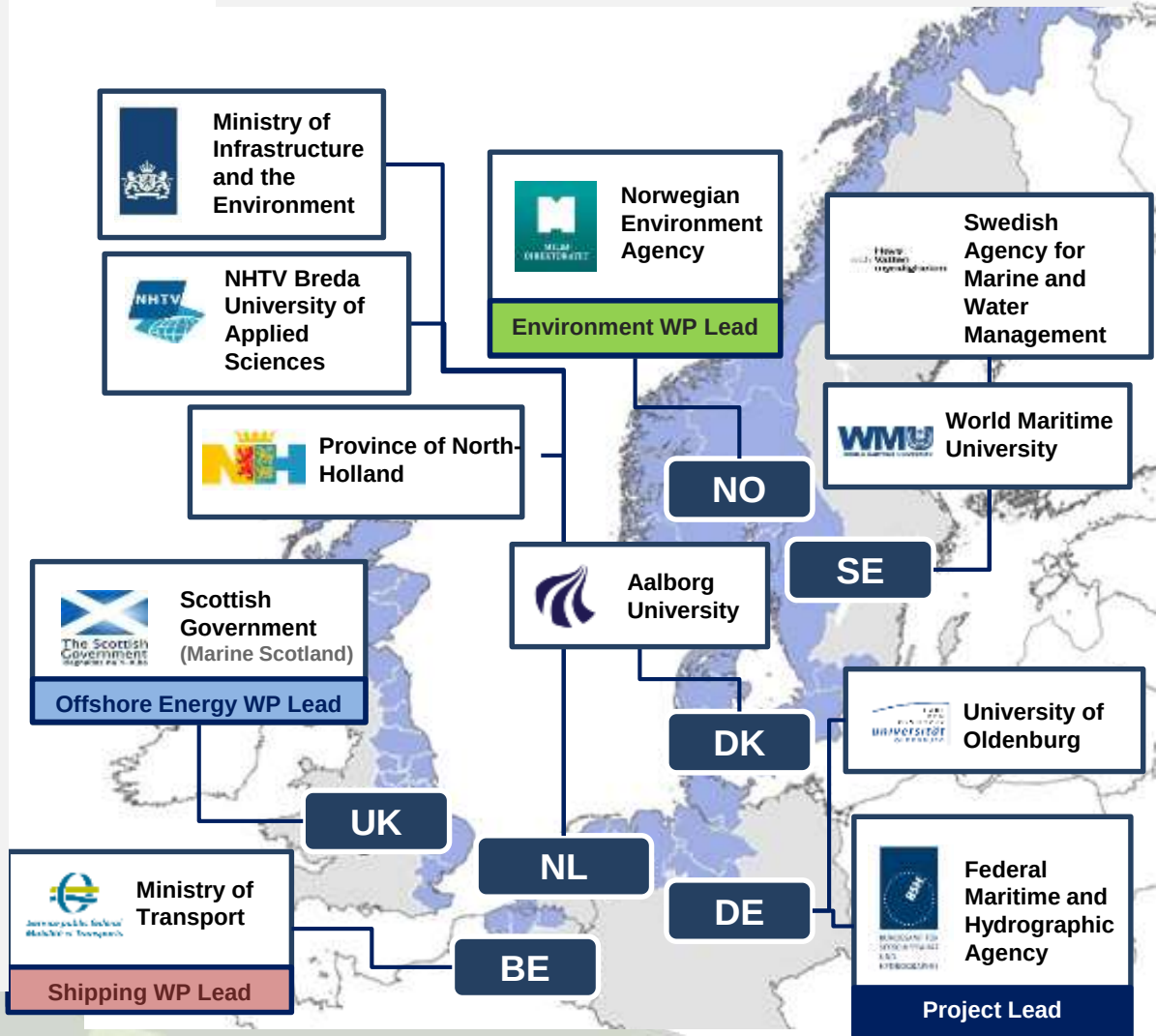
Key stats:

EU Funded: INTERREG
Budget: € 4 million
Duration: 3 years

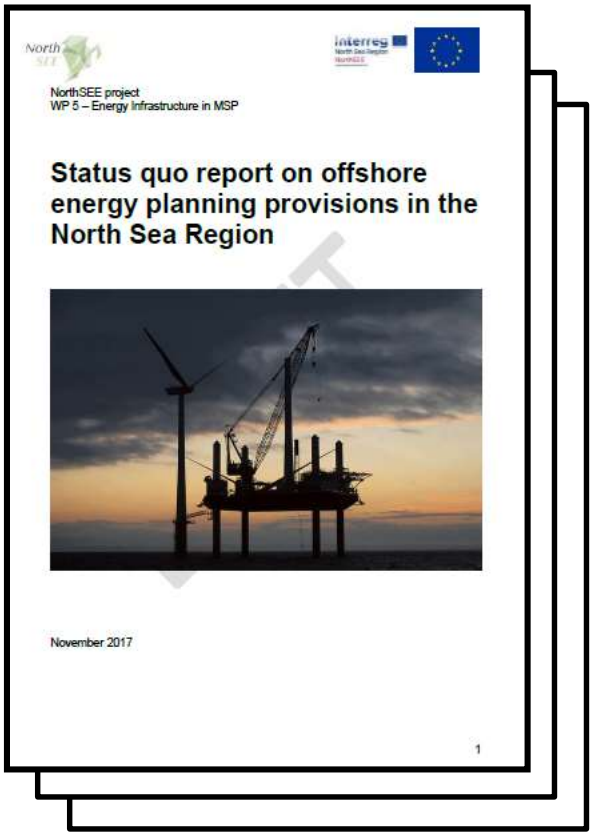
Project Duration:
April 2016 – April 2019
(+6 months extension i.e. Aug '19)

Objectives

1) Increase **MSP effectiveness** through **transnational coordination** of national marine plans
2) Develop an **information and planning platform** to share evidence for MSP
3) Develop **transnational coherence** in
   - **Environmental protection**
   - **Offshore energy infrastructure**
   - **Shipping routes**



NorthSEE Offshore Energy *Status quo* report



Aims

- ✓ Existing international **MSP institutional framework in the North Sea Region**, including past and current experience of transnational energy cooperation between North Sea countries;
- ✓ Short-, mid-, and long-term national and transnational **energy planning provisions**, including energy objectives, policies, and planning areas; and
- ✓ **Future trends** in the offshore energy industry across the NSR

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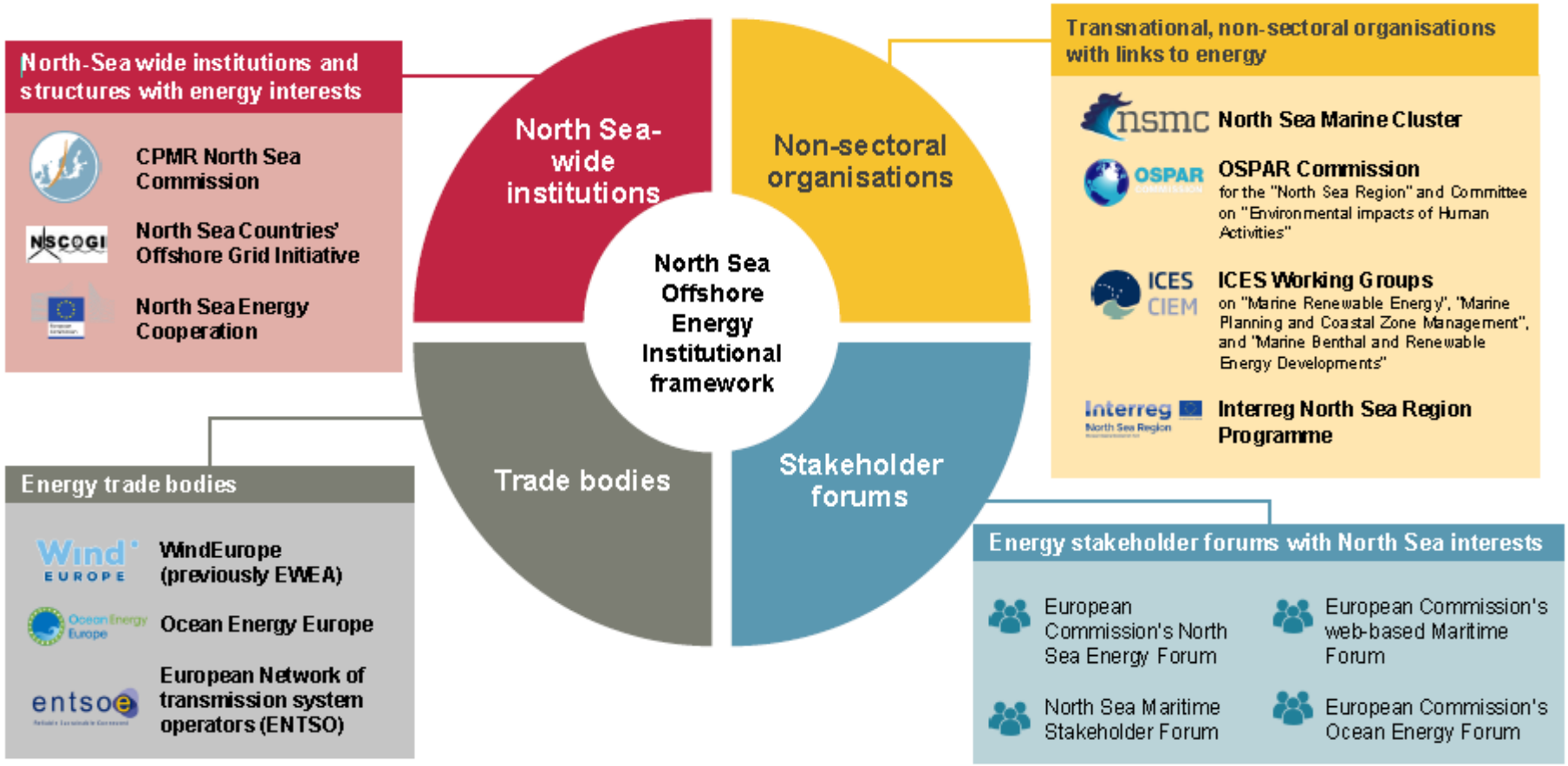
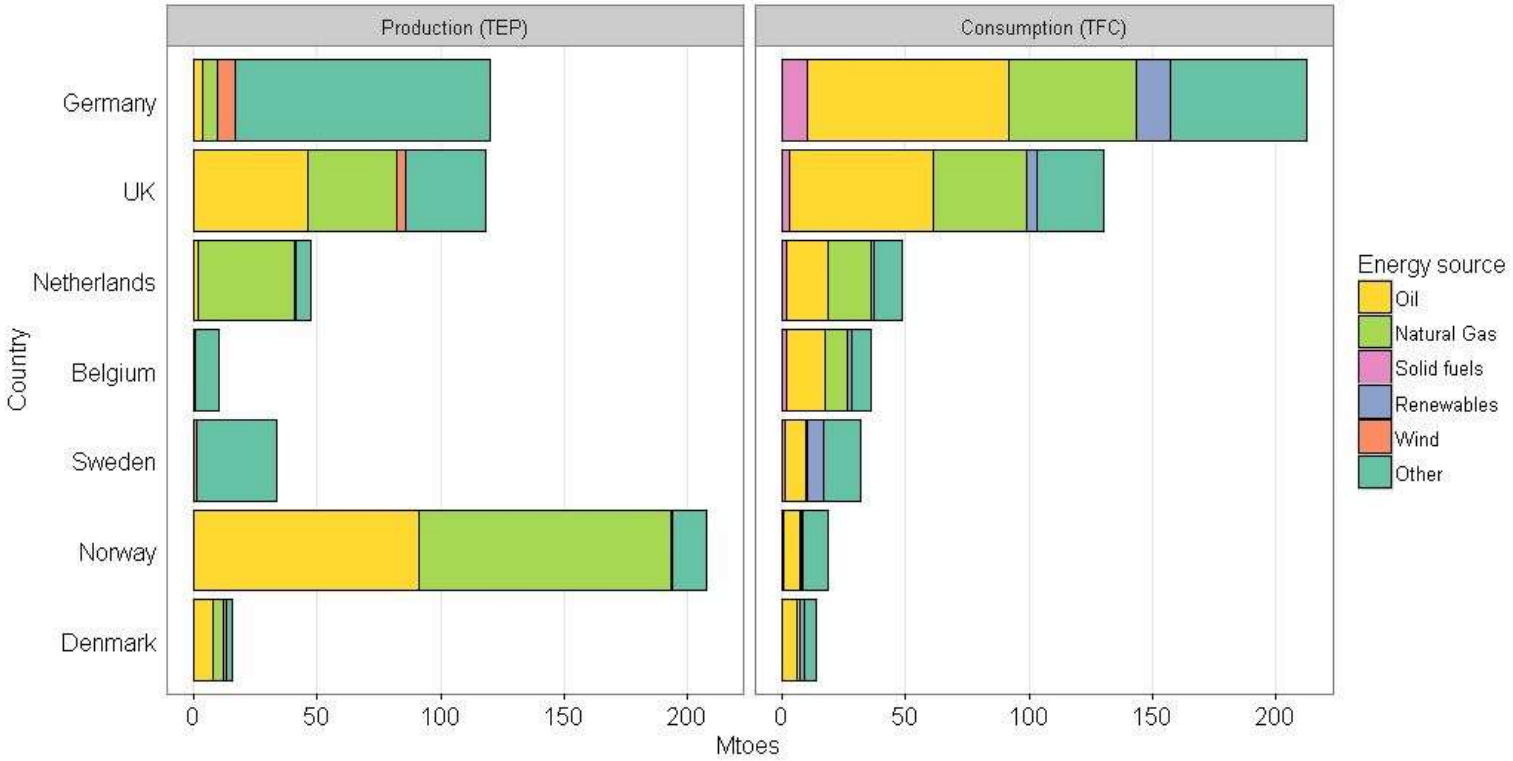
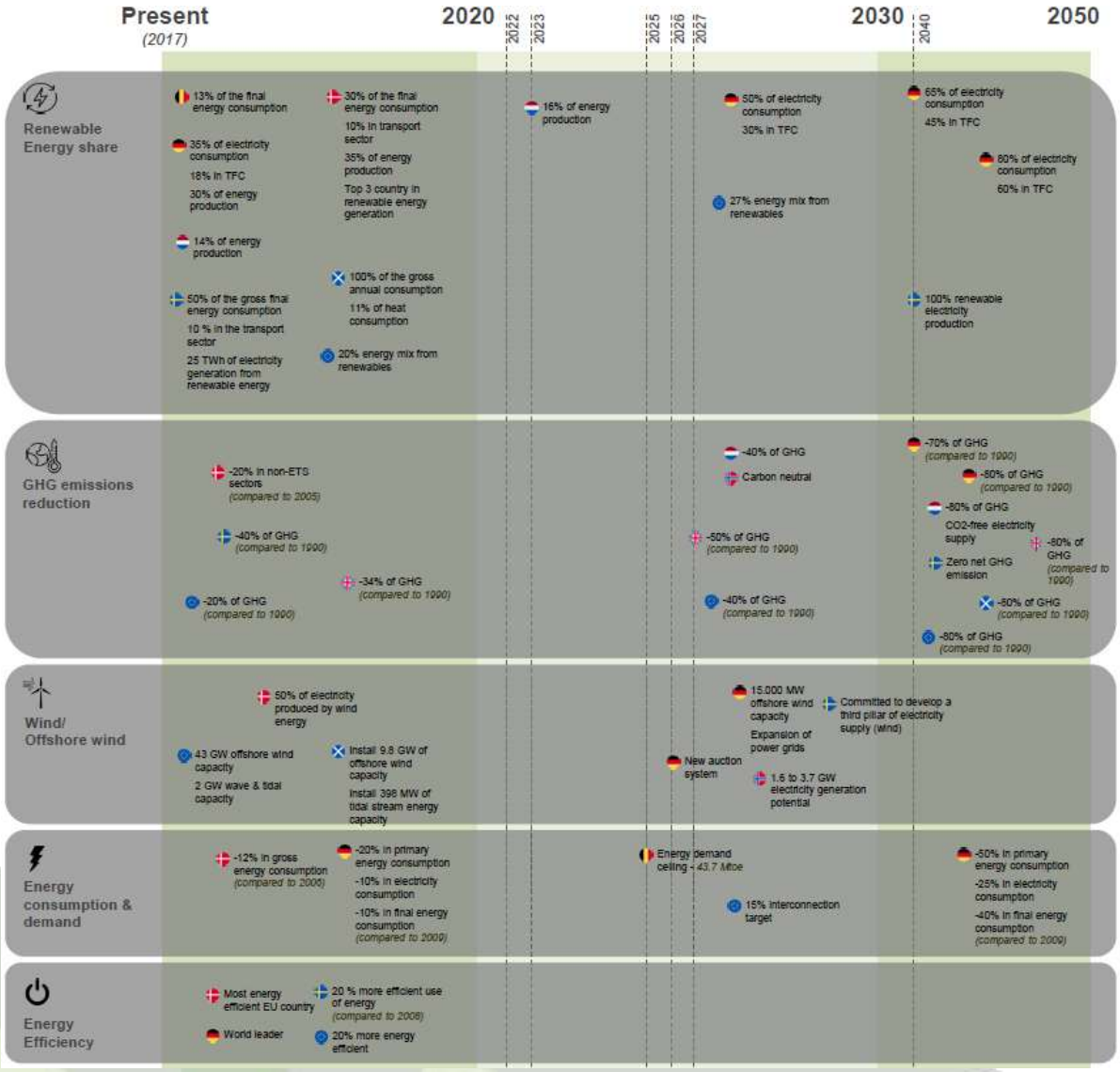
Existing international MSP institutional framework in the North Sea



National energy profiles of North Sea countries



Environmentally-friendly energy policies & targets - Driving force for the growth of offshore renewable energy



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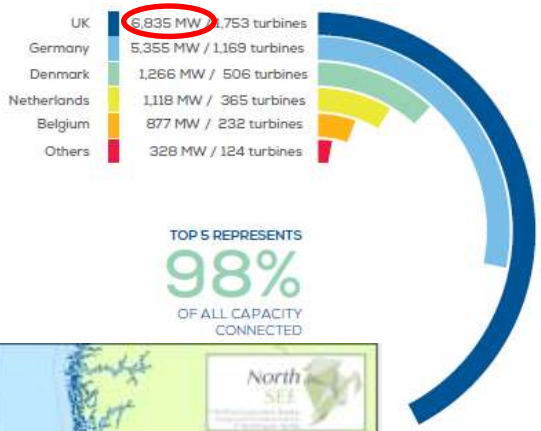
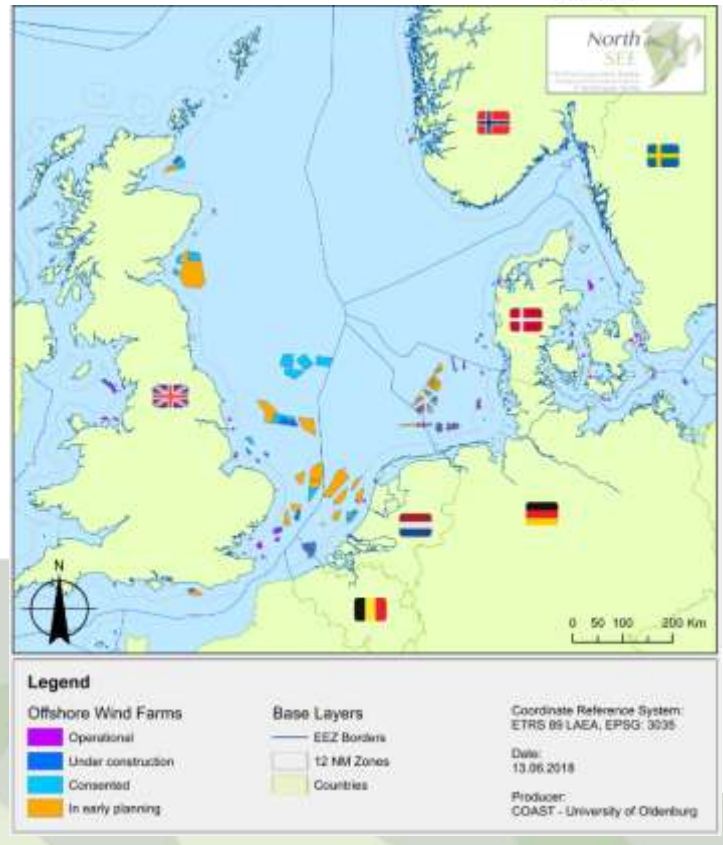
Status Quo

Offshore wind

Installed offshore wind capacity in the North Sea (2017)

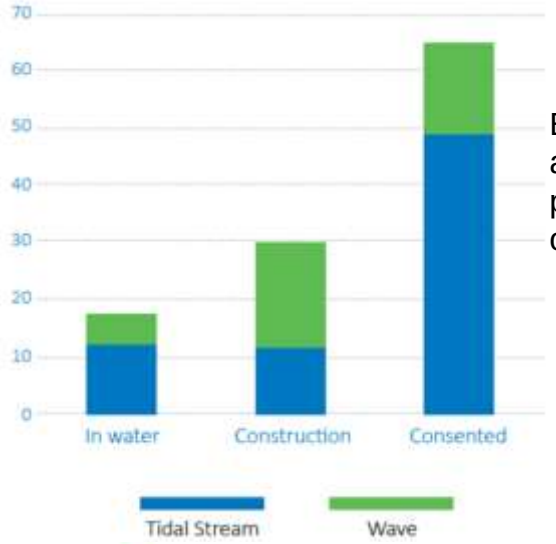


Source: WindEurope

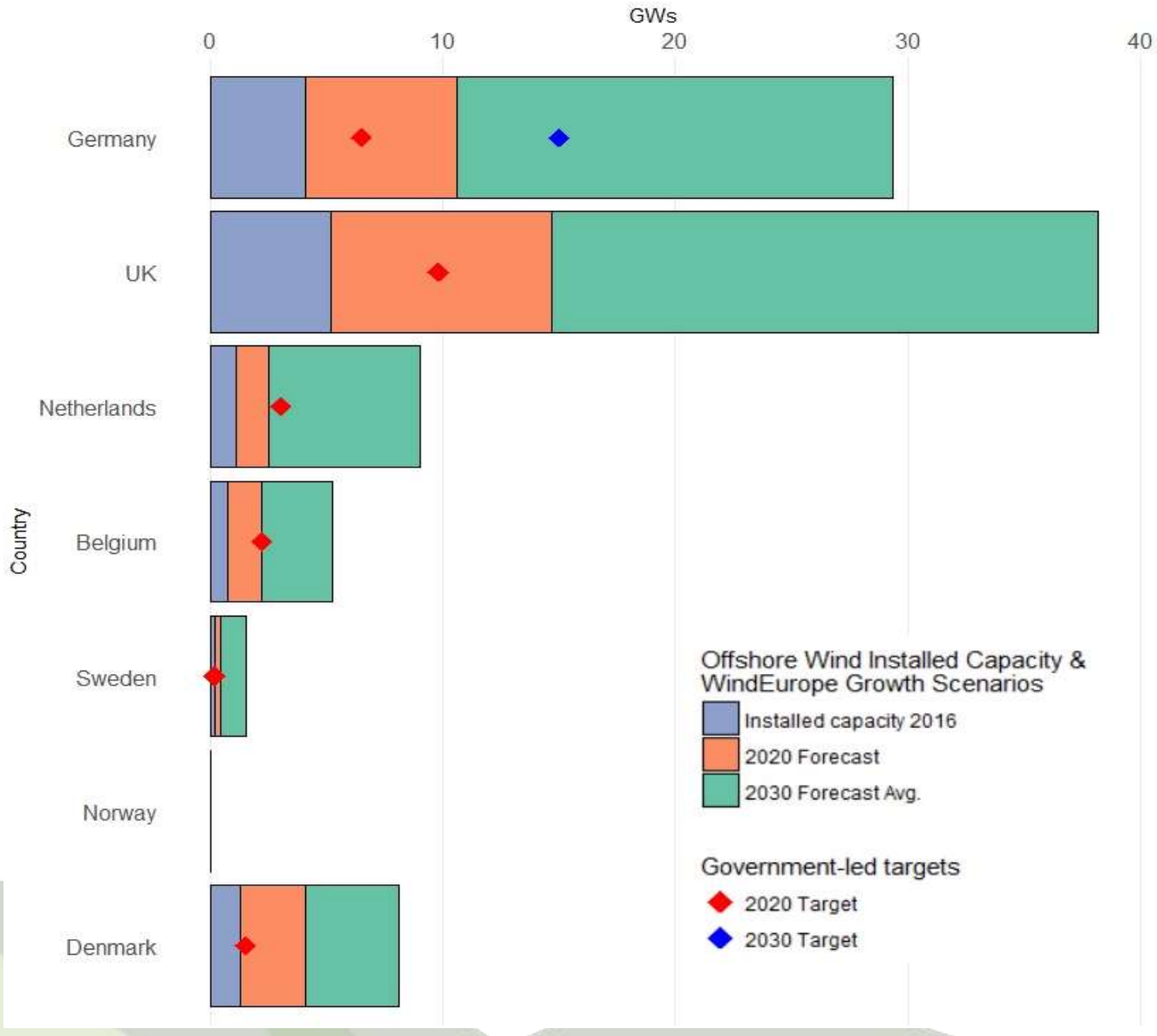


Ocean energy

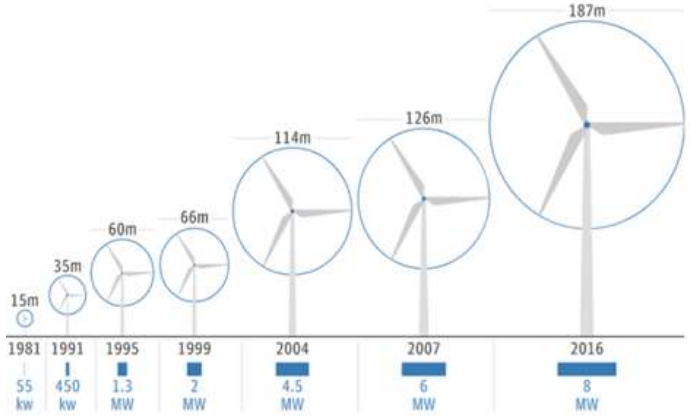
European wave and tidal energy projects at the end of 2016

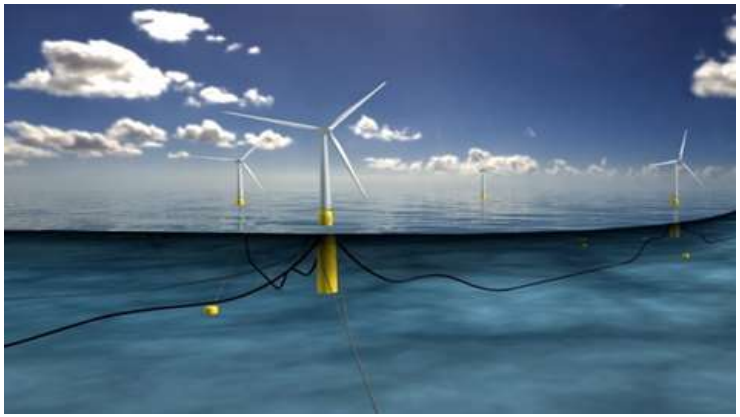


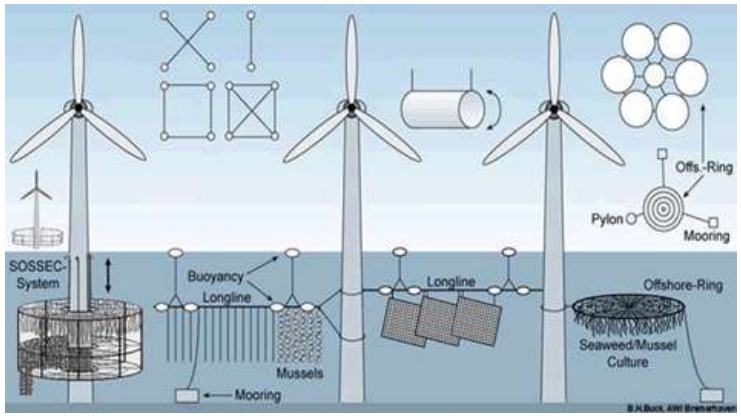
Future Outlook – Growth Scenarios



Future energy industry trends







EU target to reach 100 GW of combined wave & tidal capacity installed by 2050

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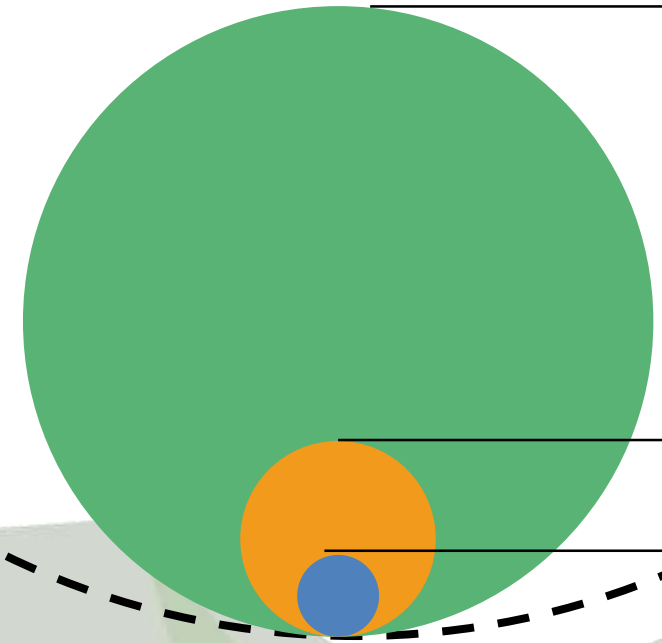
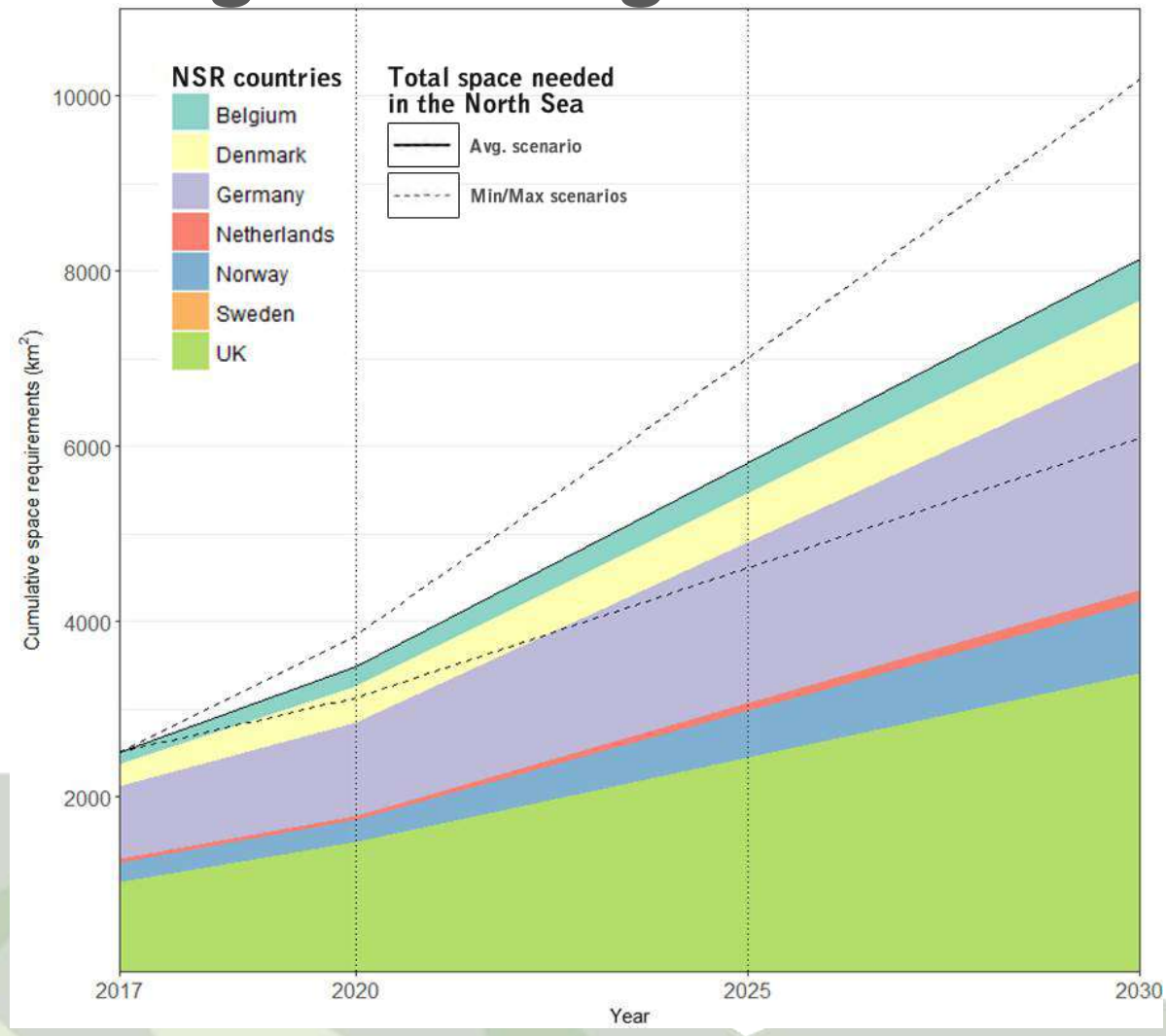
Offshore wind growth targets in the North Sea



Space requirements for fulfilling 2020 & 2030 growth targets for offshore wind



Based on average scenario and assumptions of 1 km wind turbine spacing and incremental increase in turbine size from 7 MW to 15 MW

Total space occupied by offshore wind farms:
3,500 km² by 2020
Over 8,000 km² by 2030

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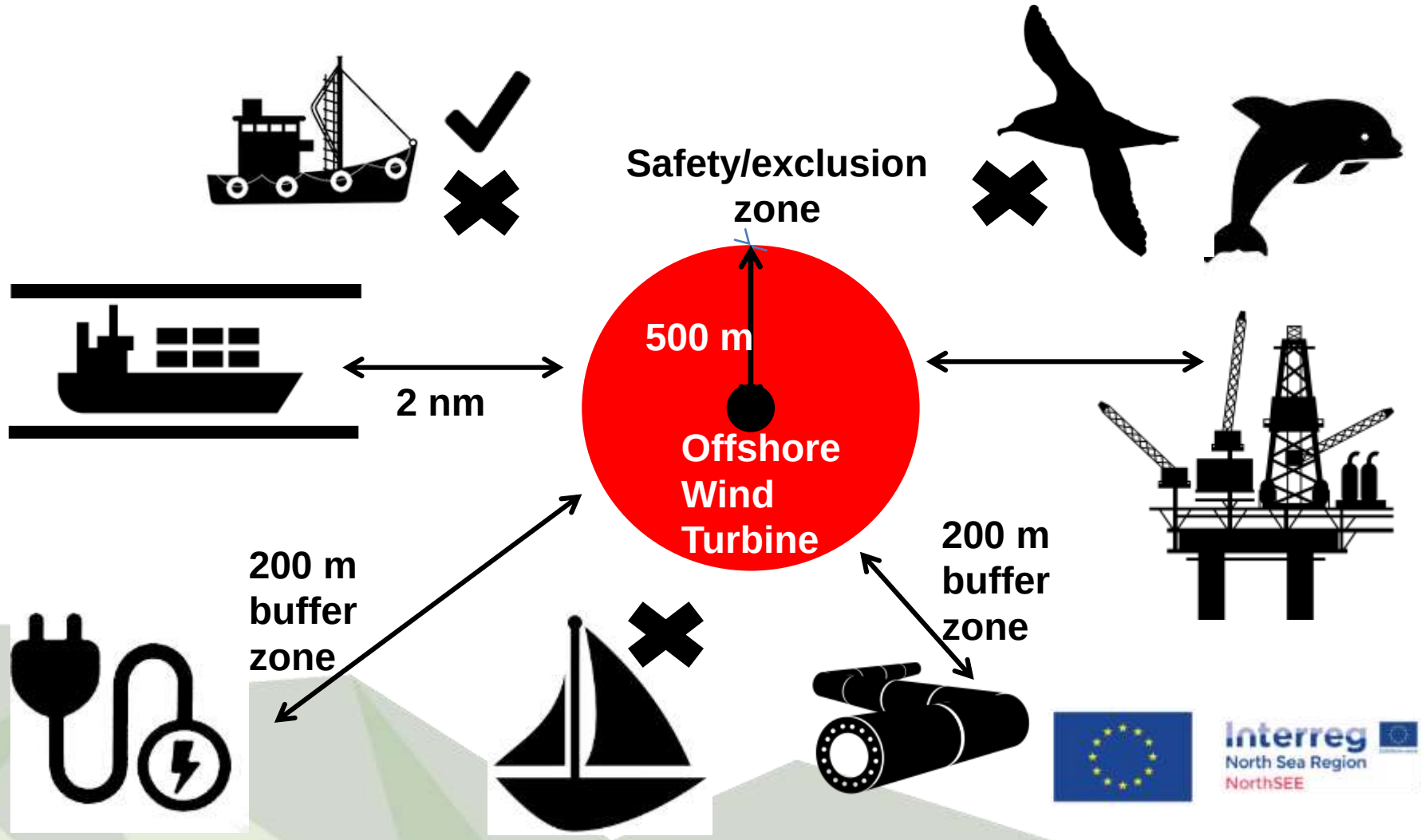
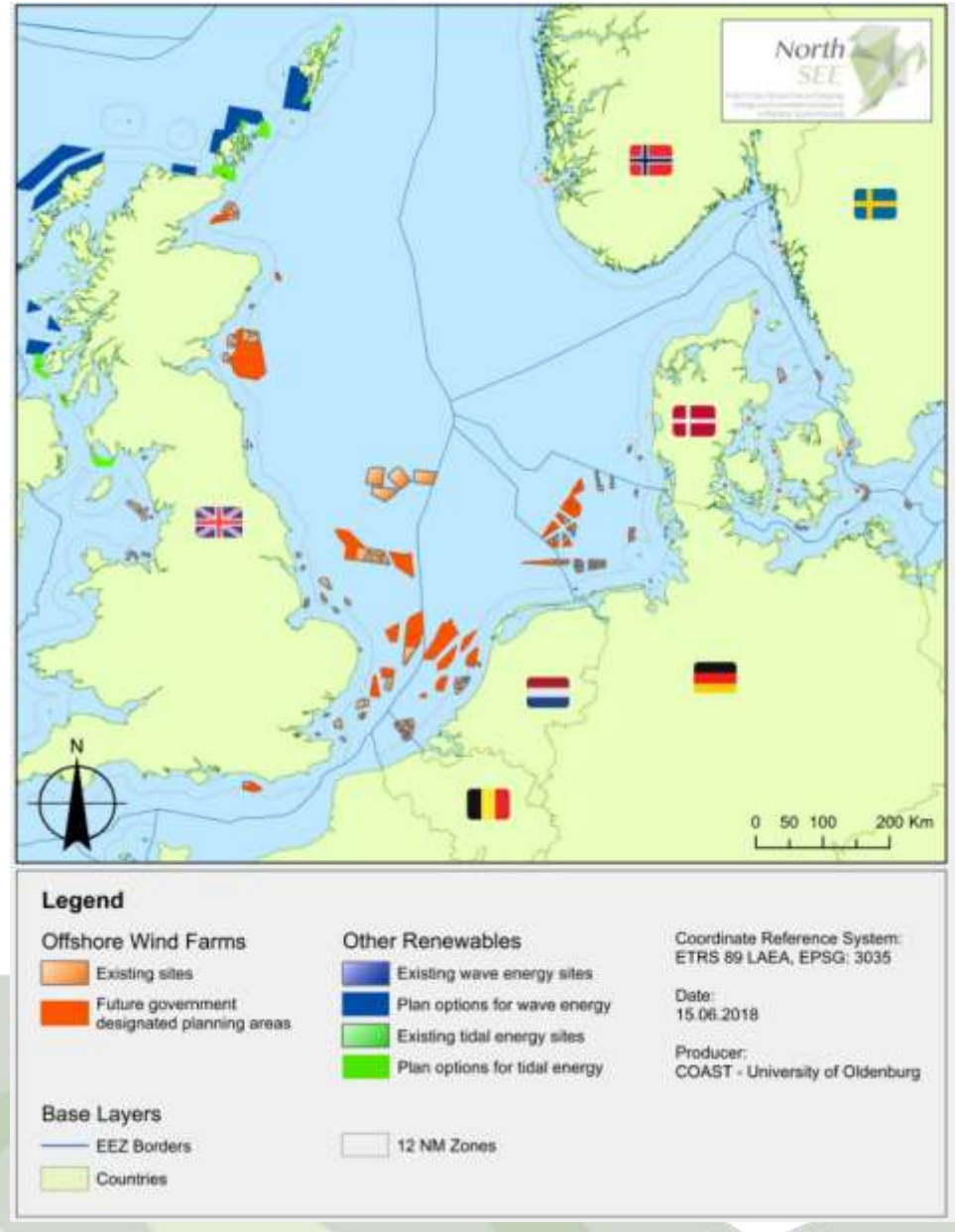
Spatial implications





Designate spatial areas for offshore energy

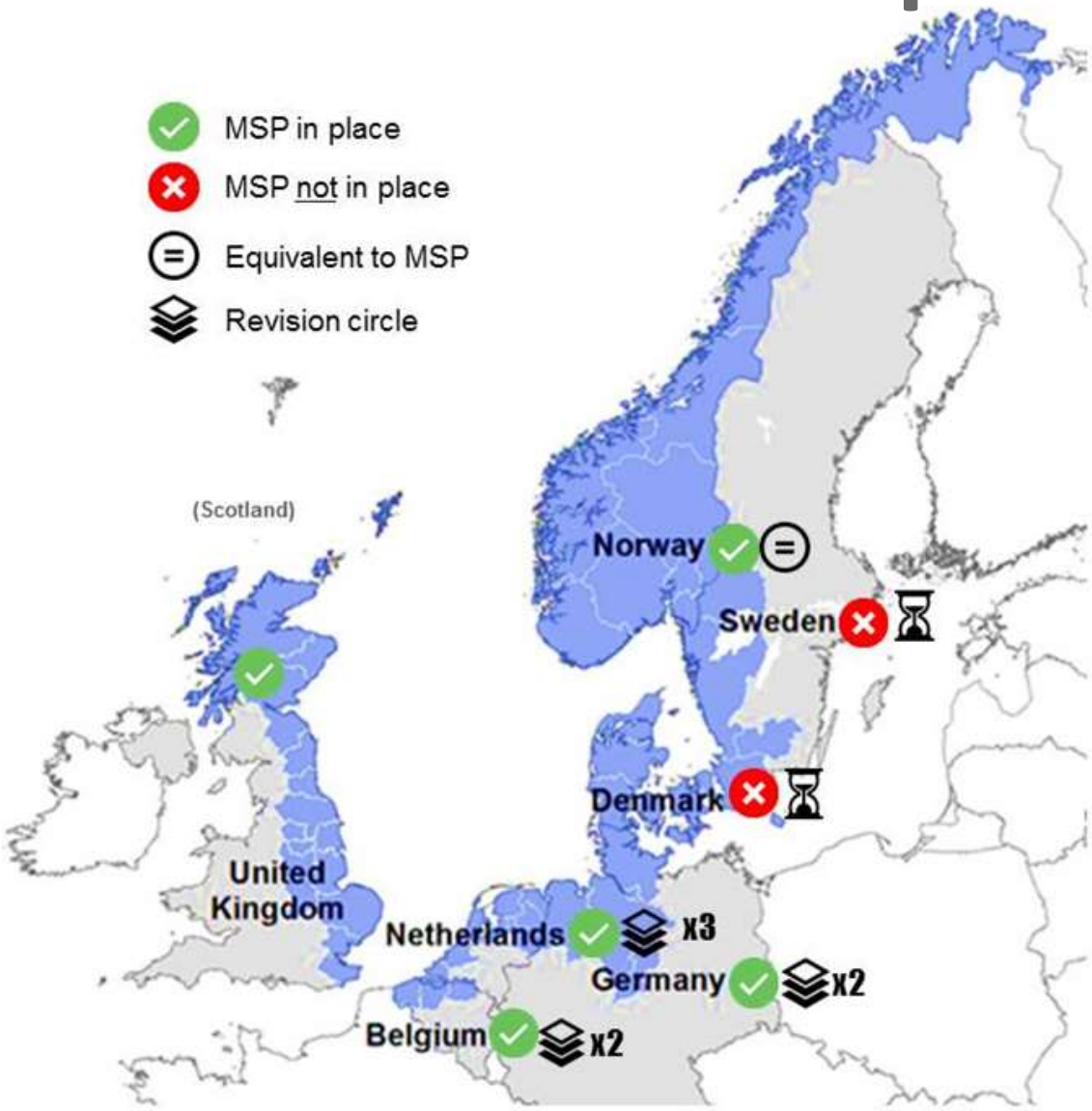
- Most NSR countries have designated spatial areas for offshore renewable energy, except Norway & Sweden
- Allows energy targets to be met and balance of conflict & synergies

Grid & Interconnectors

- identifying interconnection demand;
- identifying grid connection points on land;
- identifying future trends in the linear infrastructure policy landscape and industry developments across the NSR;
- consider the spatial implications of interconnectors for MSP in the NSR; and
- developing proposals for routes and gates in the NSR.

How can we plan for this?

…Maritime Spatial Planning



- MSP is key!
- Helps to reduce conflicts between marine users and the marine environment and identifies synergies
- EU MSP Directive commits countries to have marine plans in place by 2021
- Calls for transnational coherence
- Differences exist – Denmark & Sweden yet to adopt their first national plan, whilst others are going through plan revisions

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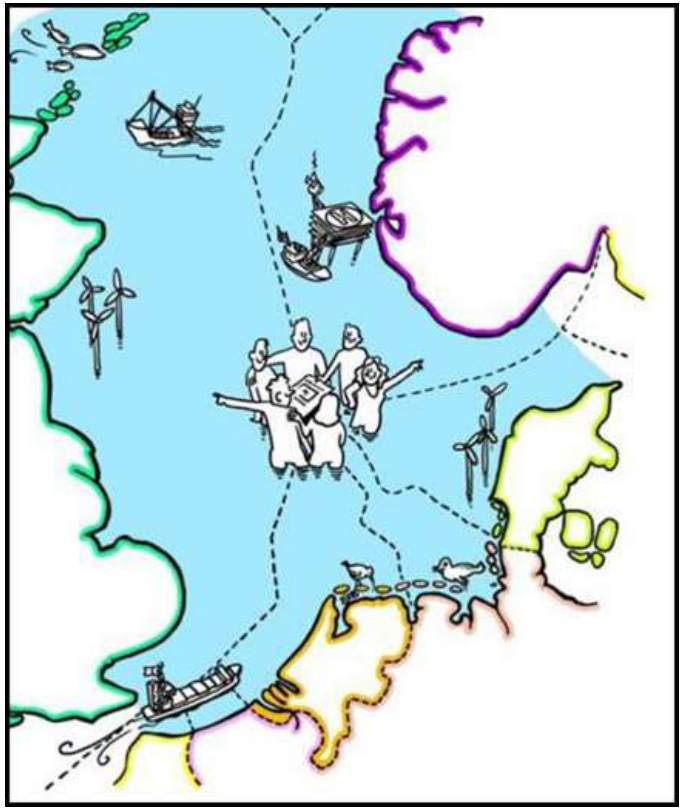
NorthSEE Energy Workshop, Aberdeen

Participants

- Range of participants – North Sea Commission ECCG, planning authorities, councils from around the North Sea, and energy industry representatives such as offshore wind (SSE BOWL and Kincardine), NorthConnect interconnector and Carbon Capture & Storage
- Mixed level of knowledge & understanding of MSP

Future trends:

- Continuous general expansion of offshore renewables by 2030
- Decrease in fixed-foundation offshore wind farms, move to floating wind, and multi-use developments become more popular with presumably more spatial constraints by 2050
- Increase in interconnectors and grid connection points on land, Increase in carbon capture and storage by 2030



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Connecting Seas

NorthSEE – Baltic LINes MSP conference

Save the date!

13 – 14 February 2019
Hamburg, Germany

www.connectingseas.eu

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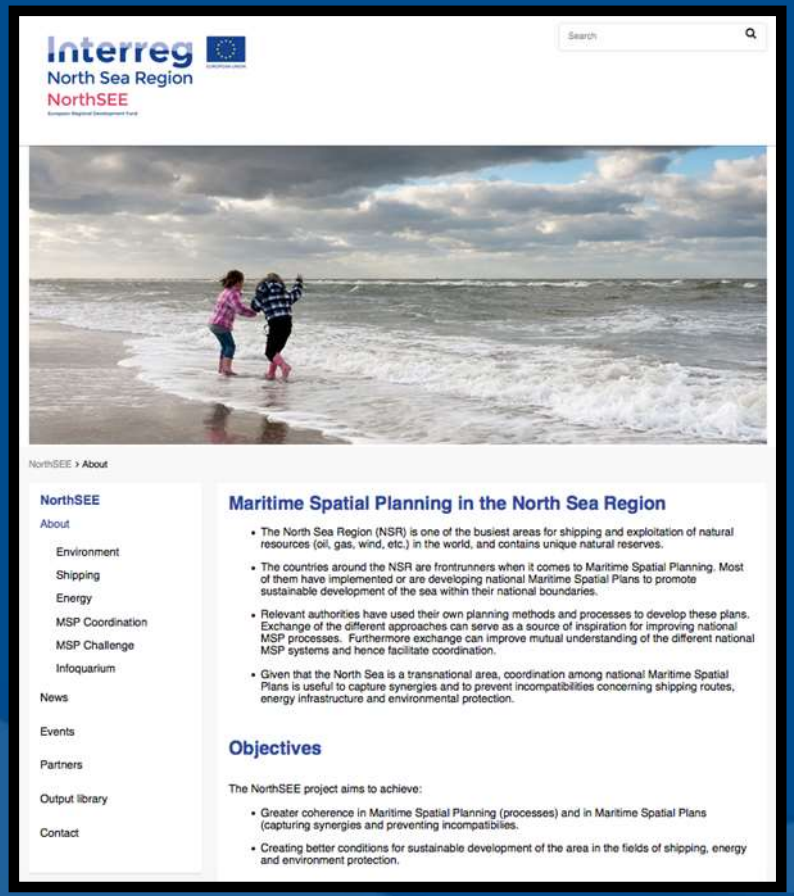
Data: google search Marine Scotland Interactive & National Marine Interactive
Offshore Renewable Energy Planning Webpage:
http://www.scotland.gov.uk/Topics/marine/marineenergy/Planning

Thank you!



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