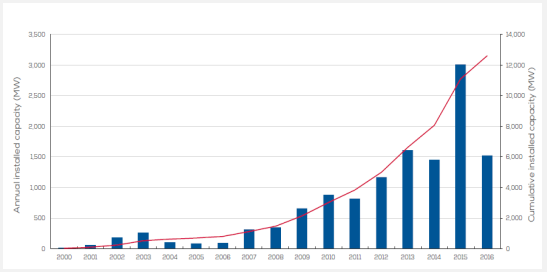
Timeline of Offshore Renewable Energy development and Maritime Spatial Planning in the North Sea

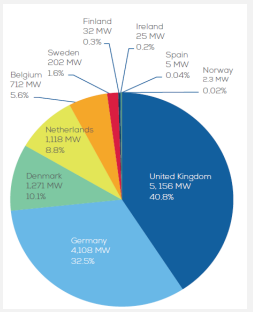
Growth of Offshore Wind sector

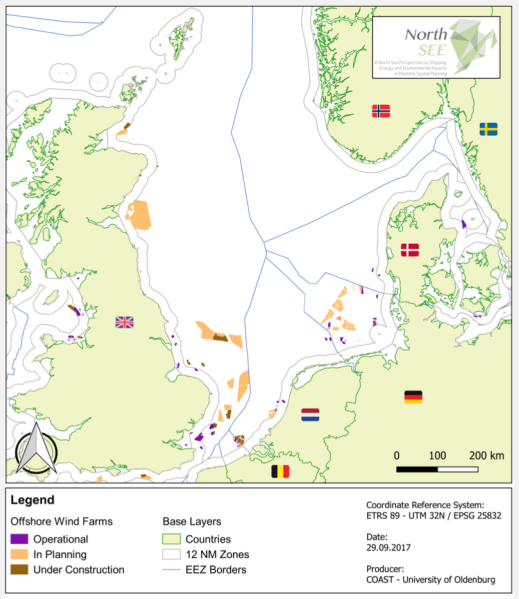
Maritime Spatial Planning

2016



- 10,4% of the power demand
- 81 Offshore Wind Farms with 3.589 Turbines producing 12,631 MW in the EU
- Top 5 European countries Offshore Wind in the North Sea
- Ocean Energy (Wave/Tidal) in test phases.

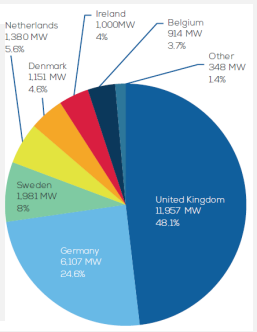


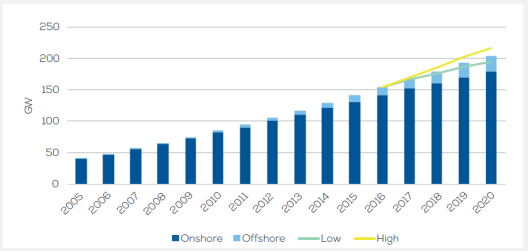


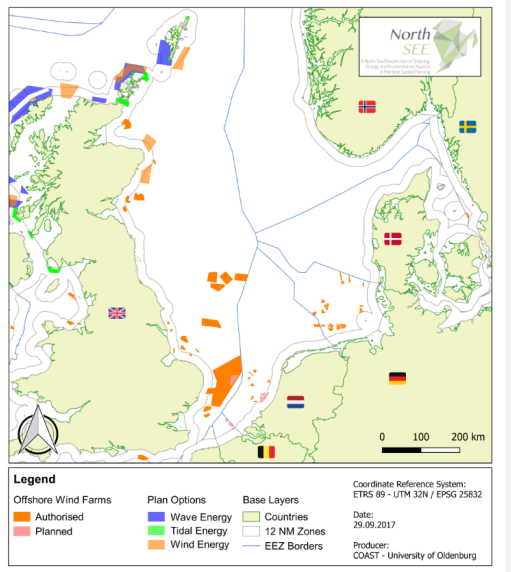
- Most North Sea countries have planned and designated spatial areas for offshore renewable energy and set goals to meet renewable energy targets.
- No zones have been opened in Norway yet, but areas have been identified
- No specific target goals or spatially designated areas have been set in Sweden.
- The method of spatially designating areas for offshore renewable energy is considered as best practice.

2020

- The 2020 outlook for wind energy is promising in terms of achieving energy policy commitments and targets
- Most offshore wind farms are within UK and German waters. Scotland is leading on wave and tidal energy developments.



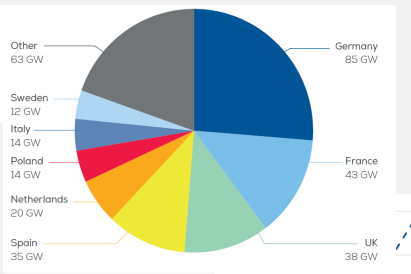


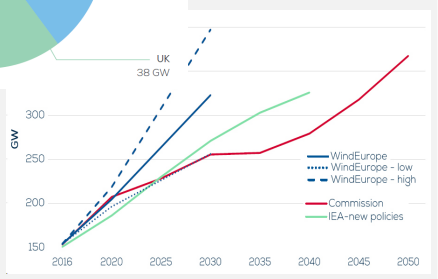


- It is important to take future timelines of wind energy projects into account in sectoral planning considerations, including upcoming competitive tenders and the regulatory framework.
- Future energy industry trends include larger, more powerful offshore wind turbines further offshore in deeper waters, floating wind, multi-rotor turbines, increased ocean energy developments, multi-use developments, and decommissioning of Oil & Gas platforms . These trends will all have spatial implications for MSP.

2030

- There are wide differences in North Sea countries policies, objectives, targets and timelines.
- Most energy targets and commitments only run up to 2020 and then there is a lack of medium term (2030) targets. The remaining targets are aspirational targets running up to 2050.





2050

- Future industry trends will have greater spatial implications in MSP on the long term.
- Future outlook for 2030 for offshore wind shows a mismatch in the level of aspirations between government and industry.
- Space requirements are needed to be considered carefully for meeting offshore industry growth forecasts for 2020, 2030 and further in the North Sea.

Recommendations for MSP in support of OWF developments

- Designate spatial areas for offshore renewable energy to safeguard space for future wind parks in suitable locations.
- Include transnational consultation as part of the formal consultation process and to engage with bordering countries at an early stage of the process.
- Determine spatial implications of future energy industry trends, e.g. multi-use, floating wind etc.
- Development of harmonised planning and technical design criteria for offshore wind farms across all North Sea countries.
- Identify planning areas and issues for linear infrastructure and develop planning criteria and proposals for interconnector routes and gates to be integrated in national MSPs.
- Develop suggestions for streamlining SEA/EIA processes across the NSR.
- Stronger links need to be made between national marine planning and regional marine planning to determine the need for the involvement of regional and local government in MSP and the range of their maritime issues.

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