



Wind – A reservoir of energy

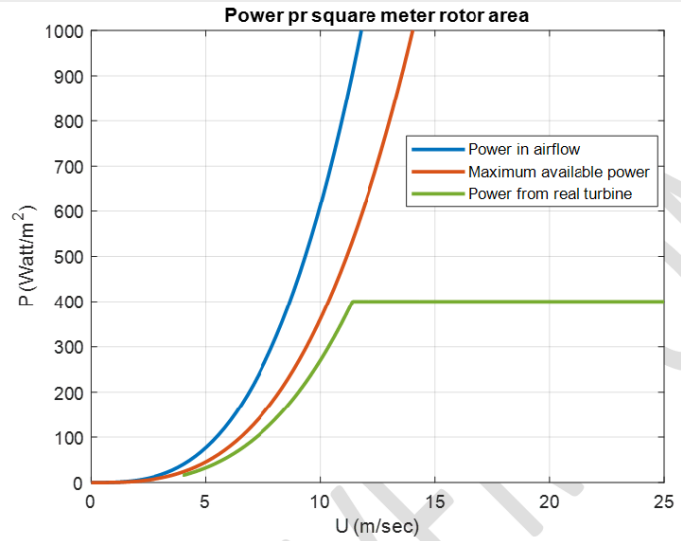
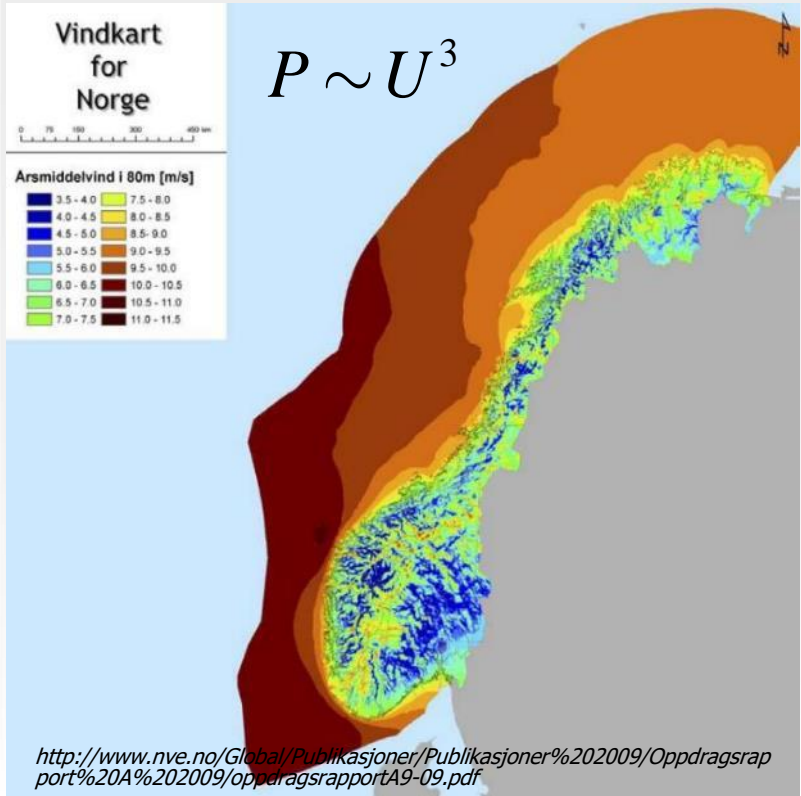
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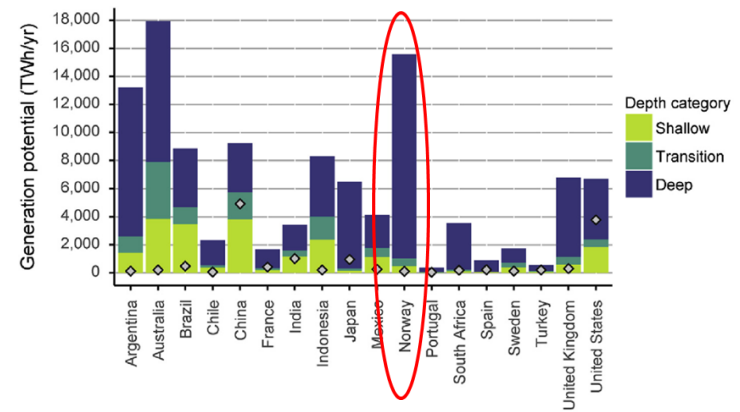
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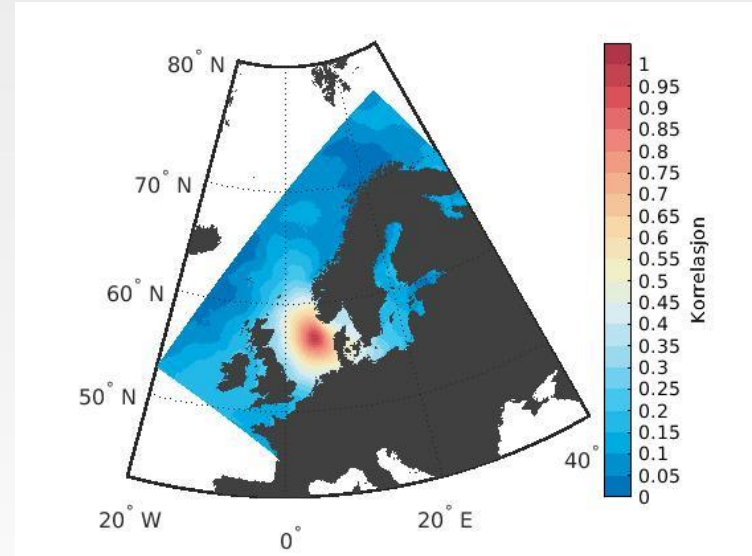
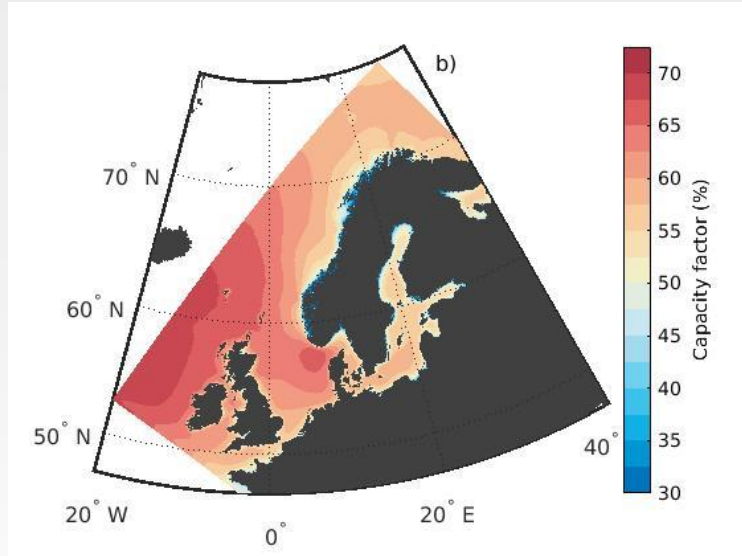
Wind resources



J. Bosch et al. / Energy 163 (2018) 766–781

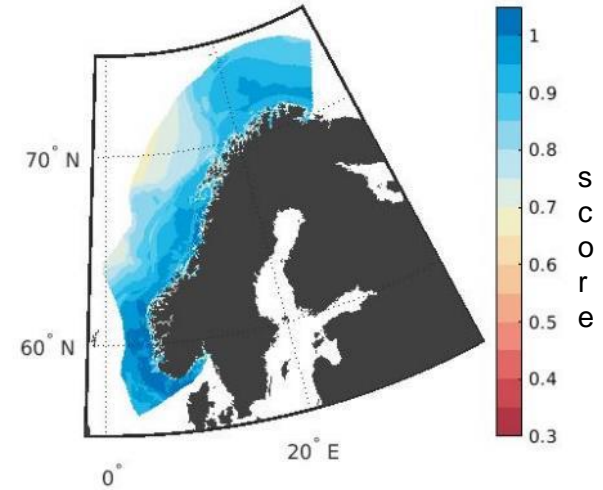
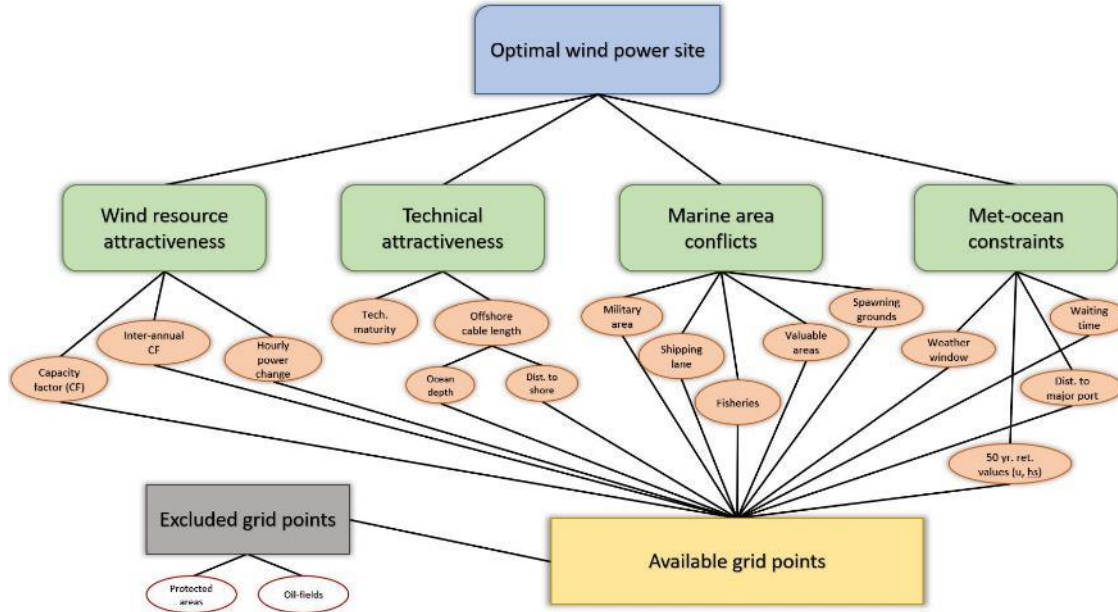


Capacity factor and correlation



Source: Ida M. Solbrekke, PhD student

Where to locate wind farms?



«Optimum» location

Source: Ida M. Solbrekke, PhD student



Wind and dynamics of wind turbines

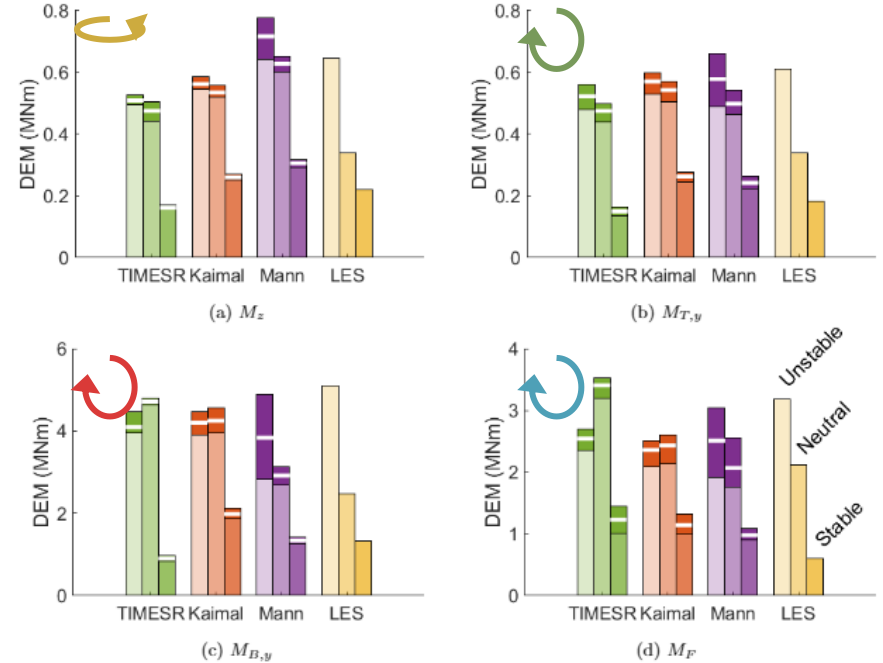
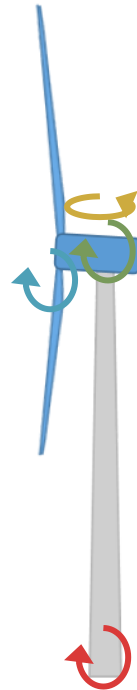
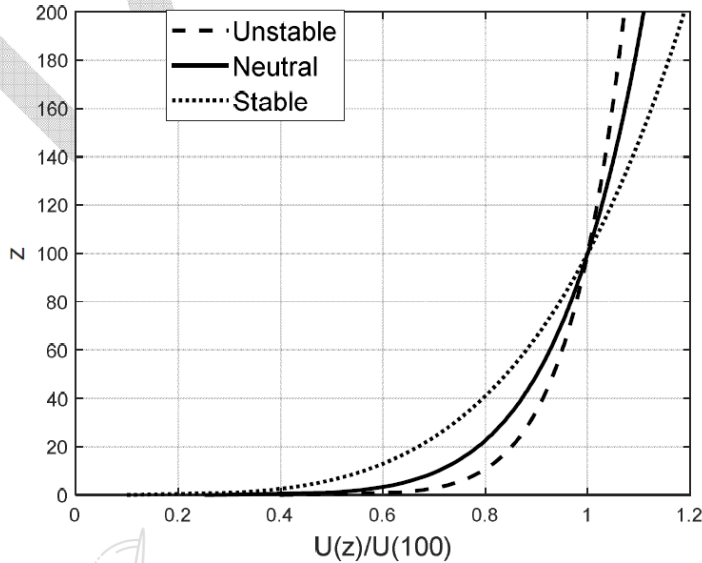


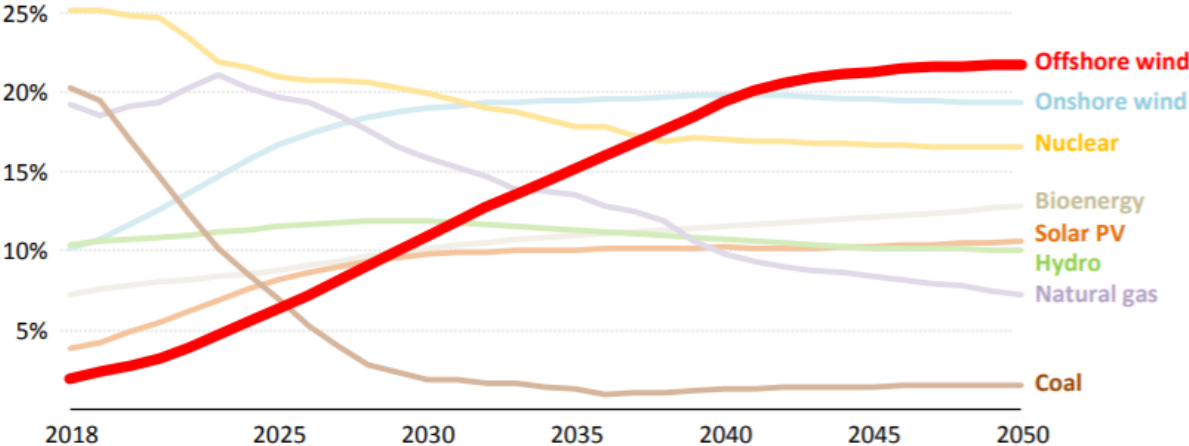
Figure 14: Damage equivalent moments of the low-pass filtered response time series for three input stability conditions. The range (dark) and mean (white lines) of six 1-hour realizations are shown.



A carbon neutral Europe puts offshore wind in front



Shares of electricity generation by technology in the European Union, Sustainable Development Scenario



Offshore wind is set to become the largest source of electricity in the European Union by 2040, complementing other renewables towards a fully decarbonised power system

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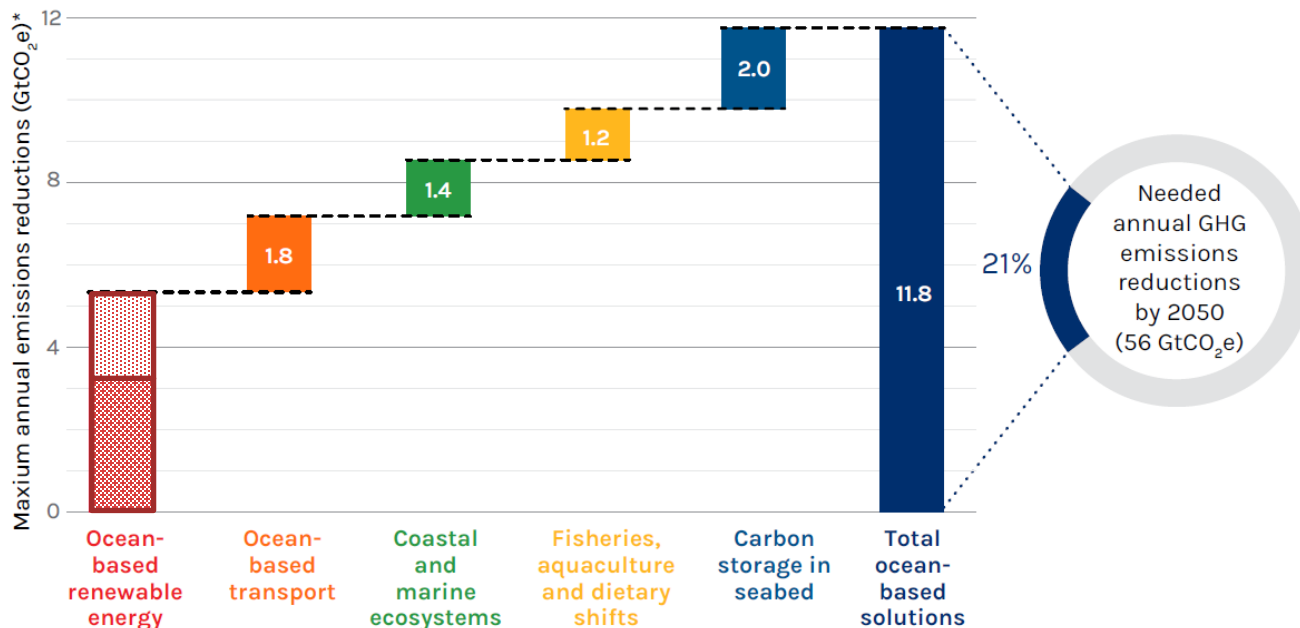
The CO₂ mitigation potential



Figure ES-4. Contribution of Five Ocean-based Climate Action Areas to Mitigating Climate Change in 2050 (Maximum GtCO₂e)

ORE (1.9)

Wind (3.5)



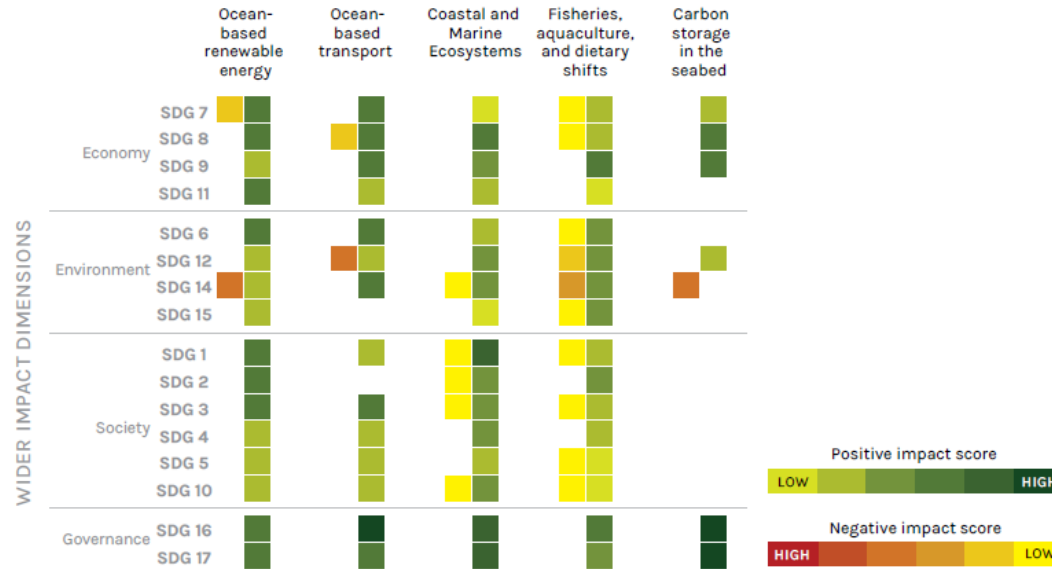
Notes: * To stay under a 1.5°C change relative to pre-industrial levels

Hoegh-Guldberg, O., et al. 2019. "The Ocean as a Solution to Climate Change: Five Opportunities for Action." Report. Washington, DC: World Resources Institute. Available online at <http://www.oceanpanel.org/climate>

Impact on SDGs



Figure ES-5. Summary of Wider Impact of Ocean-based interventions on Sustainable Development Dimensions



List of Sustainable Development Goals reviewed:



Source: Authors





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