

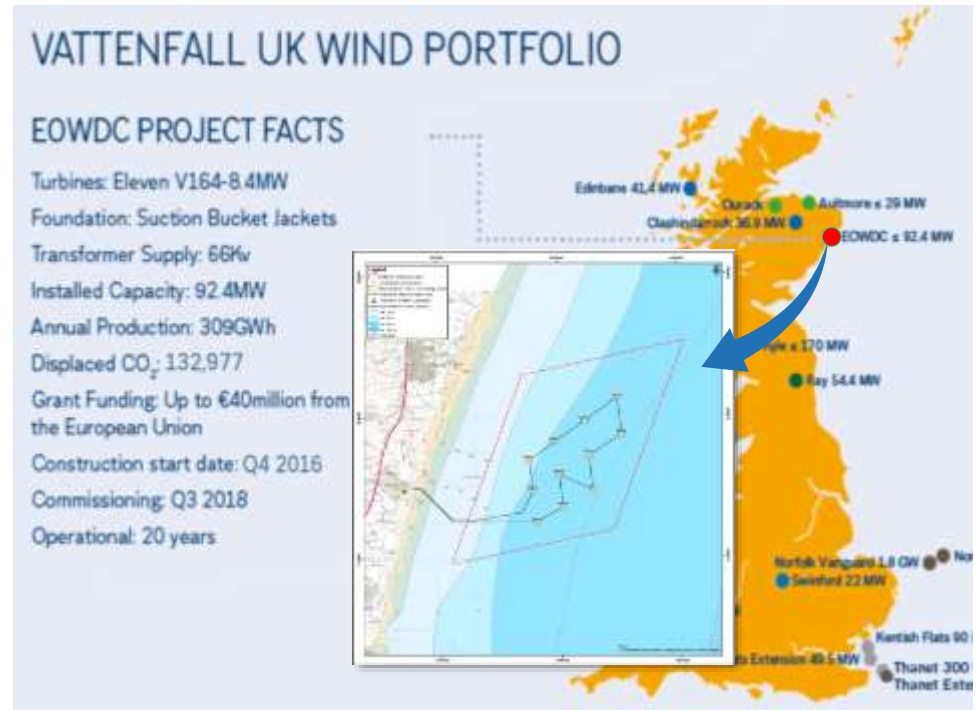
EOWDC

Environmental Research Programme

ScotMER, 3 March 2020, Edinburgh - Jesper Kyed Larsen, Vattenfall

European Offshore Wind Deployment Centre (EOWDC)

Test and demonstration wind farm supported by EU grant delivering technical innovation and environmental research.

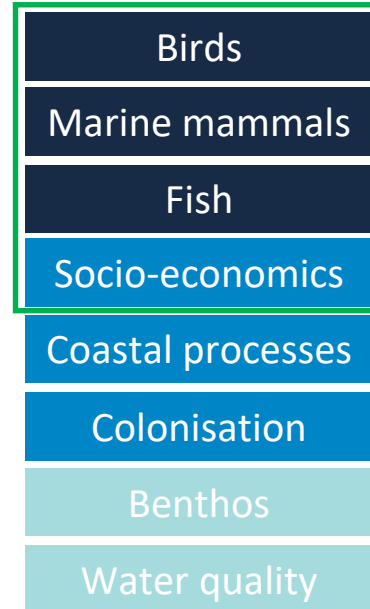


The Environmental Research & Monitoring Programme

- A EUR 3 million scientific research fund to improve the understanding of the environmental impacts of offshore wind
- Scottish Ministers guided on establishing the programme, including the Scientific Panel, chaired by Prof Stuart Gibb (UHI):



- Using Multi Criterion Decision Analysis, the Scientific panel defined focus areas and priorities, as well as advised on the calls and project selection



Six ongoing research projects



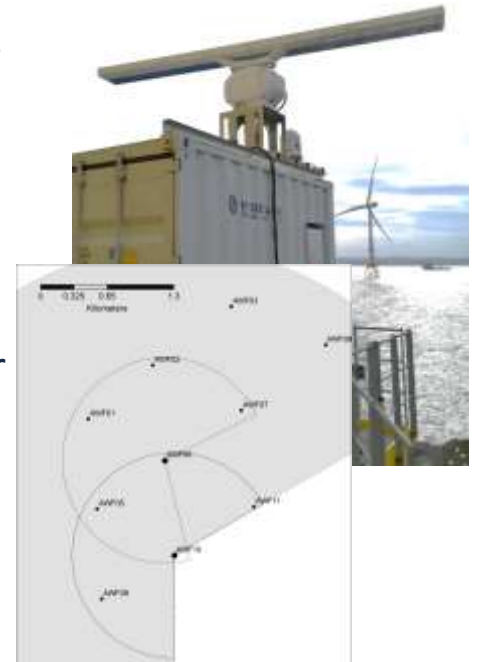
Guillemot and razorbill migration routes and wintering areas

- Among the seabird species considered most vulnerable to displacement by offshore wind farms
- Geolocator tags will be deployed on 200 guillemots and 150 razorbills per year over two years across seven Scottish colonies
- Understanding colony related patterns in migration routes and wintering areas
- MacArthur Green, CEH
- Delivery 2021, incl. PhD thesis, scientific papers, summary report



Seabird collision risk – radar and camera study within EOWDC

- Better understanding avoidance behaviour of seabirds during the breeding period, focussing on gannets, kittiwakes and large gulls
- Flight behavior within the wind farm and in the vicinity of turbines from combined radar and video technology – 3D tracks aspiration; flight heights and speeds
- Improving the evidence base for collision risk assessment for seabirds
- RPS Group and DHI
- 2019-2022, two field seasons April - October



Kittiwake flight behaviour within and outside EOWDC – GPS tracking

- Assess the flight behaviour of tracked kittiwakes within EOWDC and how it relates to behaviour more widely; complement and compare with data recorded by the camera-radar system
- 25 kittiwakes from the southern part of the Buchan Ness to Collieston Coast SPA colony to be fitted with UoA GPS tags, and subject to the necessary licenses being obtained, an additional 3 birds with pathtrack tags using harnesses
- BTO
- Field season 2020, reporting 2021



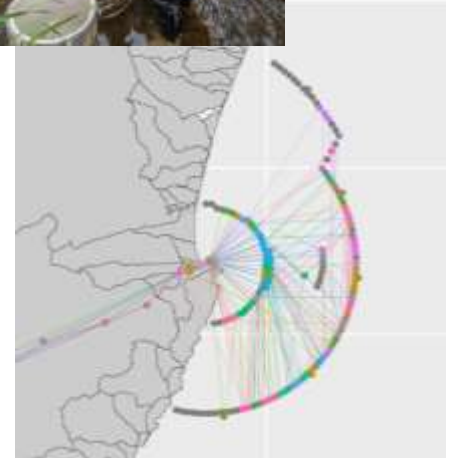
Bottlenose dolphin movement patterns, East coast population

- A better understanding of the exchanges between the northern and southern range of the Scottish east coast bottlenose dolphin population is needed
- Photo-identification from boats May – September 2017, 2018 and 2019, adding to similar and parallel efforts in northern range
- Understanding movements of individuals and population biology
- SMRU Consulting, Univ St Andrews
- Delivery 2020, scientific report



Salmon and sea trout migration routes

- The Scottish east coast rivers have salmon and trout fisheries of economic importance. Research is needed into the behaviour of these species away from the rivers
- Acoustic tags will be fitted to 300 juvenile salmon and 100 sea trout as they exit the rivers Dee, Don and Ythan, and passage of offshore hydrophone arrays recorded
- Establishing migration pathways will help inform potential for interaction with offshore wind farm developments
- The River Dee Trust, Marine Scotland Science
- 2017-2020, scientific report and hydrodynamic model input



Socio-economic impact on the human environment

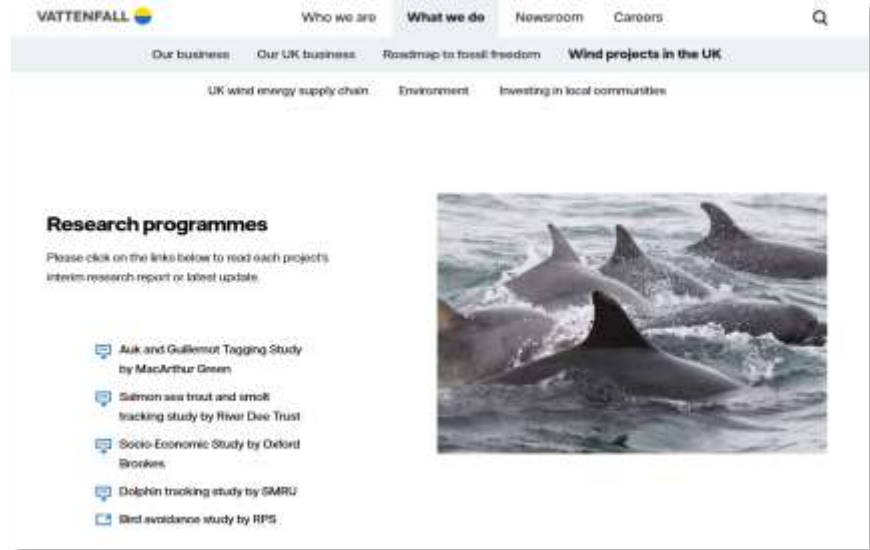
- The actual impacts on the economy and communities near to offshore wind farms is an area in need of research
- Review existing methods for predicting socio-economic impacts, and test validity against data collected during construction and operation of EOWDC
- Identify good practise impact assessment methods and best practise in maximising local socio-economic benefits from offshore wind farms
- Oxford Brookes University
- 2017-2020, scientific report ao



For more information

EOWDC website:

<https://group.vattenfall.com/uk/what-we-do/our-projects/european-offshore-wind-deployment-centre>



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Thanks

