

EMODNET Data use within Ørsted

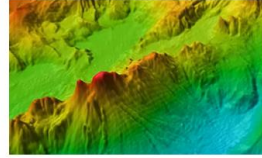
EMODNET Data

Four examples of how various EMODNET data is used within the offshore wind industry

We use hundreds of datasets throughout the lifecycle of an offshore wind farm, and EMODNET is one of our main sources of data especially in the early phases of development

Fair to say that without the EMODNET data portals, data collection and integration would take significantly longer thus increasing costs and risks to the project

Sympathetic to EMODnet's cause. Deal with inconsistent methods on a national scale. Each country wants to do things "their way". Industry data can be very sensitive, and we all want to recover our costs



Bathymetry

Data on bathymetry (water depth), coastlines, and geographical location of underwater features: wrecks.



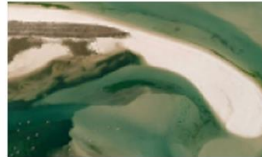
Biology

Data on temporal and spatial distribution of species abundance and biomass from several taxa.



Chemistry

Data on the concentration of nutrients, organic matter, pesticides, heavy metals, radionuclides and antifoulants in water, sediment and biota.



Geology

Data on seabed substrate, sea-floor geology, coastal behaviour, geological events, and minerals.



Human activities

Data on the intensity and spatial extent of human activities at sea.



Physics

Data on salinity, temperature, waves, currents, sea-level, light attenuation, and FerryBoxes.



Seabed habitats

Data, maps and models on the spatial distribution and extent of seabed habitats and communities.

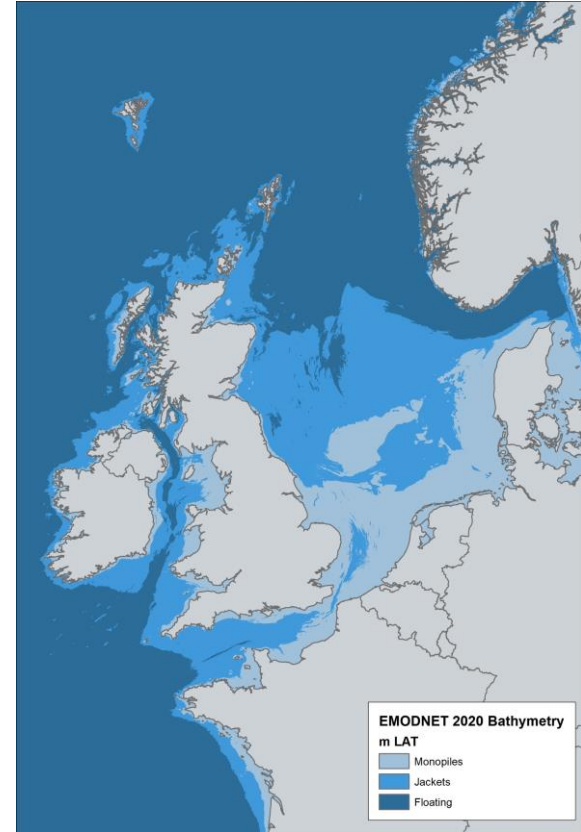
EMODNET Bathymetry Data

Used to identify suitable wind farm sites by helping us define which foundation to use and how much our foundations are likely to cost.

It's useful as it offers a consistent dataset across Europe where we can compare the potential foundation costs between two or more wind farms

Is the "go to" dataset until our own geophysical surveys are carried out and compared.

As wind farms go into deeper waters, bathymetry survey efforts decrease leading to greater data uncertainty



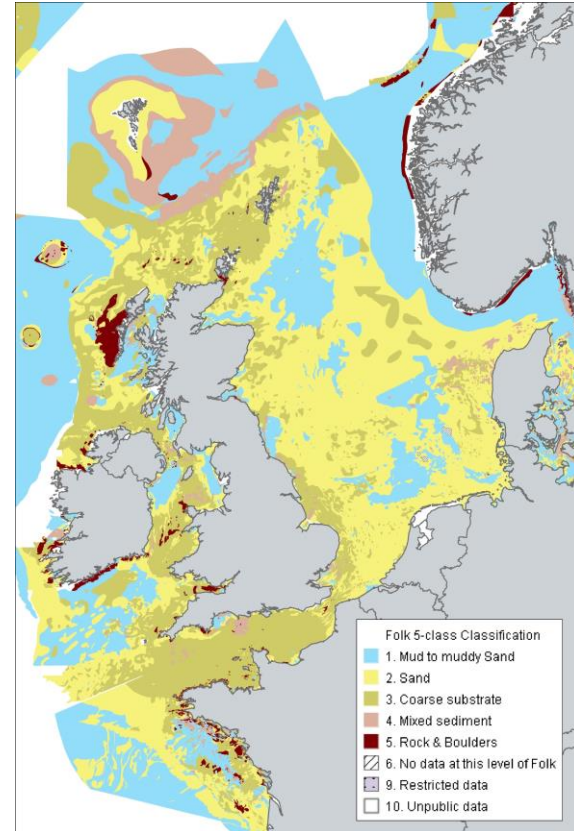
EMODNET Geological Data

Used in conjunction with bathymetry data to assist in foundation design.

Softer sediments such as mud may require suction bucket foundations whereas firmer sediments may be more suited to a driven pile foundation.

Allows us to do a high-level evaluation of sites prior to site investigation surveys.

Once our site investigation surveys are carried out we supersede this data and rely on our own ground model.



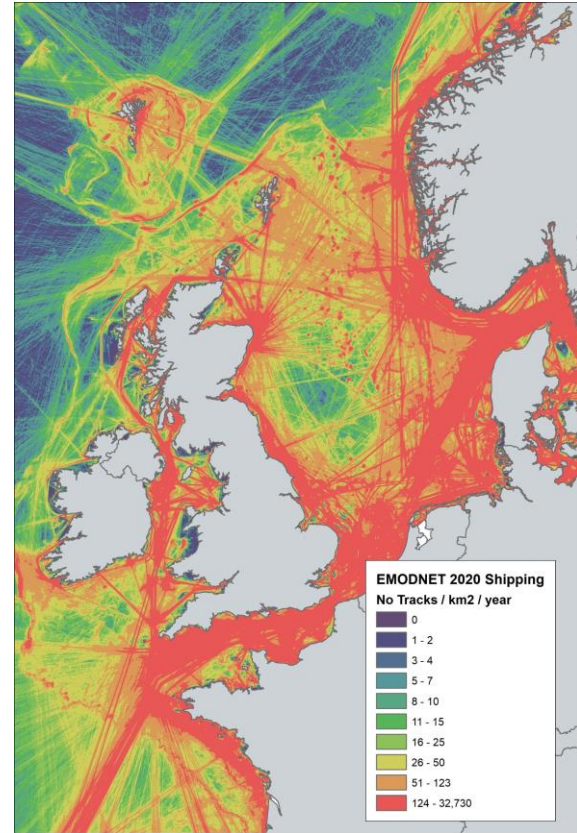
EMODNET Shipping Data

Density of shipping vessels gives an indication of whether they may be impacted by a wind farm prior to a full navigational risk assessment

Combining this data with our ports and harbours dataset allows us to recognise who may be impacted by a particular wind farm

The bearing of the shipping lanes is an indicator of how we could orient our wind farms to ensure our turbines are parallel to the prevalent traffic direction

As the dataset is consistent, it allows us to compare the potential impact on shipping between two or more wind farms



EMODNET Habitat Data

We would use the EMODNET habitat data portal to try and ascertain whether our wind farm may have an impact on benthic habitats.

If the habitat is sensitive, and also protected by a statutory designation (such as an SAC), then we would try to avoid it or put in place mitigation to reduce the impact.

The data will be included in an Environmental Impact Assessment report where consultees can discuss and challenge how we have

