

22-26 JUNE 2020

EU SUSTAINABLE ENERGY WEEK

BEYOND THE CRISIS: CLEAN ENERGY
FOR GREEN RECOVERY AND GROWTH



#EUSEW2020



 EUSEW.EU
 [EUENERGYWEEK](https://www.facebook.com/EUENERGYWEEK)
 [@EUENERGYWEEK](https://twitter.com/EUENERGYWEEK)

European Sustainable Energy Week

Green Deal and Ocean Observation



Monitoring data as a tool to unlock the needed areas for offshore wind energy

Sune Strøm

Senior Lead Regulatory Advisor, Ørsted

Agenda

1. A bit on Ørsted and climate
2. Purpose of monitoring
3. Comparison DE, NL, DK
4. Regional cooperation (Sea-basin)
5. Ørsted recommendations



Ørsted at a glance



Headquarter: Denmark

Number of employees: 6,500



The global market leader in offshore wind

- Develop, own, build & operate offshore wind farms



Onshore

- Onshore wind farms
- Solar PV & energy storage



Markets & Bioenergy

- Power & heat
- Energy products for customers

- Revenue (2019): DKK 67.8 bn (USD 10 bn)
- EBITDA (2019): DKK 17.5 bn (USD 2.6 bn)
- Credit Rating: Moody's Baa1 (stable), S&P BBB+ (stable)
- Active in Scandinavia, United Kingdom, Germany, The Neth

Major Shareholders (voting share %)

- Danish State 50%
- Seas NVE 7.8%
- Capital Group 5-10%

Our geographical footprint

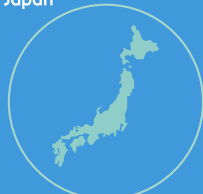
USA



Taiwan



Japan



United Kingdom



Netherlands



Denmark

Germany



Offshore



Onshore



Bioenergy



Solar



Energy storage

Sustainability, Environmental, Social and Governance performance

At Ørsted, our vision is a world that runs entirely on green energy

Green leadership

- We want to help keep global warming below 1.5°C.
- In 2019, 86% of our energy generation was green. By 2025, we target 99%.
- We have reduced the carbon intensity of our energy generation by 86%¹ to 65g CO₂e/kWh.
- By 2025, our target is to become carbon neutral in our energy generation and operations (scope 1 and 2).
- For our energy trading and supply chain, we target a 50% reduction by 2032 compared to 2018, and our ambition is to be carbon neutral in our total carbon footprint by 2040 as required by science.
- Ranked as the most sustainable company in the world in 2020, by Corporate Knights



Contributing to the global goals



Ørsted is a signatory to the UN Global Compact and adheres to its ten principles for responsible business behaviour.

Strong commitment to UN Sustainable Development Goals

The UN Sustainable Development Goals (SDGs) define some of the greatest societal challenges of our time.

SDGs where Ørsted makes the biggest difference:



Ensure access to affordable, reliable, sustainable and modern energy for all

Ensure access to affordable, reliable, sustainable and modern energy for all



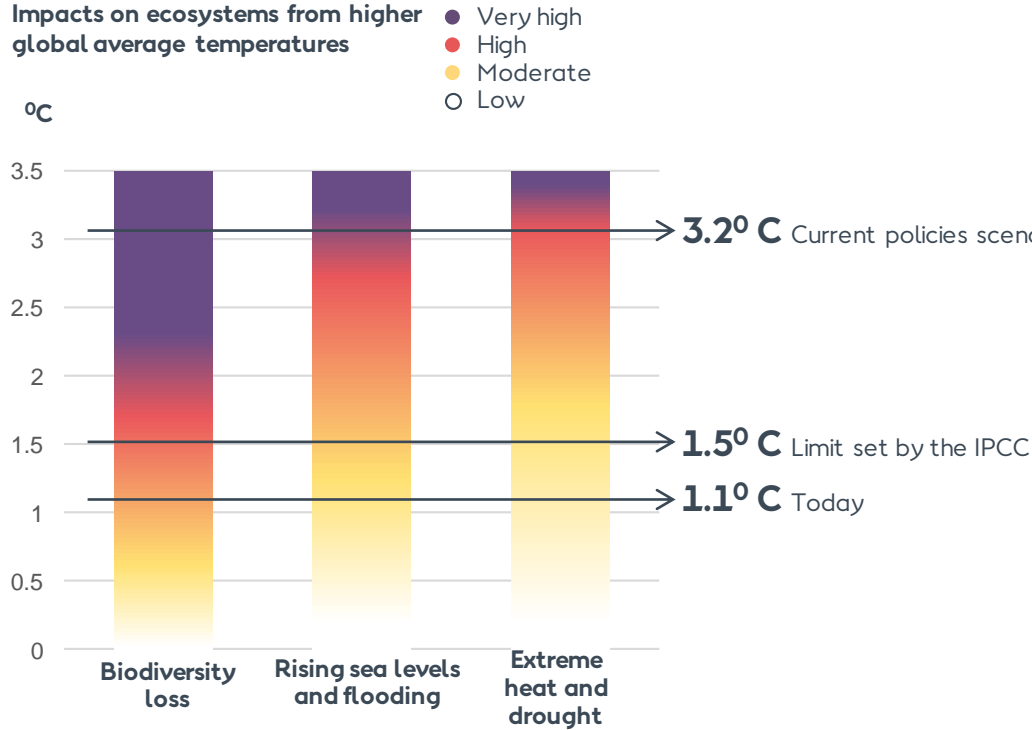
Take urgent action to combat climate change and its impacts

ESG ratings of Ørsted

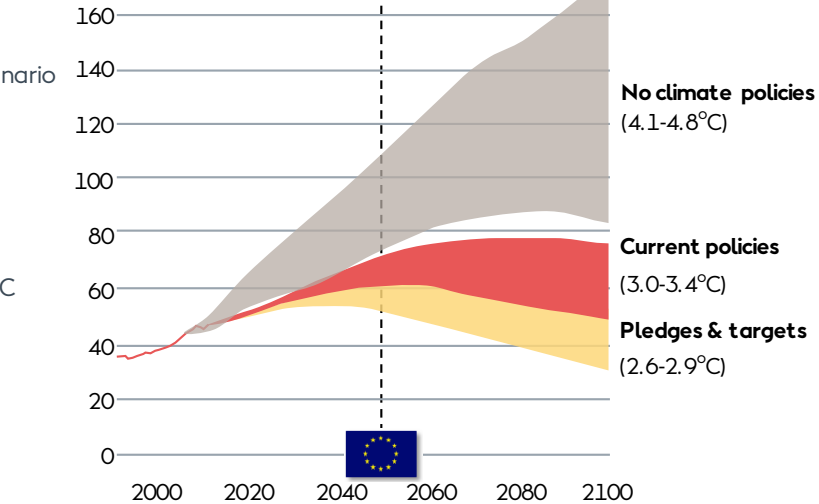
Rating agency	Rating	Benchmark
CDP	A	<ul style="list-style-type: none"> • Highest possible rating • Recognised as a global leader on climate action
MSCI	AAA	<ul style="list-style-type: none"> • Highest possible rating
SUSTAINALYTICS	83 of 100	<ul style="list-style-type: none"> • No. 1 among direct market cap peers • Highest possible 'Leader' status
Corporate ESG Performance ISS ESG Prime	B+	<ul style="list-style-type: none"> • No. 1 of all utilities • Awarded highest possible 'Prime' status
GRESB	A	<ul style="list-style-type: none"> • Highest possible rating in the GRESB Infrastructure Public Disclosure Assessment

Higher temperatures are a pressure on the environment

Impacts on ecosystems from higher global average temperatures



Potential future emissions in gigatons of carbon dioxide equivalents



Source: Climate Action Tracker incl. IPCC 2018 data

Sources: IPCC (2018) 1.5 Special Report, Global Warming of 1.5°C; Climate Action Tracker (2019) Warming Projections Global Update. Current policies presently in place around the world are projected to result in approx. 3.2°C global warming by 2100. 'Very high': Very high risks of severe impacts and presence of significant irreversibility or climate-related hazards. 'High': Severe and widespread impacts/risks. 'Moderate': Impacts are detectable and moderately attributed to climate change. 'Low': No impacts detectable and attributed to climate change.

Purpose and value of monitoring



National level:

Monitoring the status of the ecosystems at sea enabling the authorities to take necessary action to fulfil overall targets for the ecosystems

Project level: Pre-construction






Input for the EIA-process to evaluate the status at the site and as input for mitigation efforts ensuring an acceptable level of impact on the environment

Project level: Post-construction

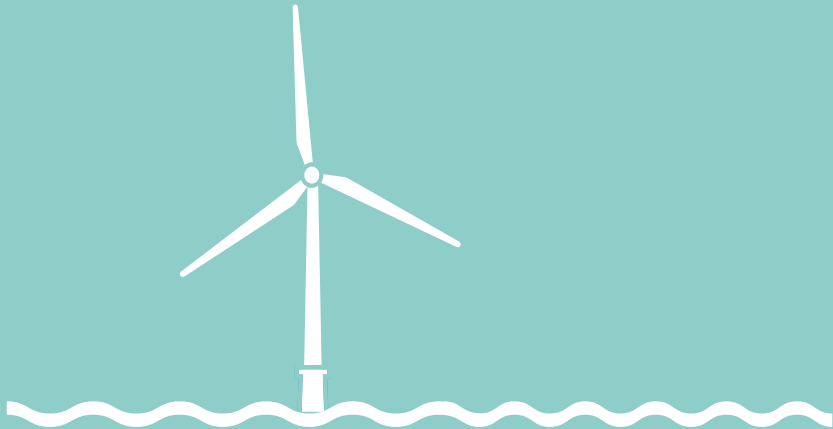
Validating assumptions in the EIA and when requested collect evidence for specific topics ensuring ability to adjust effort at site and gain further knowledge of broader interests



Monitoring – defined by authorities paid by developers

Baseline investigations undertaken by authorities	Winning bidder finances	Country specific approaches
		<ul style="list-style-type: none">• Request to undertake a defined set of surveys, which are applied to all offshore wind farms.• Monitoring provides you with consistent data over time but without adjustment to knowledge gaps• Focus should shift from project specific to more regional monitoring
	-	<ul style="list-style-type: none">• Specific monitoring research programmes are undertaken by authorities on topics that needs investigation• Focus is on knowledge gaps on a regional level.• Developers invited to discuss the scope
		<ul style="list-style-type: none">• For site preparation there is a dialogue between authorities and developers before specifying the baseline monitoring

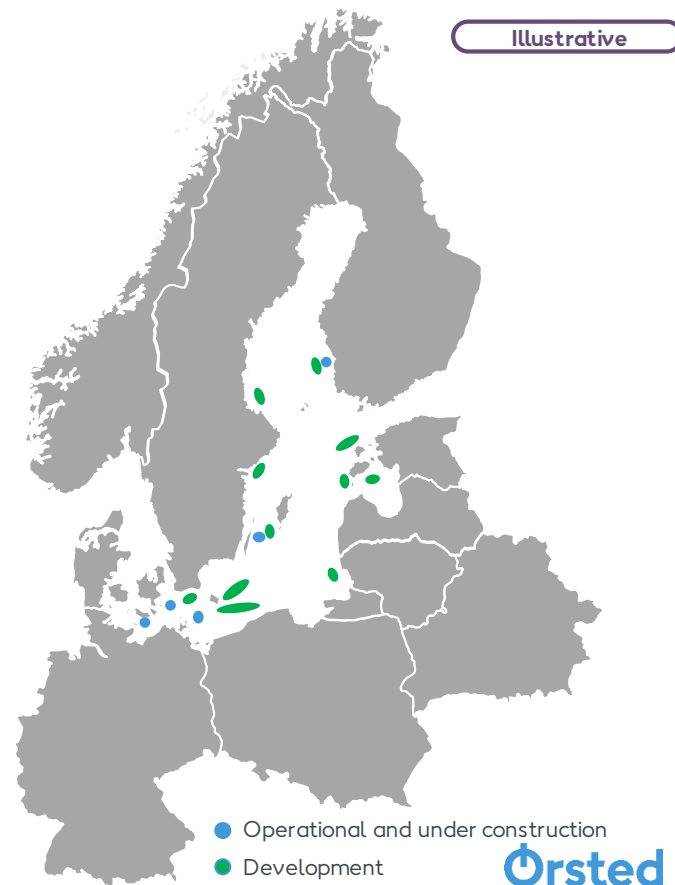
Regional cooperation to increase value of monitoring



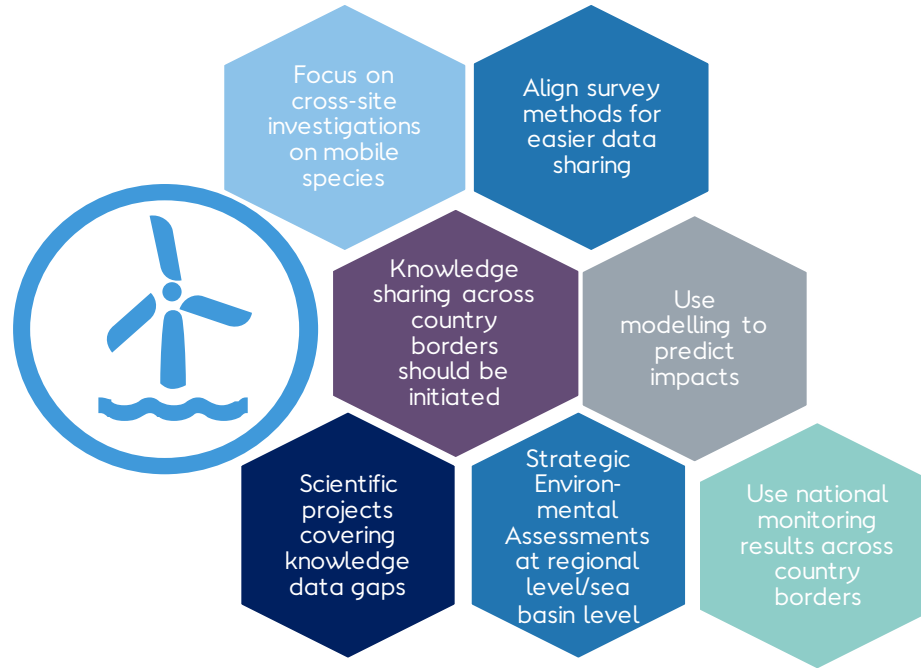
- ✓ Share already existing data across countries and investigate options to use common platforms like e.g. EMODnet
- ✓ Identify current data gaps – both at national and regional/sea basin level
- ✓ Align monitoring programs and data collection where possible at a regional/sea basin level
- ✓ Focus at highly mobile species, higher trophic levels and cumulative effects

Creating value from environmental monitoring

- Use the existing comprehensive datasets
- In the design phase environmental surveys involve NGOs and offshore wind farm developers in the design dialogue
- Strategic environmental monitoring to fulfil international requirements as tools to facilitate offshore wind farm build-out
 - Optimising the designation of areas for offshore wind farms in the MSPs
 - Increase the upfront environmental knowledge when permitting specific projects
- Monitoring data and the subsequent results will strengthen stakeholder dialogues



Monitoring is needed, but it comes with a cost to society regardless of who pays – the state budget or electricity consumers



**Let's create a world that
runs entirely on green
energy**



Ørsted