



Co-existence of offshore wind and other users of the sea:

20 years of learning what to do (and not do!)

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RWE, who we are...

19 Offshore windfarms in operation

Leader in offshore wind development: unique expertise in the development, construction, operation and dismantling of offshore windfarms

20 Years of experience in offshore wind

A unique experience : 20 years of managing impacts on the marine environment

50 GW by 2030

RWE, leader in renewable energy development : a diversified portfolio globally, with **installed capacity** to be **tripled by 2030** to 50GW

2 Key Sustainability Objectives

Sustainability at the heart of our development philosophy: commitments to **carbon neutrality** by 2040 (reduction targets aligned to 1.5oC pathway) and **net positive biodiversity impact** for all new assets by 2030

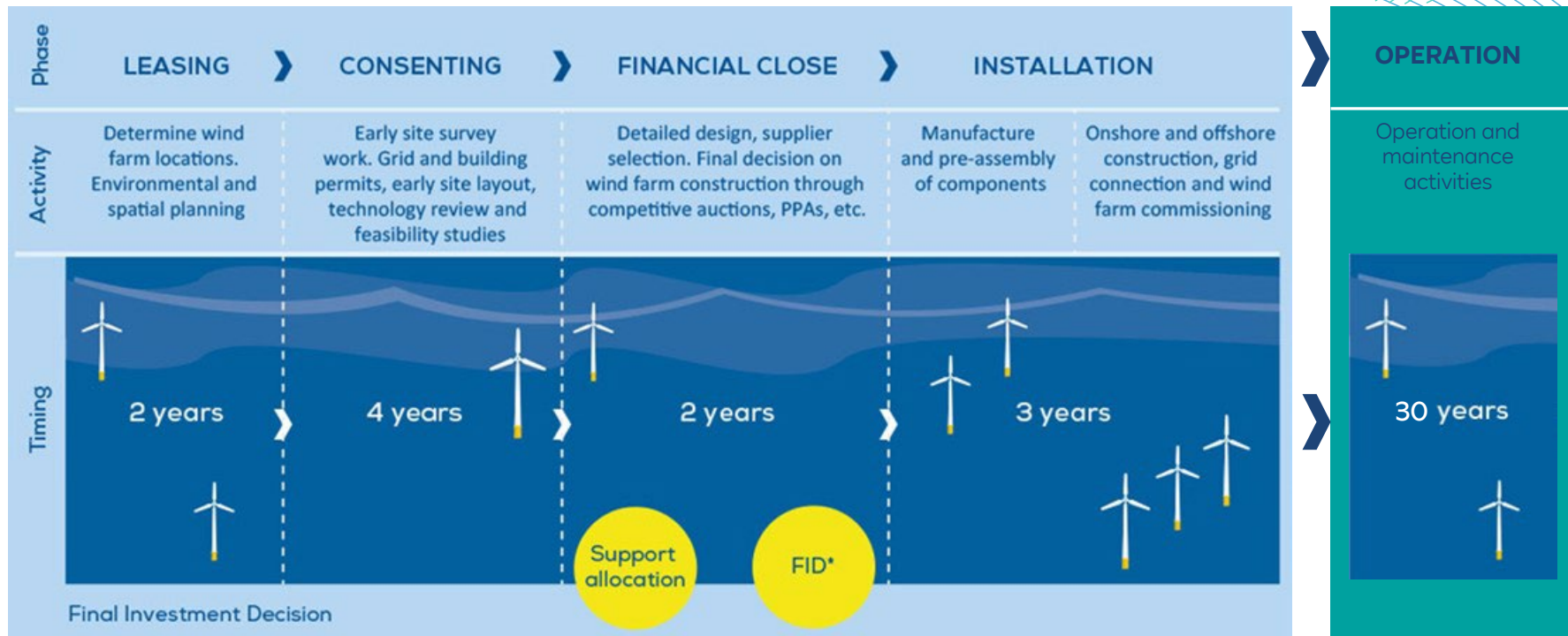


19 offshore windfarms operated by RWE



18 (+2) offshore windfarms in development and construction

And what we do!



@WindEurope

Some Key Learnings

- **#1 - Get involved early through:**
 - Stakeholder engagement
 - Knowledge sharing

" If you don't have a seat at the table,
bring a folding chair. "

Shirley Chrisholm



@RWE's virtual classroom



Fisheries Engagement Best Practice Rampion 1&2 Offshore Windfarms

- **Specific event held for sea users**, to present information about the construction program
- Implementation of **code of practice for construction vessel crew** to minimise interference with sea users
- **Detailed engagement to avoid disruption**, and implementation of fisheries cooperation agreements where required
- Development of **RWE's best practice engagement guideline** on a regional and global basis which reflects on cumulative lessons learned.



@RWE's Rampion windfarm



Floating Wind DeepDive – Sept 2023

TetraSpar Floating Demonstrator, Norway

- 100+ delegates, from **7 countries**
- **All stakeholders represented** (eNGOs, government agencies, community representatives, supply chain)
- **Objectives:**
 - Learn about floating wind with RWE's in-house experts
 - Visit an operational floating wind demonstrator
 - Exchange knowledge to share best practice and lessons learnt
 - Ask questions and receive instant responses



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@RWE's TetraSpar demonstrator

Some Key Learnings

- #1 - Get involved early through:
 - Industry representation
 - Knowledge sharing sessions
- **#2 – Responsibility to go beyond “minimum requirements”:**
 - Supporting sustainable development of communities
 - Encouraging innovation





Fishermen Reskilling Program

F.E.W. Baltic II Offshore Windfarm

- Program launched in December 2022, applications closed January 2023 and training started in May 2023.
- **Four week training program**, including:
 - Working at heights
 - Electrical
 - Mechanics, installation and maintenance of wind turbines
 - First aid and work at sea
 - Intensive English course
- **Objectives:**
 - Gain competencies needed to work on windfarms
 - Obtain qualifications relevant to the offshore wind sector
 - Gain opportunities to change career
 - Continue working at sea



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Community Benefit Fund

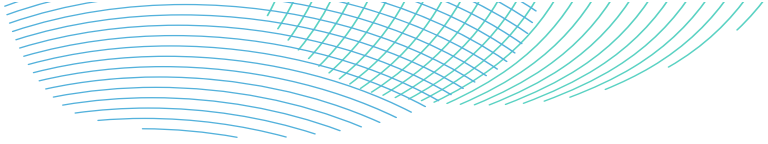
Gwynt Y Mor Offshore Windfarm

- Fund's objective is to make **a long term impact on the sustainable development of North Wales.**
- Investment of **£19 million over 25 years**
- To date, **the fund enabled notably:**
 - Funding of PPE for maritime lifesaving organization volunteers (RNLI)
 - Major improvements to the Victorian pier at Llandudno.
 - Replacement of the slipway onto Llandudno Beach to enable small life boats to be launched.
 - The re-development of Rhyl Harbour, including providing a specialist vessel.





Encouraging Innovation



RWE

Call for Innovations Floating Wind Competition

Seeking sustainable solutions for co-existence & biodiversity enhancement in floating wind projects.

**Deadline
31.12.23**

The illustration depicts a floating wind turbine in the ocean. The turbine has a grey tower and three blades, mounted on a yellow rectangular platform. It is anchored to the seabed by three white cables, each ending in a yellow anchor. To the left of the turbine, a small red boat with two people is on the water. To the right, a larger teal ship with a white cabin and two people is also on the water. The seabed is dark blue with various marine life, including fish, a shark, and coral. The sky is light grey with a yellow sun, white clouds, and small grey birds.

Some key learnings

- #1 - Get involved early through:
 - Industry representation
 - Knowledge sharing sessions
- #2 - Key opportunity to fill knowledge gaps, at various scales:
 - Industry wide topics
 - Baseline & monitoring
 - Project specific data gap
 - Encouraging innovation
- **#3 - Focus on avoidance and reduction of impacts:**
 - through detailed evaluation and stakeholder engagement
 - Alternative methods and innovative technology
 - Adaptative approaches



Fish Spawning Protection Rampion Offshore Windfarm

- Although the black sea bream stock concerned by the restrictions is reported to be healthy, it is **a designation criteria for the nearby Kingsmere marine protected area (MCZ)**, and therefore any changes could affect the status of the MPA.
- Herring stock was reported stable but under surveillance.



- **Seasonal restrictions** were implemented for construction activities, and in particular piling, to **avoid key reproduction periods** (April to July and November to January) for two fish species: black sea bream and herring.



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- #3 - Focus on avoidance and reduction of impacts:
 - through detailed evaluation and stakeholder engagement
- **#4 – Learn, feedback and improve!**

Restore Enhance



Karehamn multi-use platform



Blue mussel & seaweed aquaculture
& artificial reef & eDNA monitoring
RWE Offshore Operations – Linnæus
University (S)
2023 - 2024



Oyster reef restoration



Create oyster reefs
Community offshore wind (RWE
Offshore & National grid)
2022



Lobster hatchery



Funds for installation of lobster
hatchery equipment
RWE Offshore - Sofia Wind farm
2022



Lobster Stock Enhancement Sofia

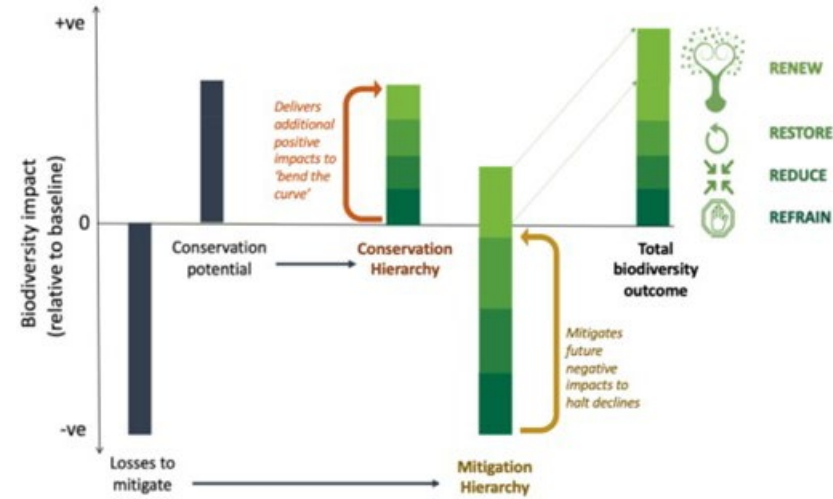
- Funding **the installation of hatchery equipment** to enable the release of 100,000 juvenile lobsters into the ocean each year.
- The aims of the Whitby Lobster Hatchery are:
 1. **Conservation**, primarily of increasing local lobster populations
 2. **Education** to teach young and old about the marine environment
 3. **Promoting research and partnership** with local universities.
- Wild lobsters are brought to the hatchery, where their eggs are hatched and larvae raised up to a stage where survival rates are much higher, before releasing them into the ocean.



@Whitby Lobster Hatchery

Some upcoming challenges for the industry

- Tackle new 'frontier' environments
 - Scaling up of the **offshore wind industry**
 - Shift towards **floating wind**
 - NIMBY vs **ambitious development targets**
- Challenges to qualifying and mitigating impacts in changing environments
 - **Remoteness and access** for baseline and monitoring
 - **Deeper, less known** marine habitats and ecosystem function
 - **Climate change**
- Duty to shift from Nature Inclusive to Nature Positive
 - Focusing on **management & conservation outcomes**
 - **Large scale pilots**, based on **collaborative** approach
 - **Monitoring** and validating **effectiveness** (scale, temporality)



"Individually, we are one drop.
Together, we are an ocean."
Ryunosuke Satoro

Thank you!

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