

# Our industry-leading sustainability ambitions

2025

98 % emission reduction, scope  $1-2^1$ 

2030

77 % emission reduction, scope  $1-3^2$ 

2040

Net-zero emissions, scope 1–3<sup>3</sup>

Today

Zero wind turbine blades to landfill

Zero solar panels to landfill

2030

Net-positive biodiversity impact from all renewable energy projects commissioned from 2030 onwards





<sup>1.</sup> Emissions intensity (CO2e/kWh) from a 2006 base year.

<sup>2.</sup> Emissions intensity (CO2e/kWh) from a 2018 base year, excl. natural gas sales.

<sup>3.</sup> Emissions intensity (CO2e/kWh) from a 2018 base year, excl. natural gas sales.

# Our blue bond is enabling resilient renewable energy projects that contribute to a sustainable ocean economy

Biodiversity continues to decline globally. At the same time, climate change and rising power demand create a pressing need to scale renewable energy solutions while protecting nature. Our blue bond helps us do both: By raising capital for initiatives that support ocean health, we can reduce project risks and ensure space for resilient renewable energy projects.

The outcomes of COP16 reaffirmed the global need to scale up biodiversity financing, with a clear call to mobilise a diversity of actors and innovative financial instruments to bridge the 'blue finance gap'.

In 2023, Ørsted became the world's first energy company to issue a blue bond – a EUR 100 million private placement. Through our blue bond and renewable energy projects, we aim to drive economic growth, create jobs, and improve livelihoods, all while protecting ocean health and marine biodiversity. In doing so, we contribute to building a 'sustainable ocean economy' and support the long-term resilience of our business.

#### Our biodiversity ambition

Renewable energy, especially offshore wind, can benefit both climate and nature. Beyond mitigating emissions and ocean warming, offshore wind farms can also support marine life and ecosystems by offering natural recovery sites, creating artificial reefs, and providing space for biodiversity enhancement.

As we work to scale renewable energy solutions, it is essential that this happens in a way that actively supports nature. Taking a responsible approach to biodiversity helps mitigate project risks, can support permitting processes, and can be an important mechanism to foster engagement with key local stakeholder groups. It also strengthens the long-term resilience of our business by helping to ensure continued access to land and ocean space for our projects.

That is why we have an ambition to deliver a net-positive biodiversity impact from all new renewable energy projects commissioned from 2030. This means we are committed to going beyond minimising adverse environmental impacts by actively enhancing the ecosystems and wildlife habitats associated with our projects.

## Advancing science-based ocean stewardship

In 2024, we launched our Biodiversity Measurement Framework to guide us towards our biodiversity ambition. Building on the mitigation hierarchy, the framework supports us in avoiding, minimising, and restoring impacts – while enhancing biodiversity across our projects from 2030 onwards. The framework also supports industry alignment with emerging standards for nature disclosure and target setting, including the TNFD and SBTN.

To accelerate broader progress, we are also proud to serve as a Champion of the Ocean Investment Protocol (OIP) – a role that reflects our commitment to responsible investment in the sustainable ocean economy. Developed by the UNGC and UNEP FI, the OIP offers a shared framework for directing capital towards ocean-based activities that benefit both nature and society.

As a Champion, Ørsted will continue promoting ocean stewardship by further integrating biodiversity considerations into our strategy, project development, financing, and reporting – and by advancing measurable, science-based actions.

# The impact of our blue bond

Our blue bond is dedicated to supporting ocean health and contributing to biodiversity conservation through marine ecosystem restoration and sustainable shipping activities, in line with the IFC Blue Finance Guidelines.

Most of the blue bond projects are still in the early stages of implementation. As biodiversity gains may take time to materialise, many impacts cannot yet be quantified. We continue to work on improving the measurement of impacts, and, where possible, we provide indicators, supported by qualitative deep dives into selected project's contribution to biodiversity.

Through this blue bond, our investors help finance resilient renewable energy projects that drive economic growth and accelerate progress towards a net-positive impact on biodiversity. Together, we are contributing to a sustainable ocean economy – creating jobs, improving livelihoods, and delivering a net-positive biodiversity impact from 2030.

# Impact of projects with blue bond allocations

Ørsted is committed to driving a positive impact through our blue bond and transparently reporting on progress.

Some projects are already delivering measurable impact, while others are in early stages or primarily yield qualitative benefits. The projects cover:

**Research and monitoring** using advanced tools like LiDAR surveys, GPS tagging, and acoustic monitoring, providing crucial understanding of species and ecosystem health.

**Mitigation actions** aiming to minimise impacts during construction, such as low-noise installation technologies, measured in decibels (dB) mitigated.

**Ecosystem restoration**, including biogenic reefs, seagrass meadows, saltmarshes, and mangroves, with progress measured by the area restored.

**Species restoration,** including coral growth and artificial nesting sites for seabirds, with impact tracked by number of individuals or nesting pairs supported.

Blue finance activity	Category	Project name	Project status	Impact indicator <sup>4</sup>	Metric
Marine ecosystem restoration	Research and monitoring	Digital aerial surveys: Using LiDAR to measure the flight height of seabirds	Ongoing	4	Number of surveys conducted
		GPS tagging and tracking: Monitoring seabirds	Ongoing	81	Number of individuals monitored
		Monitoring bird movement trough novel technologies, e.g. digital camera trial/software	Ongoing	4	Number of cameras deployed
		Avian and bat monitoring	Ongoing	8	Number of individuals monitored
		Offshore wind telemetry: Using passive acoustic telemetry to monitor marine fish	Ongoing	100	Number of individuals monitored
		Improving industry understanding of fish migration patterns in the North Sea	Ongoing	3	Number of peer-reviewed publications
		ROV video survey and SPI/PV optical surveys: Marine benthic monitoring	Ongoing	11	Number of surveys conducted
		Towed video surveys: Monitoring crustacea and benthic habitats	Ongoing	1,225,000	Number of images collected
		Studying potential effects from electromagnetic fields on fish	Ongoing	400	Number of individuals studied
		Zooplankton research	Ongoing	-	Number of samples collected
		Researching effects of offshore wind turbines on marine mammals and sea turtles	Ongoing	5	Number of species studied
		Acoustic studies and monitoring of marine mammals	Ongoing	-	Number of studies conducted
		Fisheries research and surveys: Understanding potential impacts on fish and crustacea	Ongoing	450	Number of individuals studied
		Passive acoustic monitoring: Recording and analysing underwater sounds to monitor marine life	Ongoing	15	Number of species monitored
	Mitigation actions	Offshore wind farm installation: Installation, testing, or research of low-noise installation technologies	Ongoing	34	dB, noise reduced per installation
				99	%, noise reduced per installation
	Ecosystem restoration	BioReef: Establishing biogenic reefs	Ongoing	-	m², restored biogenic reef
		Marine rewilding in the North Sea	Ongoing	10	m³, deployed oyster shells
		Restoring seagrass in the Humber Estuary	Ongoing	4	Ha, restored seagrass
		Wilder Humber: Restoring coastal ecosystems	Ongoing	10	Ha, restored seagrass
		Nature-based solutions: Restoring historic ecosystems through mangrove planting in the Gambia	Ongoing	6,000	Ha, planted mangroves
	Species restoration	ReCoral: Giving corals a home on our offshore wind farms	Ongoing	2,700	cm², enhanced coral habitat area
		Seabird ecological compensatory measures: Artificial nesting sites (ANS)	Ongoing	5	Number of nesting pairs
				5	Number of ANS deployed

# Deep dives into some of our projects with blue bond allocations

Investing in the conservation and restoration of marine biodiversity is an important part of delivering on our 2030 biodiversity ambition. These efforts help us minimise impacts during construction and operation while also addressing any remaining impacts afterwards.

To support this, we continue to trial ambitious and innovative approaches, including artificial habitat restoration, to understand which solutions are effective and scalable. A key motivation behind our blue bond has been to enable this kind of learning and progress on biodiversity.

# **Research and monitoring**

# PREDICT: Improving industry understanding of fish migration patterns

In 2024, we continued to support PREDICT – a GBP 800,000, three-year research project developed in partnership with the Environmental Research Institute (ERI) at the University of the Highlands and Islands and the University of Aberdeen.

The project aims to improve our understanding of the environmental effects of offshore wind, with a particular focus on fish migration. PREDICT addresses an important knowledge gap: how fish migration patterns influence the behaviour of seabirds and marine mammals, and how these species interact with offshore wind farms. The findings will help strengthen and validate behavioural models, which are used to inform project development and regulatory approvals.

This is particularly relevant for designing effective mitigation and compensation measures. By focusing on how specific species respond to offshore wind activity – and how this may, in turn, affect local communities – the project contributes valuable insights, supporting responsible and inclusive offshore wind development.

# Mitigation action

# Offshore wind farm installation: Installation, testing, or research of low-noise installation technologies

At Ørsted, we invest in technologies that reduce underwater noise from offshore construction to help protect marine life. Monopile foundations are typically installed using hydraulic hammers, which emit underwater

sound. To minimise impacts on marine mammals and other species, we apply a range of protective measures, including time-of-year restrictions and noise reduction tools, such as double bubble curtains, which use rings of air bubbles to dampen sound waves around the pile, as well as other innovation projects aimed at further reducing underwater noise.

One example is our recent successfully piloted lower-noise installation method that could mark a change in how offshore wind foundations are installed. At the Gode Wind 3 project in Germany, we tested a patented jetting technology that eliminates the need for pile driving. By lowering soil resistance, the foundation effectively sinks into place, significantly reducing noise.

The method achieved a 34-decibel reduction compared to conventional techniques — a noise reduction of over 99 %, reaching levels just above ambient background noise in the North Sea. The technology was used to install three full-scale monopiles, each now supporting an 11 MW wind turbine.

This marks the first time jetting has been used for full-size foundations and could pave the way for lighter, quieter, and more efficient installations in the future. Once scaled, it holds the potential to lower costs and reduce environmental impact while enabling next-generation foundation designs.

# **Ecosystem restoration**

# Marine rewilding in the North Sea

In 2022, Ørsted began a three-year collaboration with ARK Rewilding Netherlands to explore how rewilding



Studying bird behaviour helps us understand how offshore wind can contribute to the protection of marine wildlife.

principles can support ocean biodiversity as the renewable energy build-out accelerates. Since then, we have advanced to the point of actively restoring biogenic reefs and monitoring their effects at two sites in the Dutch North Sea. As one of the most heavily used marine areas in the world, the North Sea faces significant ecological pressures – making projects like this essential for supporting biodiversity and restoring ecosystem functions.

The project focuses on restoring biogenic reefs formed by European flat oysters (Ostrea edulis), which play a key role in marine ecosystems by providing food, shelter, and breeding grounds for a wide range of species.

Through this work, we aim to identify effective methods for supporting oyster reef recovery at offshore wind farms and other restoration sites. In parallel, the project explores how rewilding principles can be applied at a broader scale across the marine landscape, culminating in a dedicated seascape study.

#### Wilder Humber:

## Restoring coastal ecosystems

In 2024, we continued supporting the Wilder Humber project – an important effort to restore coastal habitats in the Humber estuary, one of the UK's key natural areas. Despite its ecological value, the estuary has experienced ongoing habitat loss due to pollution and development, resulting in declining biodiversity. That is why our collaboration with Yorkshire Wildlife Trust and Lincolnshire Wildlife Trust remains essential, as we work to restore seagrass meadows, salt marshes, and native oyster populations.

Over the past year, the project successfully launched trials for remote oyster setting using oyster larvae – likely the first time this method has been tested for native oysters in the UK. The initial results have been very promising, marking an exciting step forward.

Alongside this, the team has continued planting seagrass using improved methods that speed up the process and increase success rates. A key enabler of this progress has been the use of Al technology to accurately count seagrass seeds, helping ensure the right amount is used for each planting effort.

# Nature-based solutions: Restoring historic ecosystems through mangrove planting

Mangrove forests store large amounts of carbon and support diverse ecosystems, but in parts of The Gambia, many were lost in the 1990s due to drought and obstructed water flows. Left behind were unproductive mudflats, degraded ecosystems, and reduced fish stocks – affecting both nature and local livelihoods.

Ørsted has partnered with the Gambian state, the Gambian Department of Parks & Wildlife Management and three local NGOs to restore these areas through large-scale mangrove planting. After a successful pilot in 2022, the project scaled rapidly. In 2023, over 10,000 people from 63 communities planted around 40 million propagules across 5,000 hectares.

In 2024, we have continued with another 40 million propagules planted throughout approximately 4,000 hectares. Villagers are involved throughout the process – from stakeholder consultations to planting – and receive fair compensation for their efforts.

The project will serve as a nature-based solution, contributing to global carbon removal by harnessing the natural ability of soil, plants, and trees to absorb and store carbon dioxide — helping address climate change while restoring ecosystems. As mangroves mature, they also bring fish and oysters back to the area, creating new sources of food and income. Over the project's 30-year lifespan, mangrove growth is monitored by drone and satellite.

₩ilder Humber: Salt marsh restoration at the Humber estuary





Mangroves growing in the Gambia River basin

# Measuring and managing biodiversity impact

As we scale the transition to renewable energy, we recognise the importance of safeguarding the ocean ecosystems we depend on. This means going beyond mitigation to actively understand, measure, and improve our impact on marine biodiversity.

Through our role as an Ocean
Investment Protocol (OIP) Champion
and the launch of our Biodiversity
Measurement Framework, we are
working to embed science-based,
transparent practices across our value
chain – supporting both nature and
society as we scale up offshore wind.

#### The Ocean Investment Protocol

Ørsted is an Ocean Investment Protocol (OIP) Champion – a role that reflects our commitment to responsible investment in a sustainable ocean economy.

Launched in 2025 by the UN Global Compact (UNGC) and the UN Environment Programme Finance Initiative (UNEP FI), the OIP provides a new, shared framework with recommended steps for directing capital towards a sustainable ocean economy. As the world's largest offshore wind company, we are aligning with the ten steps outlined for ocean industry actors – and as a Champion of the OIP, we contribute to shaping the protocol and promoting its adoption across the investment community.

At the center of our approach is a clear ambition: to deliver a net-positive biodiversity impact from all renewable energy projects commissioned from 2030 onwards.

Achieving this requires a structured, science-based understanding of our ocean impacts and dependencies, supported by reliable data.

As we continue to strengthen our ability to measure and quantify these factors, the OIP serves as a practical and holistic foundation. Its ten interconnected steps help ensure we are on the right path – supporting biodiversity while scaling up the renewable energy build-out. We are taking action in alignment with these ten steps, shown on the right:

- Commitment to the UNGC Sustainable Ocean Principles, which guide our broader approach to ocean stewardship.
- **Building internal capacity and raising awareness** by training teams to integrate ocean sustainability into project development and by partnering with NGOs, academics, and communities to share knowledge and build local resilience.
- Evaluating impacts and dependencies on the ocean through double materiality assessments and tools, such as the Biodiversity Risk Screening Kit (BRiSK).
- Generating and using ESG data to track progress, supported by our Biodiversity Measurement Framework.
- **Setting science-based targets** by aligning our measurement approach with the Global Biodiversity Framework, TNFD, and SBTN.
- Developing action plans based on robust assessments, including early biodiversity screenings and environmental impact assessments (EIAs).
- Disclosing sustainability performance in line with the Corporate Sustainability Reporting Directive (CSRD) and the EU taxonomy for sustainable activities.
- Fostering innovation and increasing R&D investment, for example through proceeds from our blue bond.
- Advocating for enabling regulation by engaging with policymakers to support science-based ocean governance.
- Linking performance to outcomes by allocating bond proceeds only to EU taxonomy-aligned projects and tying executive remuneration to sustainability KPIs.

# Our Biodiversity Measurement Framework

Understanding and measuring how our projects impact biodiversity – especially in marine environments – is complex. Data on ocean ecosystems is often limited, and no single indicator can capture the full picture. Each site has its own species, habitats, and environmental conditions, which means our approach must be both site-specific and scientifically robust.

To address this challenge, Ørsted launched our Biodiversity Measurement Framework in June 2024. This framework has been developed over several years in collaboration with technical experts. It is designed to provide a consistent, science-based approach to measuring and reporting biodiversity impacts from renewable energy projects, both onshore and offshore. The framework is designed to assess the overall biodiversity impact at project level from our renewable energy assets. The initiatives financed through the blue bond represent supporting initiatives, pilot projects, and knowledge-building activities that will inform the development of robust, asset-level impact metrics.

The framework follows eight steps that guide us from early planning to final reporting. It begins with an initial screening to identify potential biodiversity risks at the earliest stages of project development. We then determine which species and habitats are most important to focus on and assess any additional monitoring needs.

A baseline is established to understand existing conditions before project activity begins. Based on this, we model potential impacts and identify interventions that could support a net-positive impact. These options are evaluated based on feasibility, cost, and stakeholder input. Once actions have been selected, we implement them and track their effectiveness over time. Finally, we report on results using a consistent and transparent approach.

Biodiversity impact mitigation, research, and restoration projects vary widely in the types of outcomes they deliver. Some lead to measurable results – such as restored habitats or reduced noise levels – while others, including research and monitoring efforts, generate valuable insights that are not easily quantified but are essential to improving future decision-making. In every case, we apply recognised scientific methods and draw on expert input to ensure quality and credibility.

By using this framework, we aim to track our impact more accurately, strengthen our biodiversity efforts, and make meaningful progress toward our 2030 ambition of achieving a net-positive impact from all our renewable energy assets.

#### Read more:

→ Our Biodiversity Measurement Framework.

#### Ørsted net-positive impact framework



# Accounting policy

#### Our blue bond

In June 2023, Ørsted issued a EUR 100 million 3.625 % fixed-rate blue bond maturing in 2028 through a private placement. The proceeds will support projects focused on marine ecosystem restoration and sustainable shipping, in line with the IFC Blue Finance Guidelines.

In the first activity, Ørsted will invest further in measures to protect and restore marine and coastal biodiversity and in innovations to find new and better ways to do this at scale. For sustainable shipping, eligible projects include the production and use of renewable fuels for vessels.

As the bond was issued via private placement, the accompanying Blue Bond Framework and annual Blue Bond Impact Reports are shared directly with bondholders.

## Impact indicators

To reflect the temporal nature of ecological processes, biodiversity impacts are reported on an accumulated basis from 2023 onwards. Many biodiversity-related interventions and impacts span multiple years, and their effects are often not confined to a single accounting period.

To the extent possible, we seek to align with best practices and relevant market guidelines for biodiversity impact reporting. This includes our own Biodiversity Measurement Framework as well as evolving guidance from the TNFD, SBTN, and the IFC Biodiversity Finance Metrics for Impact Reporting from October 2024.



# Ørsted A/S

Kraftværksvej 53 DK-7000 Fredericia Tel.: +45 99 55 11 11

orsted.com

# Thomas Toth Larsen

Head of Funding thtla@orsted.com

# Michael Edward Malewicz

Senior ESG Engagement Advisor mimal@orsted.com

# lmage

Salt marsh restoration, page 8.
© Dutch Maritime Productions /
North Sea Nature Untamed