Partnership for nature and people

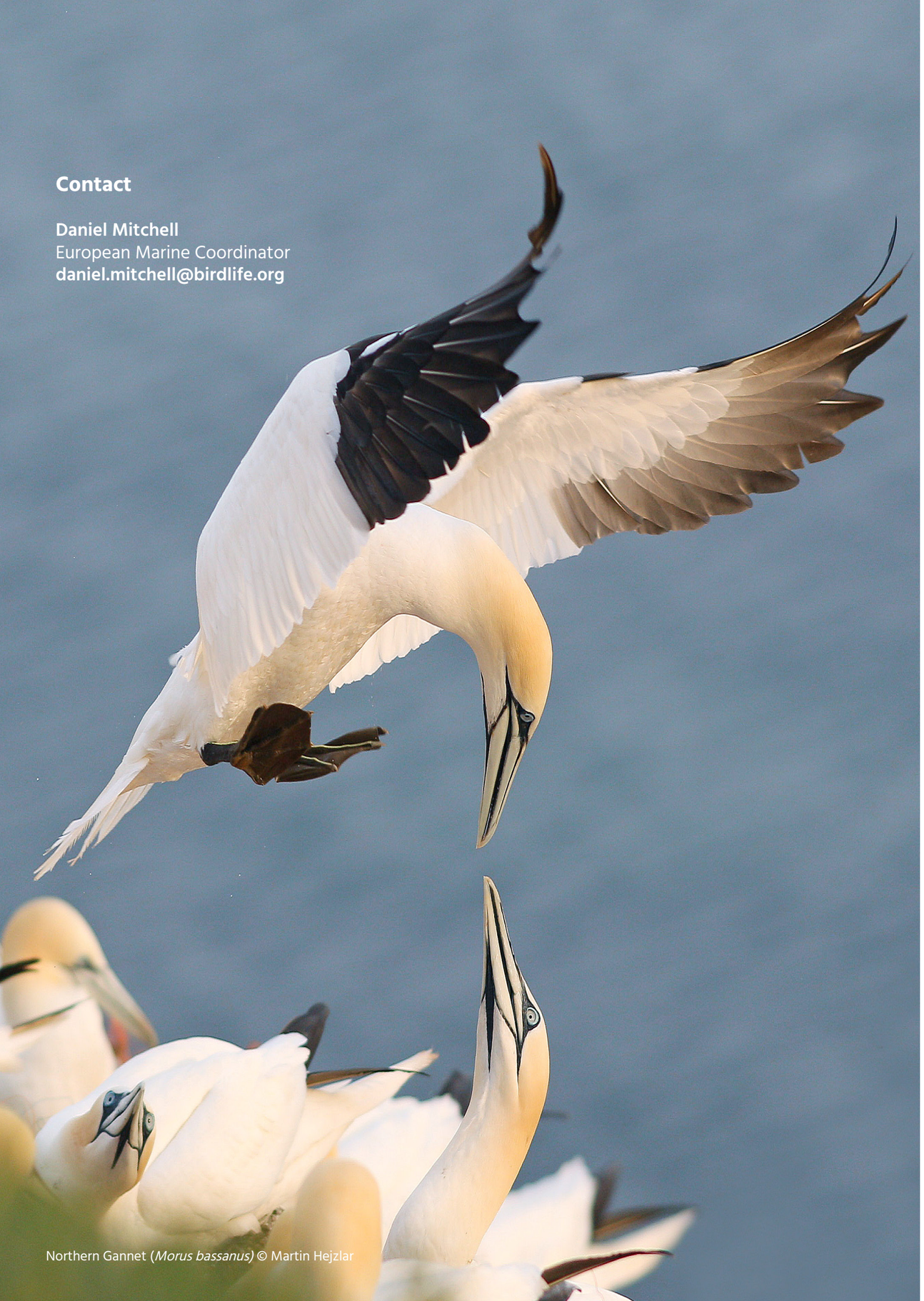
Position paper

Winds of Change: Powering Healthy Seas through a Nature Positive Energy Transition

April 2023

BirdLife INTERNATIONAL

EUROPE AND CENTRAL ASIA



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Northern Gannet (*Morus bassanus)* © Martin Hejzlar

Summary

The nature and climate crisis is indivisible. Healthy marine ecosystems are crucial for climate change mitigation and human well-being.

The rapid expansion of offshore renewable energy is vital, and there is political momentum for accelerating the permitting and rollout of offshore wind. However, this will inevitably impact marine ecosystems, which are already in a poor state.

To avoid that the energy transition at sea contributes to further losses of nature, the protection and restoration of marine ecosystems must be pursued hand in hand with, and with equal ambition to the expansion of offshore renewables.

This is a unique opportunity to deliver an energy transition at sea that achieves climate goals together with healthy, thriving, and resilient seas.

BirdLife is calling for a **Nature Positive energy transition at sea**, which we define as:

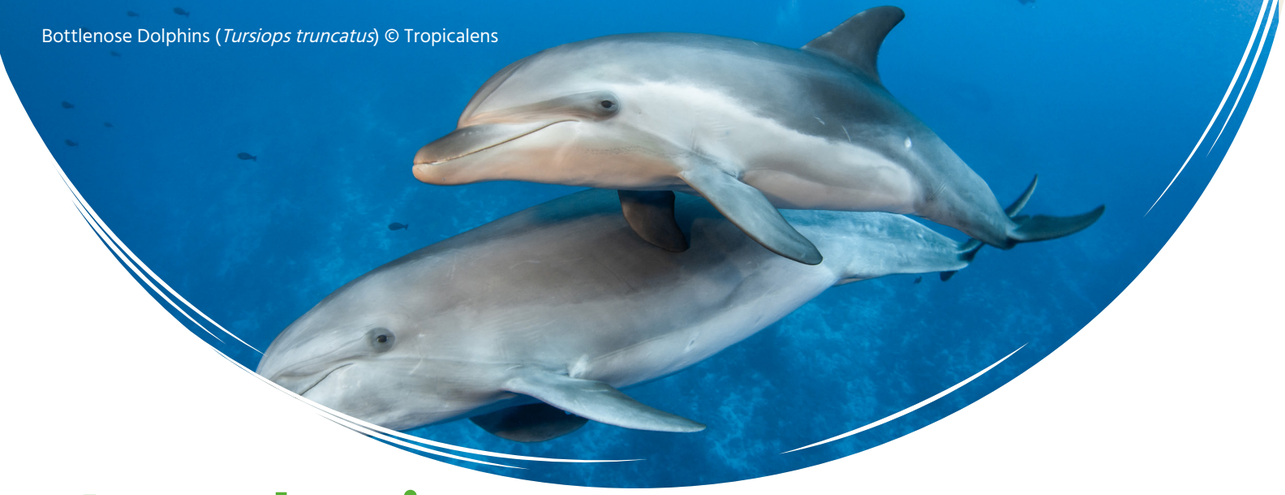
Industry and government-led action that goes above and beyond halting nature loss and is delivered at scale to restore thriving and resilient seas in tandem with the expansion of renewable energy at sea, ensuring a just transition of other marine sectors.

This requires concurrent action to protect nature and to restore and enhance nature.

Nature protection requires that all possible measures are taken to firstly avoid, and then to mitigate impacts, and finally to make good any residual harm to nature from renewable energy developments, in accordance with the mitigation hierarchy.

Nature restoration and enhancement requires large-scale measures to reduce and remove existing pressures, such as harmful fishing and extractive activities, following a holistic, ecosystem-based approach as a prerequisite for the expansion of renewable energy in order to reverse nature declines and boost the recovery and resilience of our seas.

The application of nature inclusive design and nature restoration and enhancement measures within development sites (e.g., offshore wind farms) may benefit certain species and habitats, but it is insufficient on its own to deliver a Nature Positive energy transition.



Bottlenose Dolphins (*Tursiops truncatus*) © Tropicalens

Introduction

BirdLife's vision for healthy seas and net zero

Our seas are healthy, thriving, and resilient, acting as a nature-based solution to climate change by capturing and locking away carbon, supporting productive and sustainable livelihoods, renewable energy production, and providing other vital ecosystem services. At least 30% is protected[1]—with at least 1/3 of this area strictly protected—and effectively managed through the exclusion of harmful activities to form an ecologically coherent network of marine protected areas that includes the most important areas for seabirds. The planning and management of all human activities at-sea and along the coast is sustainable and centred on the achievement of good environmental status following an ecosystem-based approach. Fisheries are sustainable, low impact, and climate smart, while fish stocks are managed within environmental limits to allow stock recovery, account for their ecosystem role, and improve their resilience.

Nature and climate emergency

The nature and climate emergency is indivisible[2]. **Rapid decarbonisation is essential** to reduce global emissions, whilst **ambitious action to protect and restore healthy marine and coastal ecosystems is vital to halt and reverse current nature losses** enabling them to capture and lock away carbon and provide ecosystem services that underpin human livelihoods and wellbeing.

Seas in crisis

Our seas are in a poor state; impacts from past and current human activities together with incoherent and uncoordinated planning hinder the provision of important ecosystem services and are being increasingly exacerbated by climate change[3]. Seabirds are excellent indicators of the overall health of the sea. In Europe over 30% of seabird species are experiencing population declines[4], underlining the failures of current management that has resulted in a continued loss of nature at sea.

1. BirdLife defines strictly protected areas as those that align with IUCN protected area categories Ia and Ib. See BirdLife's Position Paper EU Targets for Protected Areas and Restoration at Sea
2. Sixth Assessment Report, IPPC. https://www.ipcc.ch/assessment-report/ar6/
3. IPBES (2019) Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. https://doi.org/10.5281/zenodo.3553579
4. BirdLife International (2022) European Red List of Birds 2021. Luxembourg: Publications Office of the European Union. http://datazone.birdlife.org/info/euroredlist2021

Offshore wind and net zero

Offshore wind is a low cost, proven technology that has a vital role to play in the renewable energy transition and enabling us to reach net zero by 2050[5]. In response to geopolitical instability that is threatening energy security and contributing to the current cost-of-living crisis there is political momentum for accelerating the permitting and rollout of offshore wind.

Coastal states across Europe have ambitions to significantly increase offshore wind energy generation capacity over the coming decades which will require **continuous construction, maintenance, and repowering or decommissioning of offshore wind infrastructure for at least the next three decades**, accompanied by the development of the necessary coastal, port and grid infrastructure.

Impacts of offshore wind on birds

If placed in poorly chosen areas, offshore wind farms can have significant negative impacts on marine species and habitats, with seabirds being particularly sensitive. Offshore wind farms can impact birds during construction and operation, contributing to increased adult mortality and reduced breeding success, in addition to impacting other marine species and habitats. Impacts on birds include:

- **Collision:** birds flying at turbine height are at risk of hitting the blades.
- **Displacement:** some species avoid areas around turbines resulting in a loss of habitat (e.g., foraging areas)[6].
- **Barrier effect:** wind turbines interfere with birds preferred feeding and migration routes with implications for individual energy expenditure.
- **Disturbance:** the construction and maintenance of offshore wind farms (e.g., by vessels[7] [8], helicopters[9] etc.) can temporarily displace birds or alter their behaviour.

Other effects may impact birds indirectly such as the alteration of hydrodynamics leading to large-scale changes in the ecosystem. The possibility of wind farms becoming ecological traps for seabirds (i.e., birds attracted by a higher availability of food and facing an increased risk of collision) requires further investigation through appropriate long-term monitoring.

Fragmented approaches to cabling (i.e., point to point connections and individual landfall for each wind farm rather than strategic offshore transmission networks) increases overall pressure on marine ecosystems as well as social impacts on coastal communities[10].

5. https://unfccc.int/sites/default/files/english_paris_agreement.pdf
6. Displacement effects can be significant at distances of >9 km from offshore wind farms for some species. See Peschko et. al. (2020) Effects of offshore windfarms on seabird abundance: Strong effects in spring and in the breeding season. https://doi.org/10.1016/j.marenvres.2020.105157
7. Mendel, B et. al. (2019) Operational offshore wind farms and associated ship traffic cause profound changes in distribution patterns of Loons (Gavia spp.), Journal of Environmental Management, Volume 231, Pages 429-438. https://doi.org/10.1016/j.jenvman.2018.10.053
8. Fliessbach, K. et. al. (2019) A Ship Traffic Disturbance Vulnerability Index for Northwest European Seabirds as a Tool for Marine Spatial Planning. Frontiers in Marine Science. https://doi.org/10.3389/fmars.2019.00192
9. Austin, J.E. et. al. (2000) Declining scaup populations: Issues, hypotheses, and research needs. Wildlife Society Bulletin 28: 254-263. https://www.jstor.org/stable/4617308
10. Glasson, J., Durning, B., Olorundami, T. & Welch, K. (2020) Guidance on assessing the socio-economic impacts of offshore wind farms (OWFs). https://doi.org/10.24384/ax1s-jr48

Nature Positive

Nature Positive[11] **is a call to action for governments to not only halt the current trend of biodiversity loss, but to reverse this trend** by increasing the health, abundance, diversity and resilience of species, populations and ecosystems so that by 2030 nature is on the path of recovery, and is fully recovered by 2050 so that thriving ecosystems and nature-based solutions[12] continue to support future generations, the diversity of life and play a critical role in halting runaway climate change.

Figure 1: The trajectory needed to achieve Nature Positive by 2030 (source: www.naturepositive.org)

Nature Positive is an existing concept, already being used by governments and industry, that can provide a guiding path for the expansion of offshore wind and other offshore renewables.

BirdLife defines a Nature Positive energy transition at sea as:

Industry and government-led action that goes above and beyond halting nature loss and is delivered at scale to restore thriving and resilient seas in tandem with the expansion of renewable energy at sea, ensuring a just transition of other marine sectors.

For seabirds, and other marine species, Nature Positive implies reaching healthy populations (e.g., at Favourable Conservation Status as per the EU Habitats Directive) as a minimum threshold, with restoration and enhancement measures to support full recovery.

11. Nature Positive. A Global Goal for Nature. www.naturepositive.org
12. Nature Based Solutions to Climate Change. https://nbsguidelines.info/

Delivering a Nature Positive energy transition at sea

The energy transition at sea is an opportunity to address persistent shortcomings in the management of human activities at sea through a strategic, coordinated, and holistic approach, at both country and sea basin level, that embeds ambitious action and investment to protect and restore nature across all sectors.

The offshore wind sector is a relatively new player operating in already busy seas. Its expansion will add to existing pressures from other human activities and marine industries on already degraded marine ecosystems and species' populations, with the pace and scale of development representing a serious risk to nature at sea. **Thus, a considerable reduction of existing pressures is a prerequisite to achieve healthy seas and enable the necessary expansion of offshore wind.**

Measures to avoid, reduce, and then make good any residual harm from renewable energy developments are absolutely vital, and indeed legal requirements, to achieve no-net loss of marine biodiversity (nature protection), and **must be accompanied by larger-scale measures to improve and recover nature following a whole ecosystem approach that addresses all pressures in a comprehensive way** (nature restoration and enhancement). This is particularly relevant for birds due to the impossibility to fully avoid or mitigate impacts from offshore wind developments, and the challenge to identify and implement ecologically meaningful compensation measures at the project level.

Whilst delivering a Nature Positive energy transition may require new policies, strategies or regulations, these must remain strictly within current legal frameworks for nature protection (i.e., compliant with the Birds and Habitats Directives for EU Member States); **any legal deregulation is unacceptable.**

Black-legged kittiwake (*Rissa tridactyla*) ©sg-naturephoto

Nature protection

Mitigation hierarchy

The mitigation hierarchy establishes clear principles for addressing impacts from developments, with a focus on avoiding adverse impacts altogether (especially on the integrity of protected sites), and only where this is not possible requiring measures to mitigate or compensate for those impacts.

> **Avoidance**: options that avoid harm to ecological features (e.g., an alternative site or an alternative layout/design for an offshore wind farm).
>
> **Mitigation:** minimise potential negative effects (e.g., through design by raising the turbine blade height).
>
> **Compensation:** where there are residual negative ecological effects despite avoidance and mitigation, as a last resort appropriate compensatory measures must be provided.

Strategic evidence-based planning

Negative impacts from offshore wind developments must be avoided to the greatest extent possible by siting them where they will cause least harm. A robust and strategic ecological evidence base complemented by decision-supporting tools, including sensitivity mapping, must inform the identification of these areas. **The availability of areas where harm from offshore wind is low will determine the spatial extent of development possible**. International cooperation is essential to maximise the efficiency of the expansion of offshore wind and associated infrastructure.

The expansion of offshore wind must be informed by strategic government-led spatial planning that coordinates the delivery of offshore wind targets all the way to 2050 and includes a frontloaded approach to assessing and managing the ecological impacts at scale covering all aspects of development, associated infrastructure, and other marine activities. **Development should proceed initially in areas where there is strongest evidence and highest confidence that negative impacts on nature will be minimised**.

The **standardisation, coordination, and open sharing of data and impact assessments** related to renewable energy developments can contribute to improving our understanding of the ecological processes linked to developments and inform and improve strategic spatial planning.

Sufficient space should be allocated for the protection and restoration of nature within an ecologically coherent network of marine protected areas (MPAs) that is effectively protected from harmful activities. These areas and the connectivity between them, including bird migration corridors, must form the backbone of marine spatial plans. **Protected areas, together with a suitable buffer zone, are generally highly sensitive and therefore very unlikely to be suitable for any development**, and should, for precautionary avoidance and legal certainty, be excluded as much as possible from any offshore renewable energy development and related electricity grid network infrastructure.

The spatial planning of offshore wind expansion must account for environmental impacts resulting from the displacement of other marine activities (e.g., fishing). Understanding how offshore renewables and other human uses and activities can and cannot share marine space (e.g., the types of fishing, including the gear types, that can operate within offshore wind farms) is vital to provide clarity and certainty for all marine stakeholders and decision makers. Co-location should be promoted in order to relieve pressure in highly sensitive areas outside wind farms, but must not undermine compensation measures. Fishing within wind farms must be exclusively accessible to sustainable, well-monitored, best-practice fisheries and subject to a site-specific permit. Optimising sea space for nature recovery and climate mitigation is vital for sustainable fisheries and must be at the forefront of co-location decisions.

Minimising harm

Environment impact assessments that fully identify the cumulative impacts of multiple offshore wind developments must be undertaken at both the strategic and project level to inform measures to firstly avoid, and then mitigate impacts from offshore wind expansion.

The use of effective mitigation measures should become common practice through the adoption of meaningful and robust industry standards and policy. Industry should be encouraged to innovate and develop new mitigation measures through the establishment of adequate legal frameworks by governments.

All wind farms should be required to minimise impacts on birds by using mitigation measures to decrease the attraction and/or increase avoidance of turbines and implementing mandatory turbine curtailment during migration events and during weather conditions that increase the risk of collision.

Compensation

Measures to compensate for residual impacts are only acceptable once all measures have been taken to avoid and mitigate impacts. Developments that require compensatory measures should only proceed by derogation and in exceptional circumstances where properly justified[13]. The most appropriate measure(s) will depend on the species affected and the type and extent of the impact, however, they must be ecologically meaningful, addressing the factors limiting recovery.

There is a move towards larger-scale strategic measures that address cumulative losses at a plan or regional level encompassing multiple developments. This approach could allow for action for nature at a more ecologically relevant scale, but it must complement and not weaken existing legal requirements for individual developments to avoid, minimise and make good impacts as far as possible. Its success will require a clear understanding and application of measures that address the ecological needs of impacted species, habitats, and ensure the integrity of protected sites.

Monitoring programmes must be implemented to better understand the impacts of wind farms, assess the effectiveness of implemented mitigation and compensation measures, and inform robust adaptive management. This is particularly relevant where population-level impacts of compensation measures may only become apparent after several years. The results of any monitoring should be made accessible to interested parties (e.g., NGOs, research organisations) in a usable format.

13. Namely the plan or project being needed for imperative reasons of overriding importance and there being no less damaging alternative solutions to meet that need.

Nature restoration and enhancement

The reduction and removal of key pressures on marine ecosystems in order to boost the recovery and resilience of our seas are essential and must happen concurrently and with equal ambition to the planning and rollout of offshore wind.

Whilst many pressures contribute to the current poor state of the sea, fishing is one of the most significant[14]. **A Nature Positive approach requires that the level and spatial extent of fisheries is managed to ensure the achievement of good environmental status of the sea, and that the impacts of all fisheries on marine habitats and species are minimised.**

Achieving a net positive impact on nature from measures to address losses from renewable energy developments can support the ambition for Nature Positive, however, by itself it is insufficient as the focus is on delivering benefits for the species and habitats impacted by developments and not on ensuring wider protection and restoration of nature.

Nature inclusive design of wind farms can benefit some species and habitats and should be promoted through the use of non-price ecological criteria in offshore wind tenders; however, it will not directly benefit nature that is displaced from offshore wind farm sites.

As such a **Nature Positive approach cannot be delivered at the level of individual wind farms or through action focused solely inside wind farms, hence the need for larger scale strategic measures**. Any nature gains in wind farms in relation to the status quo (e.g., resulting from the exclusion of damaging activities such as bottom trawling) must be considered in the context of nature losses resulting from offshore wind development and by themselves are not consistent with a Nature Positive approach.

Nature Positive strategic interventions

Marine spatial planning

Strategic and holistic marine spatial planning (including all current and future uses) that places the protection and restoration of healthy seas at its core, follows an **ecosystem-based approach[15],** and is coordinated at the sea basin level is vital. In already busy seas, resolutions to interactions and competition for space between different marine sectors are essential **to provide clarity for all marine sectors and users and enable accelerated development of marine renewables.** Decisions about which pressures and activities continue, cease, and expand, including which can co-exist will be necessary to inform a just transition.

14. EEA Report 17/2019: Marine messages II, Figure 4.1. https://www.eea.europa.eu/publications/marine-messages-2/download
15. Are EU Member State's Maritime Spatial Plans Fit for Nature and Climate? Technical Report – Approach and Main Findings https://www.birdlife.org/wp-content/uploads/2022/06/Birdlife-Maritime-Spatial-Plan-Technical-report_web.pdf

Fisheries

A **just and fair transition to low-impact and low-carbon fisheries is needed alongside an overall reduction of fishing pressure** (e.g., by developing and supporting alternative livelihood opportunities for coastal communities). This requires, in particular, **phasing out the most impactful and non-selective fishing methods (e.g., bottom towed gears), urgently implementing bycatch mitigation measures** (e.g., fishing gear modifications) to minimise and where possible eliminate direct mortality of seabirds and other marine species, **applying fisheries restrictions**, and **establishing closed areas/no-take zones** covering the most sensitive areas for biodiversity.

Important areas (e.g., spawning sites and nursery grounds) for forage fish—an important food source for marine predators including seabirds—must be protected, and **fishing pressure reduced through the closure of fisheries and the setting of quotas that are truly precautionary and fully account for climate and environmental factors**, including the needs of marine predators.

Increasing the transparency and management of fisheries through the use of Remote Electronic Monitoring (REM) on fishing vessels can play a key role by improving compliance with existing obligations, providing vital data to inform stock assessments and catch quotas, understand the bycatch of sensitive species and other impacts, and assess the effectiveness of management and mitigation measures.

Marine protected areas

A **complete and ecologically coherent network of legally binding MPAs covering at least 30% of the sea**, which includes the best areas for seabirds, and that is properly protected by excluding destructive and damaging activities is needed to allow the recovery of marine species and habitats. **At least 1/3 of MPA networks (i.e., at least 10% of the sea area) should be strictly protected areas where all extractive activities are prohibited** creating conditions that allow passive restoration of these areas through natural processes.

Robust and systematic monitoring and reporting is needed to track the state of species and habitats, support enforcement and assess the effectiveness of protection measures, and inform adaptive management.

Predator invasive non-native species

The **eradication or control of predator invasive non-native species** on seabird islands and around seabird colonies can drastically increase juvenile survival and drive recovery of seabird populations, whilst robust biosecurity measures are needed to minimise the risk of reintroduction.

Active restoration

Measures to **actively restore and re-establish marine habitats** are key to recovering marine biodiversity and halting further degradation of marine ecosystems. Efforts should **focus on habitats where restoration is needed to achieve good conservation status or where the lack of suitable habitat is a limiting factor for population recovery** and the achievement of favourable conservation status of marine species (e.g., the creation of nests, feeding, and roosting habitats is relevant only where these are limiting factors for populations).

Restoration efforts should be targeted outside of offshore wind farms, at an ecologically relevant scale; however, interventions within wind farms can be beneficial for certain species and habitats, in particular underwater.

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