



## **Environmental Co-Existence for Sustainable Offshore Wind Deployment in The Black Sea**

### *Joint Statement*

Ensuring environmental conservation with offshore wind project development is a critical challenge for European offshore wind markets. According to the latest Action Plan for Grids, the EU aims to increase its installed capacity for offshore wind up to 317 GW by 2050. The Black Sea has been identified as one of the five key basins for deploying the future planned capacities. In parallel, the EU Biodiversity Strategy set up a target of reaching 30% of protected maritime areas of EU seas by 2030, which is more than double the current ~ 12%. Thus, the sustainable integration of the new offshore infrastructure would be crucial for the preservation of its fragile marine environment.

[The Black Sea Renewable Energy Coalition \(BSREC\)](#) has united behind a common vision for the effective implementation of offshore wind energy projects that respect environmental co-existence:

### *Regulatory frameworks for environmental co-existence*

The adopted Recovery and Resilience Plans (NRRPs) include reforms aiming at improving the regulatory regime for offshore wind deployment:

- National governments should plan and adopt effective offshore wind laws, which are followed by an expert assessment to identify the most viable sites for offshore wind development with the least environmental impact and no overlap with marine protected and other sensitive areas.
- Black Sea countries must develop national Maritime Spatial Plans (MSPs) in line with the Maritime Spatial Planning Directive (MSPD), which defines the possible uses of their marine space following an environmental system-based approach, aiming to preserve maritime activities within levels compatible with the achievement of Good Environmental Status (GES) of the sea.
- We encourage Governments to set up ambitious installation targets for offshore wind capacities, plan and adopt an effective offshore wind law that is in parallel accompanied and prepared by an expert study to identify the best areas for offshore wind development where the environmental impact is minimal, and set up the corresponding maritime spatial planning, to align the different uses of the Sea.

- Governments should also review their current maritime spatial plans to better integrate the requirements of the revised Renewable Energy Directive (RED III) and environmental legislation (including the Nature Restoration Law, the Bird and Habitats Directive, among others), aiming to reduce the overall pressure of human activities on nature:
  - The plans are based on holistic environmental system-based planning with the application of the best available data, tools, knowledge and practices.
  - The plans are developed based on transparent consultation processes and fair stakeholder engagement. Offshore wind and grid projects need to be accompanied by the meaningful involvement of coastal communities.
  - The plans envision the inclusion of criteria to ensure that offshore wind projects contribute positively to coastal communities.

Achieving the 2050 offshore wind energy target requires certainty on spatial allocation, improved permitting processes (e.g., one-stop shops and sufficient national capacity), expanded investment in electricity grid infrastructure, supply chains, and research and innovation. To ensure that co-existence issues are not in the way of offshore wind investment, governments could also make use of ecological and social non-price criteria for the design of offshore wind farm auctions, in line with the recent guidance of the European Commission for the reform of the auction design for new renewable energy projects. This will boost the competitiveness of the EU industry while providing value for society and nature, among others.

### *Mitigating the noise, light and vibration impact*

The process of deploying offshore wind energy parks in the Black Sea has the potential to disturb the habitats of marine species living in or around the designated areas. Among the most vulnerable are the benthic species, phytoplankton, fish, marine mammals, turtles, birds, and bats. The risk assessment should always be case-specific to take into consideration the technology used, the scale and location of projects, and the temporal dimension of impacts, such as migration and spawning seasons.

The [Offshore Coalition for Energy and Nature \(OCEaN\)](#) has developed a [comprehensive collection of mitigation measures](#) that help developers and authorities mitigate the environmental impacts of offshore wind development:

- **Risk of collision mortality for birds and bats:**
  - *Siting*: avoid migration flyways or areas used frequently by bats and birds when siting; avoid spawning and nursery habitats and species-rich habitats. For benthos, define exclusion zones for anchoring.
  - *Vision-based collision*: consider applying achromatic patterns to the blades to enhance the detectability of turbines, painting blades in black, and using UV colours.
  - *Sensitivity mapping*: careful siting to avoid valuable areas for sensitive seabird species (e.g. near seabird breeding colonies).
  - *Shutdown on demand*: curtailment using camera or radar technology to set the time of halting the rotation of the blade (e.g. at a specific time of the day).
- **Displacement due to disturbance and injury**

- *Safe equipment*: use least-intrusive equipment during geophysical surveys and perform it outside the sensitive periods for threatened species.
- *Light design options*: for marine mammals and sea turtles, use adaptive light controls to manage light timing/intensity/colour, as well as use the lowest light intensity possible and ultraviolet wavelengths; lighten only the object or area intended.
- **Barrier effects**
  - *Adjustment of piling energy (soft start)*: gradual increase of the piling energy so that noise-sensitive animals can leave areas.
  - *Establish mandatory noise threshold values and, where possible, schedule construction and operations above the threshold according to relevant species' seasonal patterns.*
  - *Layout design*: arranging turbines in clusters since birds are more likely to avoid a group of turbines than a single row; flight paths of migrating birds should be taken into consideration.

### *Mitigating environmental risks*

While nature-inclusive designs offer significant benefits, they also come with potential risks. The attraction of invasive species to hard substrates, for example, can disrupt local ecosystems. Therefore, careful planning and pilot tests are necessary to understand and mitigate these risks effectively. The integration of nature-based solutions should be thoroughly assessed during the conception phase and included in the environmental impact assessment (EIA) to ensure that they contribute positively to biodiversity conservation without unintended negative consequences.

Deployment of offshore wind farms falls under the scope of the EIA Directive and the Strategic Environmental Assessment (SEA) Directive, encompassing the construction, operation and decommissioning phases, and ensuring the GES described by the European Marine Strategy Framework Directive (2008/56/EC).

- The governments in the Black Sea region should conduct SEA assessments based on sensitivity maps before each seabed concession auction, along with maintaining the requirement that developers then also plan and implement a separate site-specific EIA for their proposed offshore wind project.
- Black Sea countries should also increase the level of transparency, fairness and rigorousness of the SEAs and EIAs, including by pro-actively engaging the environmental authorities and environmental civil society organisations in a policy co-creation format that will ensure maximum inclusiveness of the decisions.
- Where SEA and EIA assessments are not obligatory (i.e., acceleration areas), governments should ensure that the designation of acceleration areas is sound and well-established.
- The governments in the Black Sea region should establish appropriate rules for the renewables acceleration areas on effective mitigation measures to be adopted for the installation of renewable energy plants and co-located energy storage, in accordance with the RED III.
- National authorities should also invest in cross-border, long-term research and monitoring programs that would help in the continuous improvement of the current offshore wind-

related environmental practices. As the Black Sea offshore wind sector is still emerging, additional research will be key to understanding co-existence patterns between nature and infrastructure development.

Adherence to these recommendations is crucial for navigating the regulatory, spatial, infrastructure, and environmental challenges related to the development of the offshore wind energy industry. By fostering inclusive stakeholder engagement, leveraging international cooperation, and embracing technological innovation, regional governments can accelerate their energy transition in line with the long-term EU climate policy objectives, and foster a new impetus for sustainable economic development.

*The **Black Sea Renewable Energy Coalition (BSREC)** is committed to advancing sustainable offshore wind energy development in the Black Sea region. The coalition seeks to promote comprehensive planning that balances environmental protection with global climate goals, ensuring that marine renewable energy growth contributes to a healthier planet. The Coalition aims to align the varied interests of project developers, infrastructure operators, environmental organisations, the tourism sector, and other stakeholders, fostering collaboration to proactively address the challenges and opportunities before the expansion of offshore wind energy.*

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