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PelAC reference: 2425PAC22

Subject: Impact of Offshore Renewable Deployment on Marine Ecosystems

Dear Ms. Charlina Vitcheva,

On the 20th of November 2023, the third revision of the Renewable Energy Directive (RED) entered into force. In addition to increasing renewable energy target to at least 42.5% by 2030 (up to 45%) , the Directive aims to expediate the deployment of renewables with the designation of Renewables Acceleration Areas (RAA). These RAAs will allow for accelerated processes with streamlined permit-granting procedures on the basis that Renewable energy operations are not expected to have a significant environmental impact on the areas in which they are being deployed.

In July 2024, the Commission published a study on the designation of RAAs for onshore and offshore wind and solar photovoltaic energy. Despite the title of the study, it does not list the main environmental impacts of onshore wind or Offshore Renewable Energy deployment.

As the deployment of ORE is in its infancy, the impacts are only starting to be better understood as projects are carried out by European scientific institutes. The lack of knowledge on the cumulative impacts of ORE development was underlined in a report published by the European Court of Auditors in 2023.

In the Netherlands, an integrated research programme, Wozep (the Wind Op Zee Ecologisch Programma), aims to reduce the knowledge gaps regarding the possible negative environmental effects of offshore wind farms (OWFs) in the North Sea. The latest report underlines the impacts such as:

- the alteration of physical processes, such as water column stratification and sediment dynamics.
- Disruption of natural water mixing, affecting nutrient distribution and primary production, which cascades through the marine food web.





The PELAC is aware of similar studies being carried out in other countries.

The example of the central southern North Sea shows that increased mixing of sediments due to turbine structures could enhance nutrient availability, boost phytoplankton growth, while in other areas, the elevated sediment concentration could reduce light penetration and inhibit algae growth. These changes can influence the abundance and distribution of marine life.

The coordinated use of ORE and marine protection are often brought forward as complementary activities. By limiting the access of fishers to the area, marine biodiversity is expected to increase. This line of thought is, to a certain extent, captured in the concept of Other Effective area-based Conservation Measures. A recent report published by the Research institute of the European Parliament stresses that the deployment of ORE can *modify the local ecosystems, their structure and functioning, and their trophic structure, and can favour the spread of non-native, often invasive species* (Metz and Claudet (2023)).

For several years, the International Council for the Exploration of the Sea has been providing non-fisheries conservation considerations for stocks that are highly affected by other anthropogenic pressures than fishing (ICES. 2024a.). For all herring stocks, *“ICES advises that no activities on spawning habitats should be allowed unless the effects of these activities have been assessed and shown not to be detrimental”* (ICES. 2024b). The PelAC has already identified the need to preserve spawning habitats from seismic impacts in 2019 and had requested the setting up of a dedicated working group (PelAC, 2019).

ICES provides high-quality scientific advice on fisheries-related matters for the European Commission, Norway, the UK, and NEAFC. This advice represents the best available science used by decision-makers and managers to set sustainable fishing opportunities. Despite ICES's key role as a science provider on marine environment issues, the extent of its expertise remains underutilised by other blue economy sectors. It is essential for all blue economy sectors, European Commission personnel, and national authorities of Member States to acknowledge ICES's expertise.

Considering the previously highlighted impacts, we believe that the development of Offshore Renewable Energy (ORE) in or near spawning habitats is detrimental and contradicts ICES' advice on non-fisheries conservation considerations. Refusing to go with ICES advice on non-fisheries conservation considerations go against the principles of good governance set under article 3 of the Common fisheries Policy. Not including ICES advice is also contrary to the Better Regulation guidelines requiring the use of best available science in EU legislation¹

The PelAC is also of the opinion that the setting of targets for renewable energy deployment, along with the development of RAAs fails to address the impacts of ORE development and safeguard spawning habitats of key pelagic species.

¹ https://commission.europa.eu/document/download/d0bbd77f-bee5-4ee5-b5c4-6110c7605476_en?filename=swd2021_305_en.pdf





An example of the pressure put by RED targets on the designation of areas is visible in Ireland with the implementation of the South Coast Designated Maritime Area Plan (SC-DMAP). The SC-DMAP aims at designating areas suitable for potential ORE development. In parallel, the Irish government is developing its Marine Protected Areas Bill to reach the target of 30% Marine Protected Areas coverage nationally by 2030. To ensure best protection and coordination between both initiatives, the Irish government has carried out an Ecological Sensitivity Analysis (ESA) to inform the designation of potential ORE sites going forward.

The study identified a list of features including species listed under IUCN Red List, and broad benthic habitats under the MSFD. Data used for sectoral activities includes fishing, shipping and ORE to help identify how sensitive each of the features is to the different potential stressors. From this a prioritization is created, i.e., environmental data is layered to create a heat map of where sensitive areas are, and then a layer including sectoral activities is included to try and create a network of potential MPAs. This provides the percentage protection aimed for whilst minimising overlap with sectoral activities including fisheries, marine transport and marine recreational activities.

The ESA report (**Marine Protected Area Advisory Group (2024)**), underlines in section 3.5.3.1 that the results of the generation of conservation network varied when the ORE designated areas were included as hard constraints. This is a particular approach considering that the ORE areas have not been installed. The ESA is considering ORE areas as hard constraints despite them not being installed yet. Considering the differences between including ORE areas and excluding them, ORE have been set up on areas of importance from a biological standpoint. This approach is contrary to the precautionary approach considering the unknown impacts of ORE deployment.

The report also includes maps of key fish species spawning habitats and their overlap with ORE designated areas. Figure 3.5.7 highlights the overlap between herring spawning habitats and SC-DMAP designated area, contrary to ICES's non-fisheries conservation considerations that advise that spawning habitats be exempt from all anthropogenic pressures.

A second example emphasising the possible environmental impact of ORE deployment relate to the lack of environmental impact assessments completed prior to sites being designated. In 2023, the Danish Energy Agency published the conclusions of the Attorney General's investigation into the Danish Energy Agency's implementation of Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment. The conclusions highlight that, for 34 years, the Danish Energy Agency has made mistakes in its environmental assessments of oil and gas projects in the North and Baltic Seas². Leading experts in energy and environmental have expressed concerns that Danish ORE deployment could similarly be supported by the lack of robust environmental assessments³, meaning that wind parks could have already been deployed on areas of importance from a biological standpoint.

² Conclusions from the Attorney General: <https://ens.dk/presse/kammeradvokaten-har-faerdiggjort-undersoegelse-af-energistyrelsens-vvm-praksis-godkendelser>

³ https://www.altinget.dk/artikel/det-danske-vindmoelleeventyr-kan-vaere-foregaaet-i-strid-med-centrale-miljoeregler?utm_medium=email&_hsmi=304761071&utm_content=304761071&utm_source=hs_email





Regarding the impacts of ORE deployment, the PelAC agrees that the socio-economic impacts of ORE deployment alongside a baseline analysis for all projects measuring the impact over the full life cycle of the project must be carried out prior to deployment.

In conclusion, considering the high priority put by the Commission and the Member States on the deployment of Offshore Renewable Energy with the objective of providing 42.5% of EU energy consumption (23% in 2022⁴), there is a need to better understand the impacts of ORE on sensitive habitats from their deployment. The designation of ORE areas must be improved to ensure that it takes account of socio-economic impacts. A focus must be on the establishment of independent and robust science baseline data as part of a Sustainability Impact Assessment - and to ensure an ongoing monitoring and evaluation of the impacts on biodiversity on a continuous basis for the full life cycle of projects. The process must comply fully with the EU's nature conservation directives. An important step to achieve this is excluding within Natura 2000 sites or other MPAs from delineated or targeted ORE areas but also considering the protection of critical habitats and spawning areas for certain species. The leading principle of designation should be the precautionary approach. Thus, we request that designated and industry-led ORE areas avoid known spawning areas for herring, as well as other known essential habitats for pelagic species.

We thank you in advance for your prompt attention to this matter. We would welcome the opportunity to discuss it further with your services in a meeting, along with other relevant issues raised by the PelAC. We will reach out to DGMARE services to schedule a convenient time for this discussion.

Kind regards,

Esben Sverdrup-Jensen
Chair of the Pelagic Advisory Council

⁴ <https://www.eea.europa.eu/en/analysis/indicators/share-of-energy-consumption-from>





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