Ms Charlina Vitcheva
Director-General for Maritime Affairs and Fisheries
European Commission
Rue Josef II 99
1000 Brussels
Belgium

Cc: North Sea Member States

NSAC Advice Ref. 06-2526
NSAC Advice on data sharing guidelines of spatial restrictions data through onboard navigation systems

This paper was approved with consensus by the NSAC Executive Committee on 7 April 2026 via written procedure.

Executive Summary

- Fishers face significant challenges in navigating multiple and overlapping spatial designations, ensuring compliance with applicable rules, and accessing accurate, consolidated, and up-to-date information on fisheries restrictions.
- A lack of interoperability between different onboard plotter systems used by fishers, and between these systems and those used by authorities, further complicates compliance.
- The process for sharing MPA coordinates and other spatial restriction data with fishers must be standardized, ensuring the provision of accurate, up-to-date information in formats compatible with onboard navigation systems.
- Clear rules are needed to define how spatial data are shared and to clarify institutional responsibility for their provision and maintenance.
- Fishers would benefit from centralized platforms that clearly display all fisheries restrictions applicable within each sea basin. NSAC invites the European Commission to consider developing a centralized EU-wide platform enabling fishers to access authoritative and timely information on fisheries restrictions, supporting improved awareness, fisheries management, and sustainable fishing practices.
- An EU-wide standardized digital mapping system, compatible across multiple navigation platforms, would deliver broad benefits to the fisheries sector, support generational renewal, contribute to nature conservation objectives, advance EU simplification goals, and enhance compliance with EU legislation.

1 Background

The North Sea is one of the world's most intensively used marine areas. As a semi-enclosed basin bordered by seven EU Member States as well as the United Kingdom and Norway, it hosts a wide range of competing maritime activities, including fishing, aquaculture, shipping, renewable energy, and nature conservation, within an area of approximately 750,000 km².

Based on the OSPAR 2024 Quality Status Report, OSPAR MPAs cover approximately 22% of the Greater North Sea[1]. If considering MPAs designated under Natura 2000 alongside those designated by EU Member States through other mechanisms (as recorded in the Common Database on Designated Areas, CDDA), fisheries management measures vary considerably. Within the Greater North Sea, 71 MPAs (38%) have no fisheries restrictions in place, 61 MPAs are subject to spatially explicit restrictions, 9 MPAs are subject to spatio-temporal restrictions, 14 MPAs are classified as having effort restrictions, and for 31 MPAs the applicable restrictions are classified as unknown[2]. It should be noted that no single, consolidated source currently provides an overview of the number, spatial extent, and regulatory status of MPAs in the North Sea.

Looking ahead, the EU Biodiversity Strategy for 2030 sets a target of protecting 30% of EU sea areas, with one third of these areas under strict protection. Consequently, the number of protected areas and associated fisheries restrictions is expected to increase in the coming years.

The NSAC has actively contributed to discussions on marine spatial planning (MSP) for several years, particularly with focus on stakeholder engagement. This includes a dedicated advice on MSP[3] published in 2023, as well as a more specific paper on the mapping of important fishing grounds[4] in 2025. In July 2025, the NSAC also organised a dedicated workshop to provide an update on the state of play of MSP in the North Sea (report here). Within MSP, nature protection plays a central role. Given the high number and density of MPAs in the North Sea basin, a recent NSAC meeting highlighted practical challenges faced by fishers in navigating overlapping spatial designations, ensuring compliance with applicable rules, and accessing accurate, consolidated and up-to-date information on restrictions.

This advice expands on the issue that fishers and fishery representatives experience with obtaining and sharing data on fisheries restrictions and provides practical recommendations on how these challenges could be addressed.

2. The issue

Under the current system, ensuring that fishing activities do not take place within restricted areas is challenging, primarily due to inadequate connectivity and data sharing. In Denmark, when a new MPA is established or the boundaries of an existing MPA are modified, for the past 10-15 years fishers have typically been provided with a paper document containing coordinates of closed areas. These coordinates are often supplied in formats that are incompatible with the onboard navigation systems, requiring manual conversion before use.

[1] https://oap.ospar.org/en/versions/3522-en-1-0-0-mpa-status-2024/#:~:text=In%202024%2C%20Denmark%20(7),the%20OSPAR%20Network%20of%20MPAs.
[2] https://cinea.ec.europa.eu/document/download/73dfff72-1530-4d8c-8f9e-14af0b57c53a_en?filename=Report_mapping%20of%20marine%20protected%20areas%20and%20their%20associated-HZ0125007ENN.pdf
[3] https://www.nsrac.org/wp-content/uploads/2023/08/12-2223-NSAC-Advice-on-MSP-and-stakeholder-engagement.pdf
[4] https://www.nsrac.org/wp-content/uploads/2025/05/13-2425_NSAC_Advice_on_Mapping-Fishing-Grounds.pdf

As a result, fishers must manually enter the data into their plotter systems, in some cases inputting up to 200 individual coordinates, a process which makes achieving complete accuracy nearly impossible.

The absence of officially provided digital map layers from the competent authorities further complicates compliance, with fishers risking fines of up to 20,000 EUR if coordinates are entered incorrectly leading to non-compliance. Despite long-standing efforts by the sector to develop a workable digital solution in cooperation with the authorities, no fully functional and reliable system has yet been implemented.

While the relevant agency may, in some cases, distribute digital map files that can be uploaded as layers into navigation systems, there is no formal obligation for the agency to do so. If the files are not provided, it becomes the responsibility of the fishers to obtain them. Producer organisations are therefore frequently contacted to assist fishers in identifying and understanding closed areas, making this a persistent and practical challenge for the industry. When new fishers enter the sector, they often request help from others to locate and input the correct coordinates for closed areas, frequently relying on online searches to find the necessary information. Intensifying this issue, official authority websites listing closed or restricted areas have not been updated for several years, resulting in the circulation of outdated information. A core issue is maintaining up-to-date data and clarifying who is responsible for updates.

Another challenge is that different fishers use different onboard plotter systems (i.e., Sodena, MaxSea, Penta), which are not interoperable. At the same time, authorities often work in GIS systems, such as ARC GIS or QGIS. These systems do not readily communicate with one another, further complicating data exchange.

The issue is not limited to Danish waters. Danish vessels regularly operate in the waters of neighbouring countries, including Sweden, Germany, and the United Kingdom, where compliance also depends on access to accurate, up-to-date, and harmonised spatial restriction data. Limited cooperation between member states complicates the situation.

Taken together, these technical and operational issues highlight the need for a standardised, coordinated digital mapping system, compatible with multiple navigation platforms, to support compliance across all North Sea fisheries.

3 NSAC Advice

To ensure compliance with existing fishing restrictions, action needs to be taken to formally standardize the process of sharing MPA coordinates with fishers. Fishers should receive correct and up-to-date spatial data, in standardized formats and that are fully compatible with onboard navigation systems.

First, clear and formalized rules guiding how spatial information is shared and who is responsible for its provision and maintenance are required. Competent authorities should ensure that updates are easily accessible, interoperable with commonly used navigation systems, and provided in downloadable formats that minimize the risk of manual input errors. Guidance on system interoperability and information dissemination would substantially improve fisheries management and reduce confusion when new restrictions are introduced.

Considering the process of sharing data, fishers would benefit from access to centralized platforms that clearly display all spatial restrictions present within a given sea basin. While tools exist that map MPAs at national or EU level (i.e., Protected Planet Platform and European Atlas of the Sea), comprehensive and easily accessible mappings of *all* fisheries restrictions by sea basin remain largely unavailable or difficult to retrieve.

A best-practice example of sharing spatial data is the AC FishMap, an online platform commissioned by the North Western Waters Advisory Council to compile environmental and fisheries restrictions. The FishMap allows fishers to easily determine which areas are open to fishing and which maps to use. It also allows users to view and upload multiple spatial data layers, integrating different types of restrictions applicable to specific areas. Fishers in the region have found this tool to be extremely useful in understanding where and how they can operate.

Developing similar platforms for all EU sea basins could significantly improve the visualization of frequently changing closures. Following the NWWAC model, individual Advisory Councils could, in principle, develop similar tools for their respective sea basins. However, this approach is constrained by the limited budgets of ACs, strictly tied to the delivery of their approved work plans and rarely allowing for the development of additional large-scale projects.

To ensure harmonized and equal access to spatial restriction data across all sea basins, NSAC members invite the European Commission to consider developing a centralized EU-wide platform through which both inshore and offshore fishers can access authoritative information on fisheries restrictions at an appropriate level of spatial detail. Rather than relying on fragmented national solutions requiring multiple systems, a single European map could be established using a unified and coherent framework applicable to all EU sea basins and Member States. Ideally, such a platform would be developed by national research institutes and regulators, in cooperation with relevant ACs, particularly with regard to the validation and selection of official coordinates. The system should allow fishers to download coordinates in standardized formats compatible with a wide range of fishing navigation systems. In addition, an automated notification mechanism could be introduced to inform users promptly of new closures or modifications to existing ones, ensuring timely access to updated information. Language accessibility is another critical factor. The system must not be limited to a single working language (e.g. English, French, or Spanish), as this would hinder its practical use by fishers in daily operations. Multilingual functionality is therefore essential, further supporting the need for Commission-led coordination or facilitation.

Members also highlight concerns regarding spatial data produced by private entities, as responsibility for accuracy and liability may be unclear. In cases where incorrect information is provided, fishers may face legal action or financial penalties. It is therefore essential that any information on spatial restrictions be issued and maintained by an official institution or competent authority that can guarantee its accuracy and legal reliability.

An EU-wide standardized digital mapping system, with layers compatible across multiple navigation platforms, would deliver significant benefits to the fisheries sector, including improved compliance, operational clarity, and support for generational renewal. Beyond fisheries, such a project would also contribute to nature conservation objectives, including Global Biodiversity Framework Target 10, and support simplification in line with the Commissioner's 2025 Work Programme, thereby improving regulatory compliance and promoting transition toward more sustainable fishing. Addressing this issue at EU level would

also allow for long-term maintenance, updating, and governance of the platform must be established from the outset.

4 Conclusion

The NSAC wishes to thank the Commission and North Sea Member States for considering our recommendations on data sharing guidelines of spatial restrictions data via onboard navigation systems and remains available for further consultation on this matter.