UPDATE ON REDUCING THE RISK OF SHIP STRIKES OF ENDANGERED SPERM WHALES IN THE HELLENIC TRENCH

Issue: ship strikes in the Hellenic Trench

Background

The ACCOBAMS Secretariat received the document "Update on reducing the risk of ship strikes of endangered sperm whales in the Hellenic Trench" from OceanCare.

This document provides an update about the progress made to mitigate the threat collisions with vessels pose to endangered sperm whales in the Hellenic Trench, a recognized Important Marine Mammal Area (IMMA) for this species. Work undertaken is in line with the ACCOBAMS Resolutions 7.12 and 8.18 and contribute to the Work Programme of the ACCOBAMS Scientific Committee CA 2c, Ship Strikes, "promote the use of mitigation measures

Update on reducing the risk of ship strikes of endangered sperm whales in the Hellenic Trench

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This document provides an update about the progress made to mitigate the threat collisions with vessels pose to endangered sperm whales in the Hellenic Trench, a recognized Important Marine Mammal Area (IMMA) for this species. Work undertaken is in line with the ACCOBAMS Resolutions 7.12 and 8.18 and contribute to the Work Programme of the ACCOBAMS Scientific Committee CA 2c, Ship Strikes, "promote the use of mitigation measures".

Progress So-Far

In 2020, a coalition of four NGO organizations— the International Fund for Animal Welfare (IFAW), OceanCare, the Pelagos Cetacean Research Institute, and WWF Greece—was formed to address the impact of ship strikes on the endangered sperm whale population in the Eastern Mediterranean Sea, especially the Hellenic Trench.

Building on the findings of the IWC-IUCN-ACCOBAMS workshop (Messinia, Greece, 2019), which identified separating whales from vessels as the most effective measure to reduce ship strikes, leading scientists collaborated with navigational experts to develop an alternative "safe route" for a segment of the Hellenic Trench. This route aims to minimize the overlap between shipping traffic and whales' habitat by proposing a westward shift of vessel traffic away from the critical area (see below Figure 1, 2).

Ever since its formation, the NGO coalition has actively engaged with shipping companies to encourage rerouting and worked with shipping associations to raise awareness among their members. As a result, several commercial operators, including MSC, CMA CGM, Hapag-Lloyd, DFDS, Euronav, and Arcadia, along with cruise operators MSC, Royal Caribbean Group and TUI, have implemented rerouting measures. Additionally, shipping associations such as International Chamber of Shipping (ICS), Verband Deutscher Reeder (VDR), Hellenic Chamber of Shipping (HCS), Armateurs de France, have advised their members to adopt these changes. The number of vessels implementing adjusted navigation in support of reducing the risk of collisions is in the hundreds. A proper assessment will be provided in due time.

In support of these efforts, the World Shipping Council (WSC) has published two editions of the "Whale Chart" a comprehensive list of areas where maritime authorities of coastal states have issued recommendations to shipping operators including the Hellenic Trench. This publication serves as a dedicated maritime manual to enhance the protection of marine mammals.

In parallel, and in close collaboration with the Hellenic Chamber of Shipping (HCS), the Greek Ministry of Mercantile Shipping, the Ministry of National Defense, and the Hellenic Hydrographic Office have issued notices to mariners, updating official navigational manuals to highlight the presence of whales in the Hellenic Trench. In 2022, these updates were also incorporated into the British Admiralty Sailing Directions, significantly broadening the reach of this information.

These coordinated actions by the NGO coalition in the Hellenic Trench have successfully reduced the risk of ship strikes by at least 30 %. A proper calculation will be done following the assessment of implementation of routing measures.

Current Work

The coalition monitors shipping traffic by analyzing data from the AIS (Automatic Identification System) to assess the compliance rate of shipping stakeholders with the proposed rerouting measures. Additionally, the coalition continues its outreach efforts to encourage more shipping companies to adopt these measures.

During Our oceans Conference held in Athens April 2024, the Greek Government proclaimed the expansion of Marine Protected areas to cover 30 % of the Greek Territorial waters by 2030 as per Law 5037/2023. To that end Greece plans to establish two additional marine national parks.

THE IONIAN MARINE NATIONAL PARK (from north of Kefallonia to south of Antikythira) with a total area of over 14,000 km2 will be established due to its significance for marine mammals such as Physeter macrocephalus, Ziphius cavirostris and Stenella coeruleoalba

Implementation of the SAvE Whales System

For areas where rerouting is not feasible (see below Figure 3), a collaborative initiative has been established involving the Greek Ministry of Environment and Energy (MEEN), the Natural Environment and Climate Change Agency of Greece (NECCA), and The OceanCare, The Green Tank, along with contributions from the Pelagos Cetacean Research Institute and the Institute of Applied and Computational Mathematics (FORTH). This partnership aims to scale up the “SAvE Whales” (System for the Avoidance of Ship-strikes with Endangered Whales) technology which has been successfully developed and tested during a pilot project between 2019 and 2021 southwest of Crete, Greece. The objective of the project is to implement this system as an official mitigation and warning tool to alert mariners about the presence of sperm whales in the Strait of Kythira to engage in vessel slow down operations.

At the Our Ocean Conference, April 2024, the Greek government committed to the implementation of the system. A Memorandum of Understanding, singed in June 2024, by the Greek Ministry of Environment and Energy, the Natural Environment and Climate Change Agency, OceanCare and The Green Tank provides for the scaling up and the full implementation of the system in the Kythira Strait by 2028.

To be considered by the Scientific Committee

We recommend the Scientific Committee provides support, as appropriate, to the Greek authorities in the design and development of the marine protected area in the Ionian Sea with respect to ship strike mitigation, in alignment with the recommendations of the ACCOBAMS Scientific Committee.

We recommend the Secretariat and the Scientific Committee to strengthen collaboration with the:

International Hydrographic Organization (IHO) and the Hellenic Hydrographic Office to enhance the adoption and compliance of measures aimed at protecting sperm whales in the Hellenic Trench. This cooperation should leverage existing mechanisms in alignment with standard maritime practices. Specifically, it is recommended to:

- Include the Hellenic Trench in all conventional and electronic nautical charts issued by the Hydrographic Authorities, with clear symbols delineating the geographic scope of the whale habitat.
- Incorporate recommendations for rerouting, area avoidance, or reducing vessel speed to 10 knots as the primary effective measures to mitigate the risk of ship strikes to all relevant maritime publications – aids to navigation. At current stage "to maintain sharp lookout" is the recommendation suggested by the Hellenic Notice to mariners issued by the Hellenic Hydrographic Office updating the pilot books (see below Figure 4) which falls short to effectively contribute to a risk reduction of ship strikes.

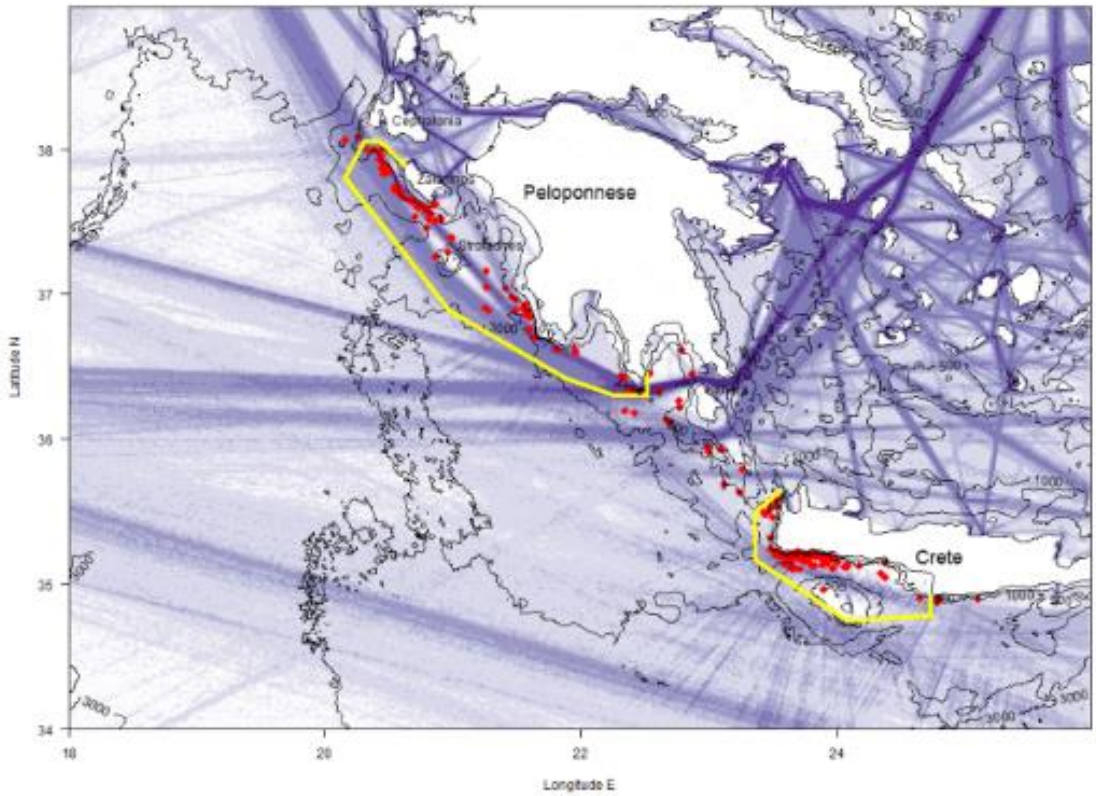

Figure 1. Shipping density (purple shading showing distance travelled in km per km2), sperm whales (red circles) and areas of high risk (yellow)

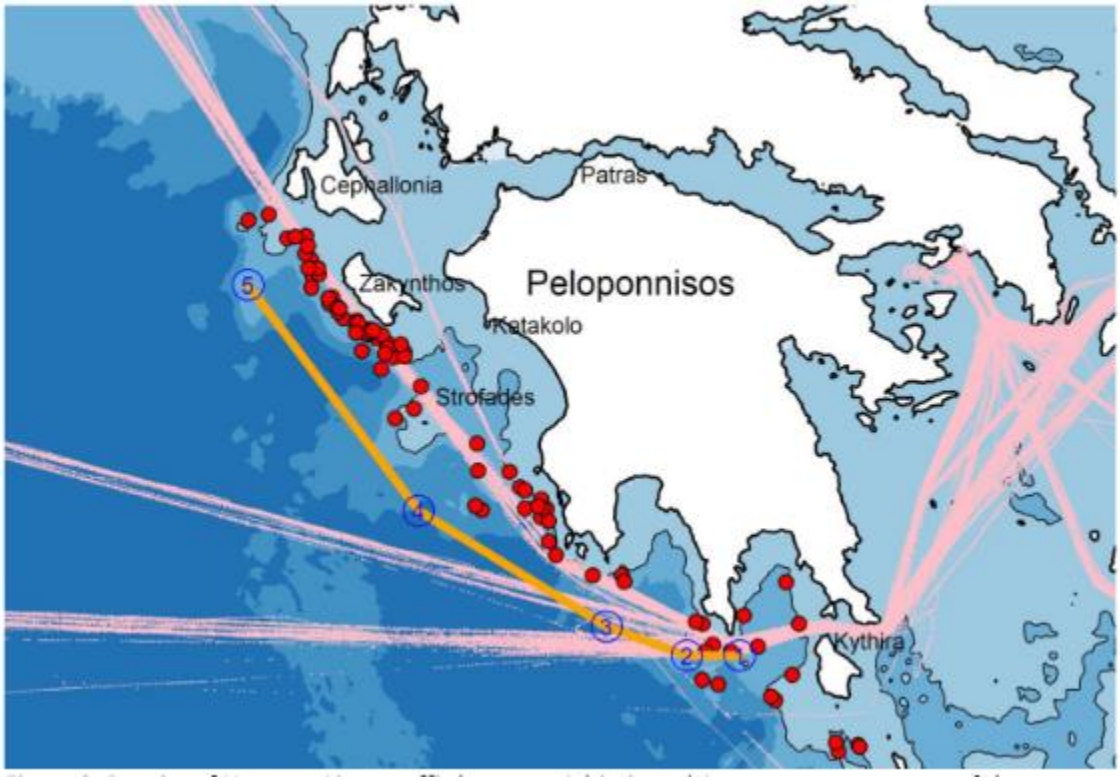

Figure 2. Density of Commercial RoRo operators shipping lanes between Adriatic and Aegean on routes west of the Peloponnese (pink tracks). ” Low risk” route shown in orange with their waypoints in blue.

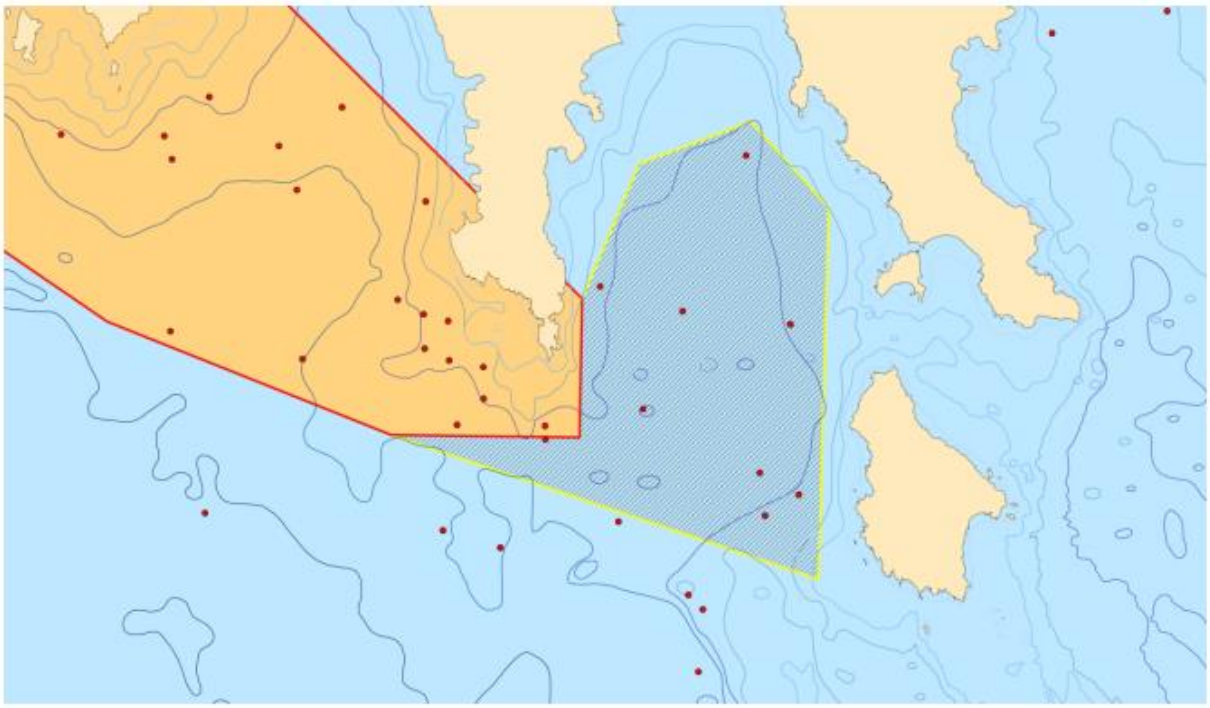

Figure 3. The area covered by the SaVE Whales system

Appendix.
Notices 24/2021 and 27/2021 from Greek Ministry of Maritime Affairs and Insular Policy (February 2021)

Notice No. 24/2021 (issued in Greek and English)

PILOT A΄ (1ST EDITION 2015) - MEDITERRANEAN SEA - HELLÁS - Iónio Sea (Hellenic Trench) - West Coasts of Zákynthos Island, Pelopónnisos - Area of Frequent Presence Marine Mammals. Paragraph 1.8 line R 51 Insert:«Area of Frequent Presence of Marine Mammals is located in the sea area of the Southern Iónio Sea (Hellenic Trench). To protect them from passing ships, mariners are requested to intensify their lookout to detect and avoid collisions with marine mammals, which usually lead to fatal injuries. The area is delimited inside the imaginary line which joins the following points and the opposite coastline starting from a point of the NW coast of Zákynthos island (37° 53,0΄ N - 020° 38,0΄ E), extends up to 5, 8, and approximately 23 n. miles, S, SW and SSW of the rocky islet Vardiánoi (southwest coast of Kefallinia island), at the points (38° 03,0΄ N - 020° 26,0΄ E), (38° 03,0΄ N - 020° 18.0΄ E) & (37° 48.0΄ N - 020° 09,4΄ E) respectively. Then it extends up to about 22 n. miles, S of Strofádes islands, at the point (36° 53.2΄ N - 020° 58.6΄ E) and up to about 17 n. miles, S of Venétiko islet (SW border of Messiniakós gulf (36° 25.0΄ N - 021° 53.0΄ E). It then extends to about 12, 5, and 5 n. miles, SW, SSE, and NW of the Taínaro point, at the corresponding points (36° 18,0΄ N - 022 ° 16,2΄ E), (36° 18,0΄ N - 022° 31,5΄ E) & (36° 27,0΄ N - 022° 31,5΄ E).»

Notice No. 27/2021 (unofficial translation)

PILOT VOLUME B΄ (E΄ EDITION 2019) - MEDITERRANEAN SEA - HELLÁS - Kríti Island - Southwest, West Coasts of Kríti Island - (Hellenic Trench) - Area of Frequent Presence Marine Mammals.
A 16 Insert:«Area of Frequent Presence of Marine Mammals is located in the sea area of the Southwest, West Coasts of Kríti Island - (Hellenic Trench). To protect them from passing ships, mariners are requested to intensify their lookout to detect and avoid collisions with marine mammals, which usually lead to fatal injuries. The area is delimited inside the imaginary line which joins the following points and the opposite coastline starting from a point at cape Litinos of Messaras gulf (southern limit of Kriti island) at the point (34° 55,0΄ N - 024° 44,0΄ E), extends up to approximately 8 n. miles, S of the above cape, to the point (34° 47,0΄ N - 024° 44,0΄ E). Then it extends up to about 4 n. miles, SSW of cape Trypiti (Gavdos island), at the point (34° 45,0΄ N - 024° 05,0΄ E) and up to about 9 n. miles, SW of Elafonissos Islet (southwest coasts of Kriti island) at the point (35° 10,0΄ N - 023° 22,0΄ E). It then extends to about 14, and 0,5 n. miles, SW and NW of Agria Gramvousa (northwest coasts of Kriti island), at the corresponding points (35° 30,0΄ N - 023° 22,0΄ E), (35° 39,0΄ N - 023° 34,0΄ E)."

Figure 4. The Hellenic Hydrographic Notices to mariners as included in the Pilot books and British Admiralty Sailing Directions