Update regarding plans for <u>fixed</u> offshore wind development in the Irish sector of the Celtic Sea

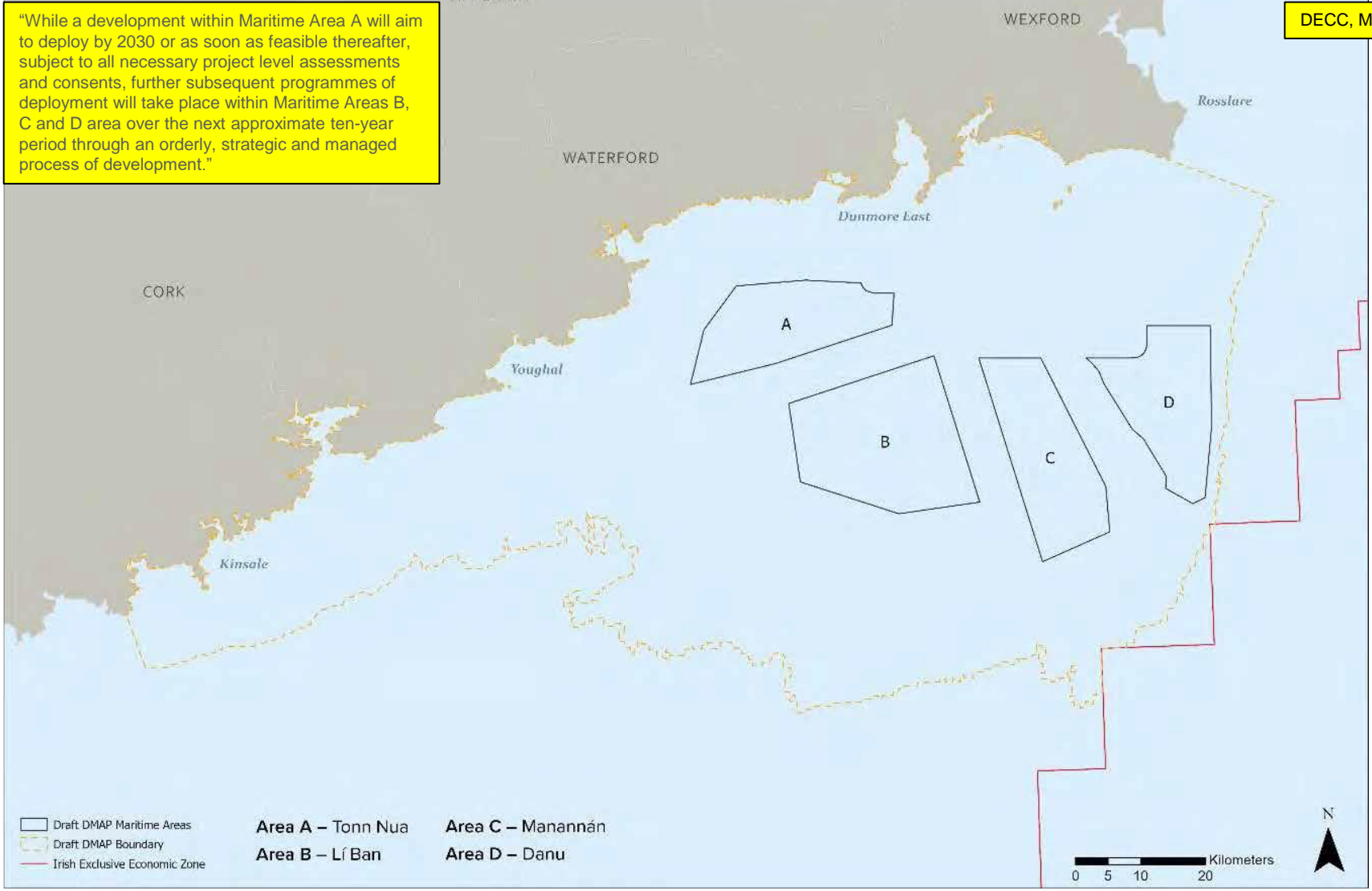## Peter Croker, The M Horizon (UK) Limited, July 2024

<u>References</u>

Government of Ireland (2024) Draft South Coast Designated Maritime Area Plan for Offshore Renewable Energy, DECC, May 2024

Marine Protected Area Advisory Group (2024) Ecological Sensitivity Analysis of the Celtic Sea to inform future designation of Marine Protected Areas (MPAs), DHLGH, June 2024

"While a development within Maritime Area A will aim to deploy by 2030 or as soon as feasible thereafter, subject to all necessary project level assessments and consents, further subsequent programmes of deployment will take place within Maritime Areas B, C and D area over the next approximate ten-year period through an orderly, strategic and managed process of development."

WEXFORD

Rosslare

WATERFORD

Dunmore East

CORK

A

Youghal

B

C

D

Kinsale

Draft DMAP Maritime Areas
Draft DMAP Boundary
Irish Exclusive Economic Zone

Area A – Tonn Nua   **Area C – Manannán**

Area B – Lí Ban   **Area D – Danu**

N

Kilometers
0   5   10   20

Maritime Areas A to D proposed for offshore wind development in the SC-DMAP

Celtic Sea ORE_PFC_26 July 2024 - ArcMap

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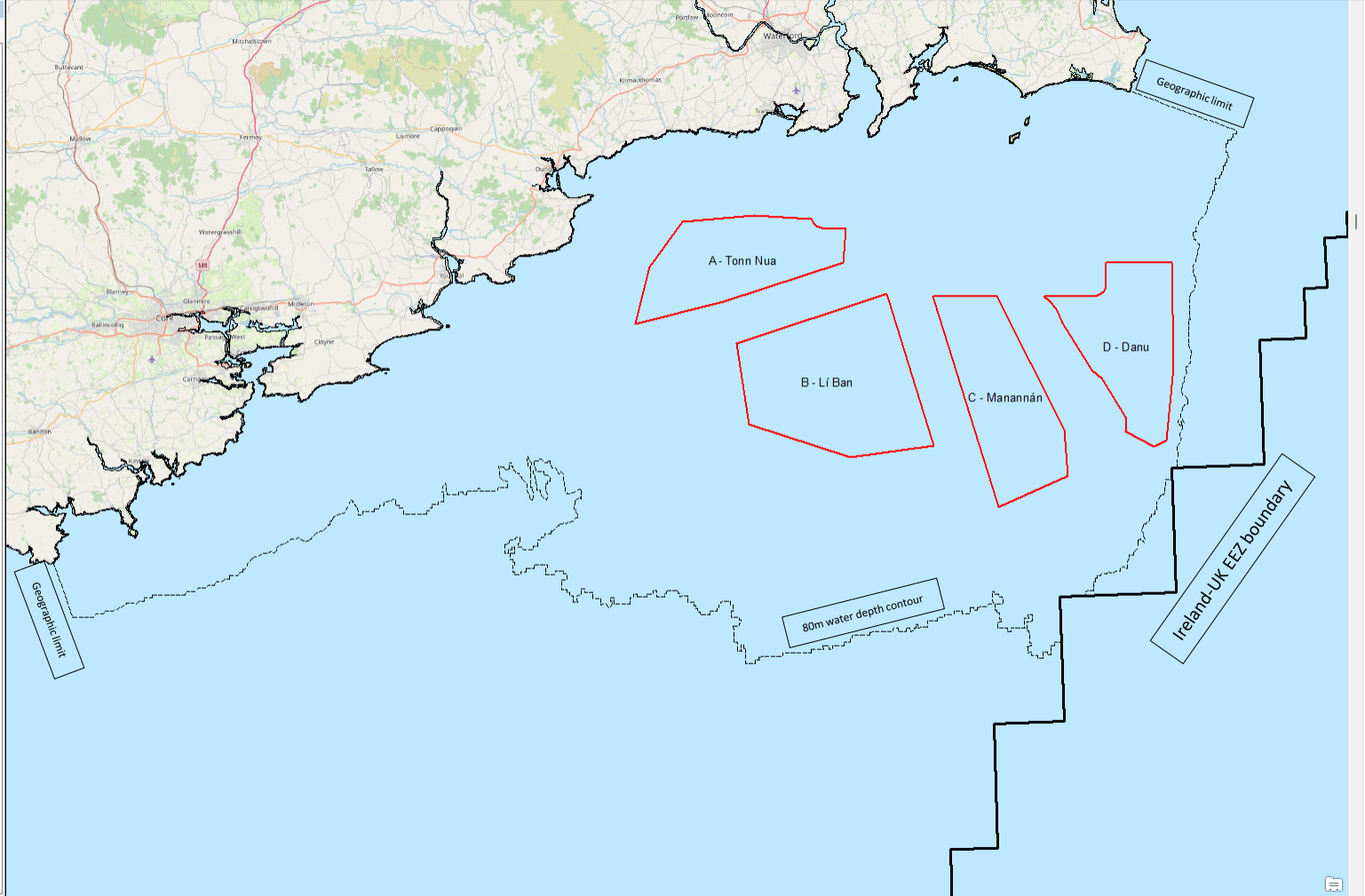Georeferencing ▾   MPAAG_2024_Celtic_Sea_Fig1A ▾

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- Coastline
- World_EEZ
- Basemap

Geographic limit

A - Tonn Nua

B - Lí Ban

C - Manannán

D - Danu

Geographic limit

80m water depth contour

Ireland-UK EEZ boundary

-9.311, 51.122 Decimal Degrees

IRE - ZIM
Live

Search

Draft SC-DMAP boundary and Maritime Areas A - Tonn Nua; B - Lí Ban; C - Manannán; D - Danu

Celtic Sea ORE_PFC_26 July 2024 - ArcMap

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Editor
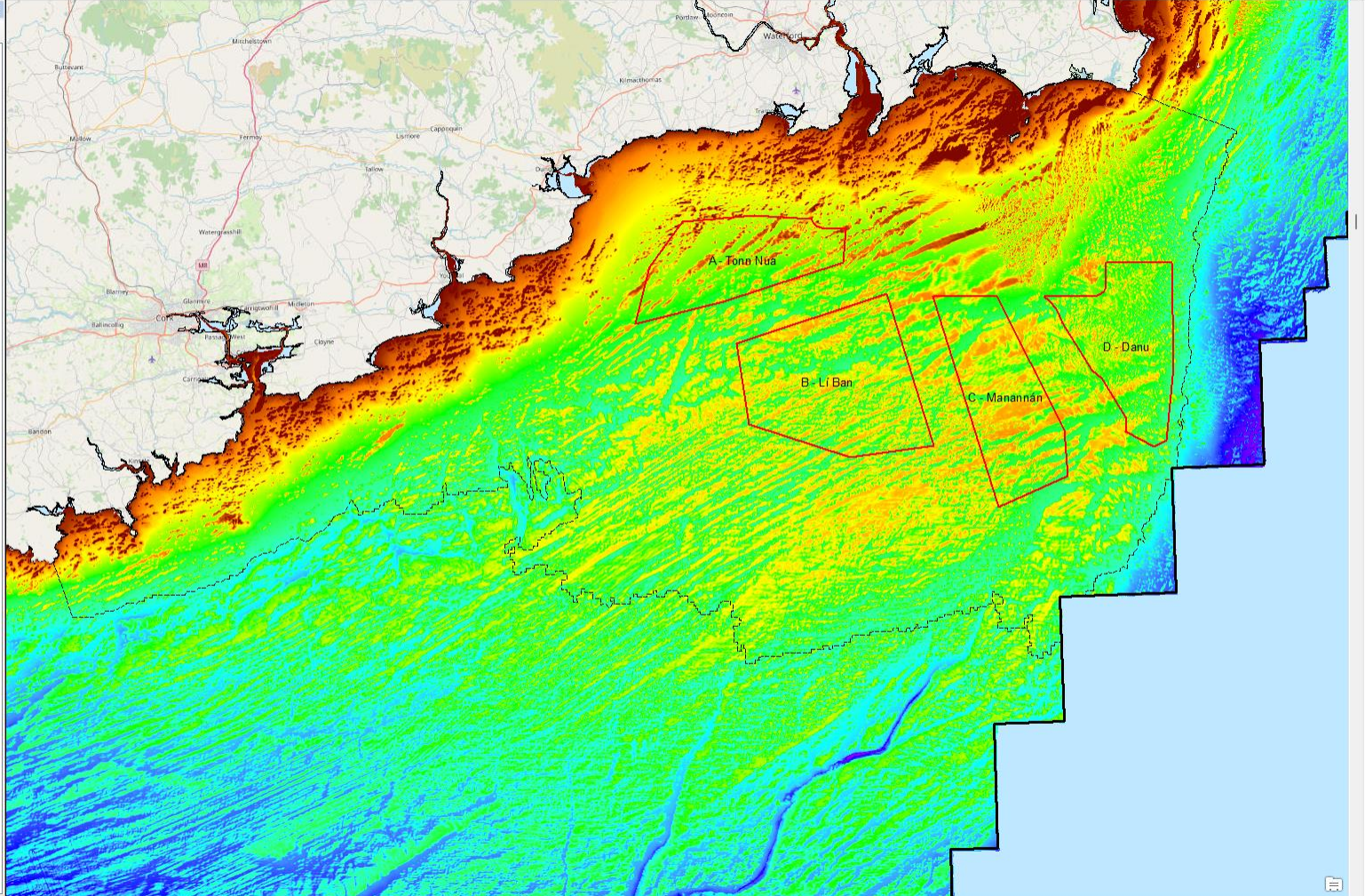
Georeferencing MPAAG_2024_Celtic_Sea_Fig1A

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A - Tonn Nua

B - Lí Ban

C - Manannán

D - Danu

Bathymetry from INFOMAR MBES

File   Edit   View   Bookmarks   Insert   Selection   Geoprocessing   Customize   Windows   Help

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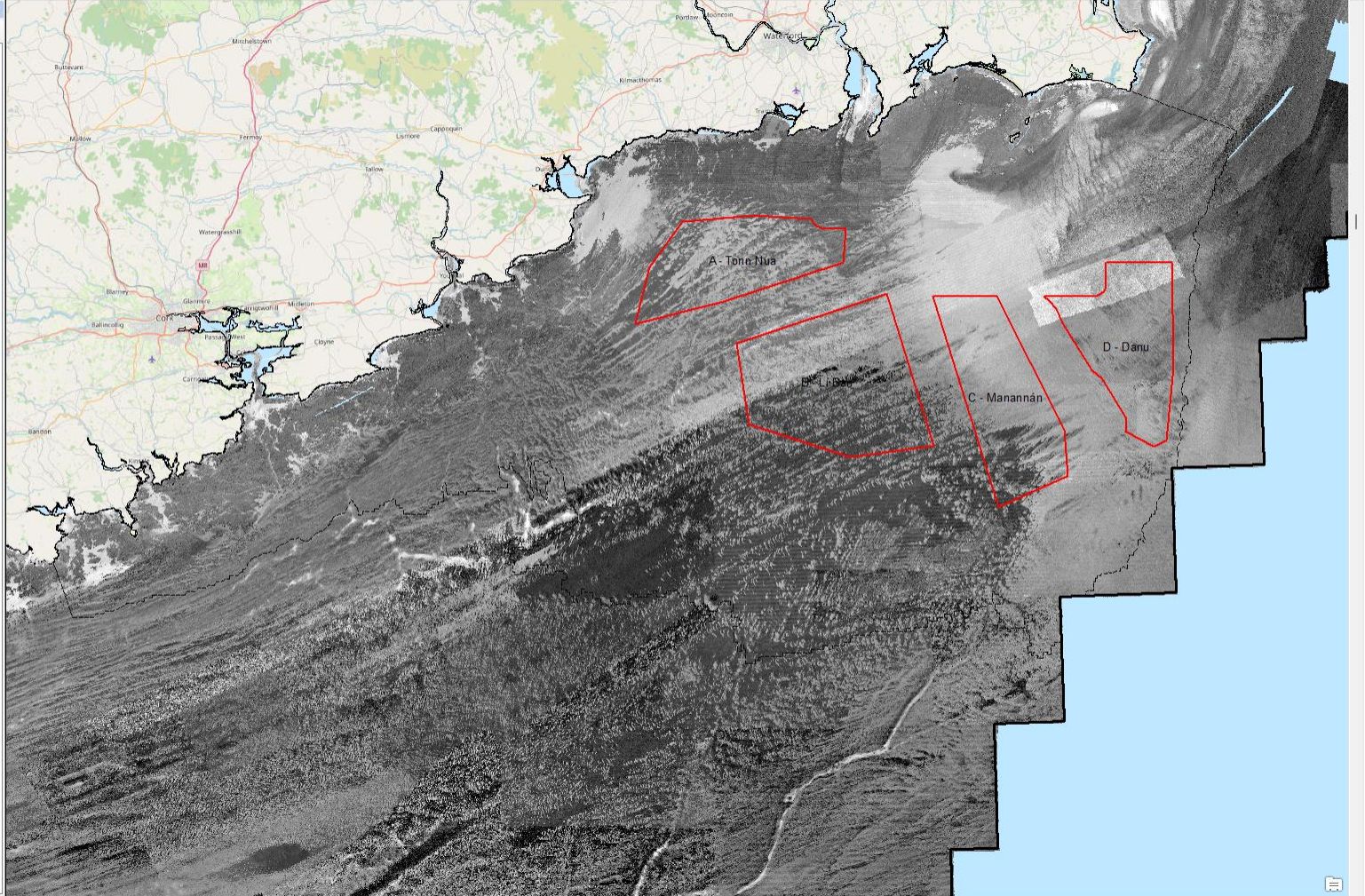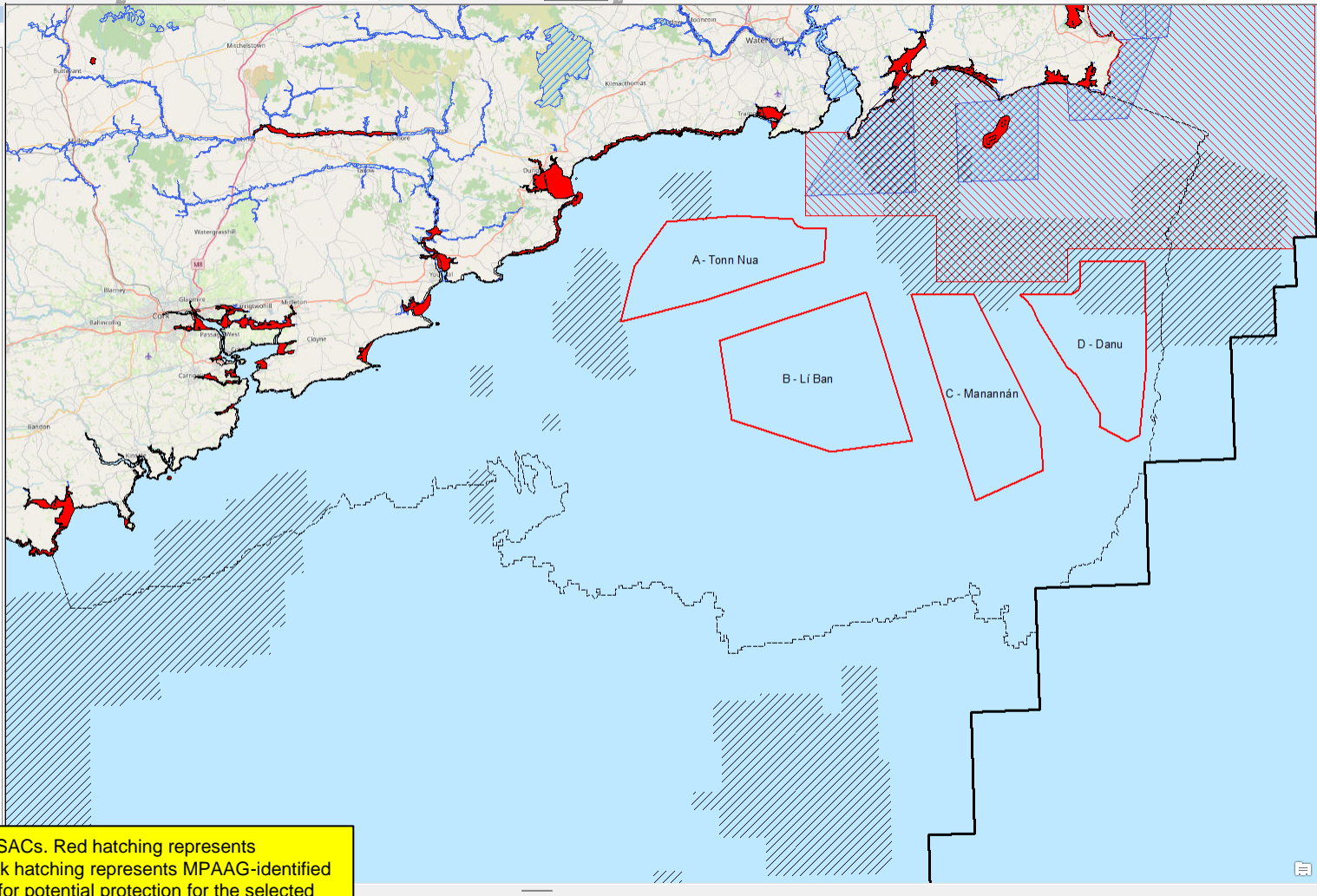Georeferencing ▾   MPAAG_2024_Celtic_Sea_Fig1A

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A - Tonn Nua

D - Danu

C - Manannán

20°C
Mostly sunny

Backscatter from INFOMAR MBES

Blue hatching represents designated SACs. Red hatching represents designated and candidate SPAs. Black hatching represents MPAAG-identified areas of comparatively higher priority for potential protection for the selected ecological features. Suitable areas for potential MPAs in the Celtic Sea could be selected from within these identified areas (DHLGH, June 2024).

Existing SACs, SPAs and MPAAG zones

Vessel density (all_2022) from EMODnet

Route density (all_2022) from EMODnet

Celtic Sea ORE_PFC_26 July 2024 - ArcMap

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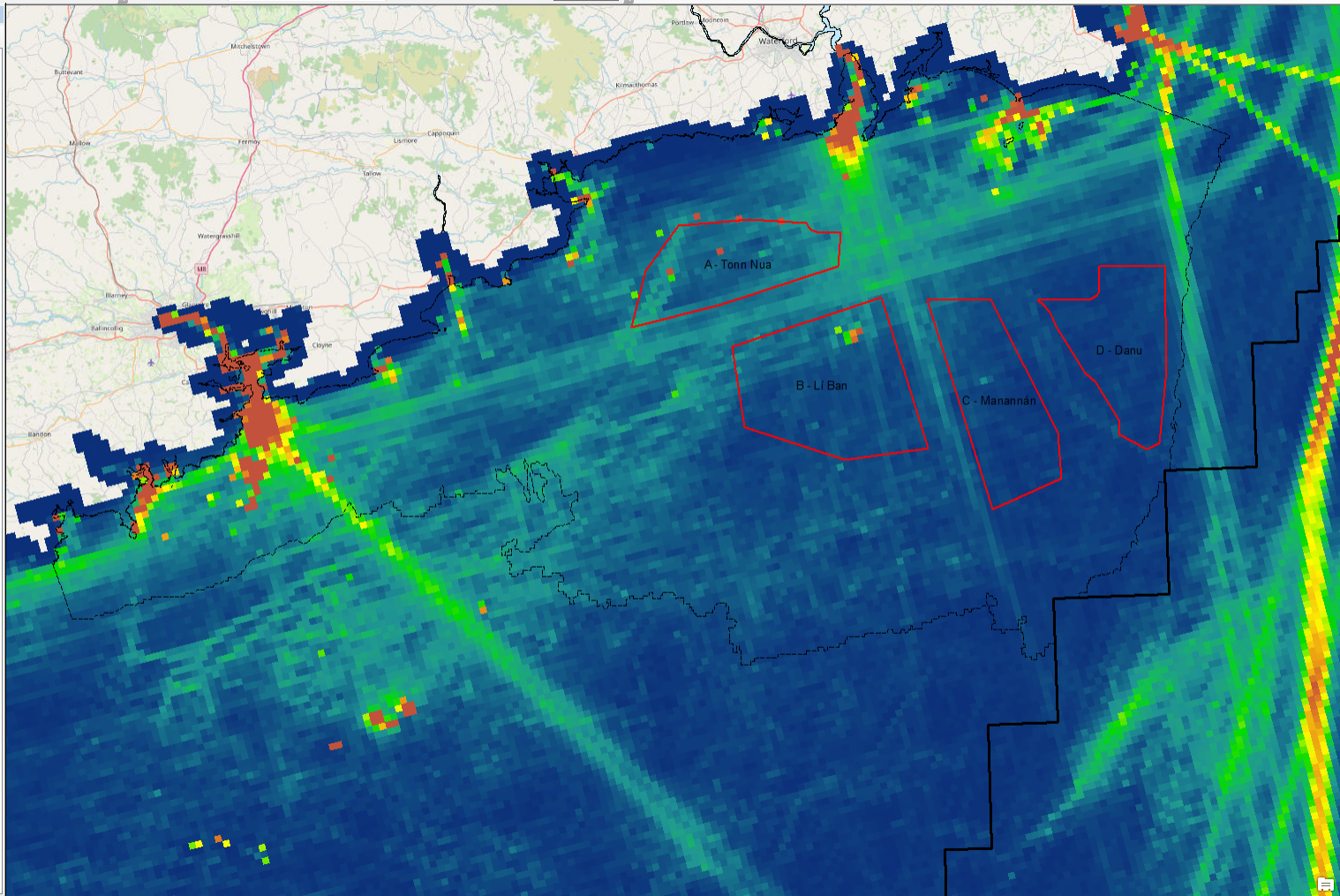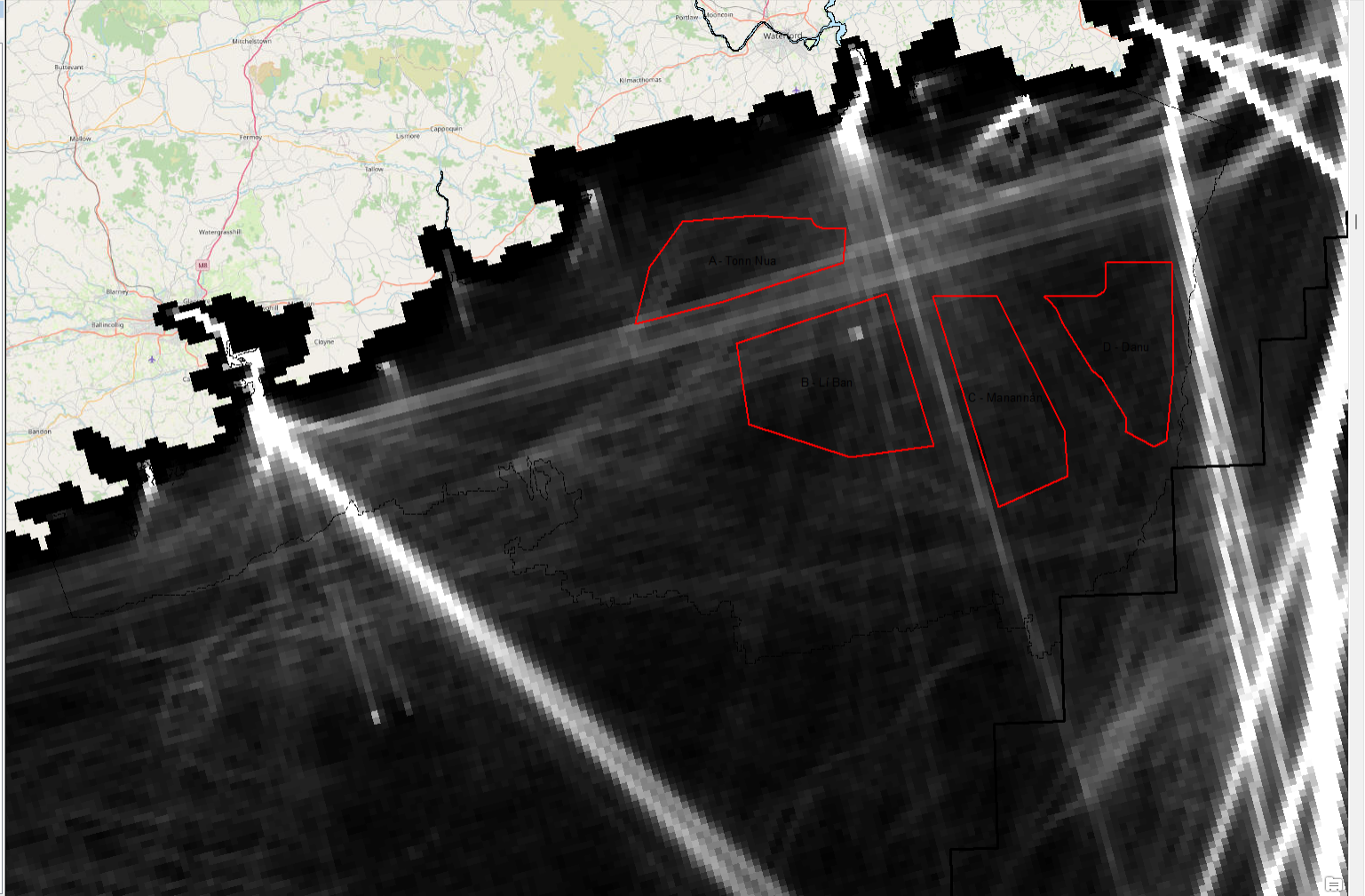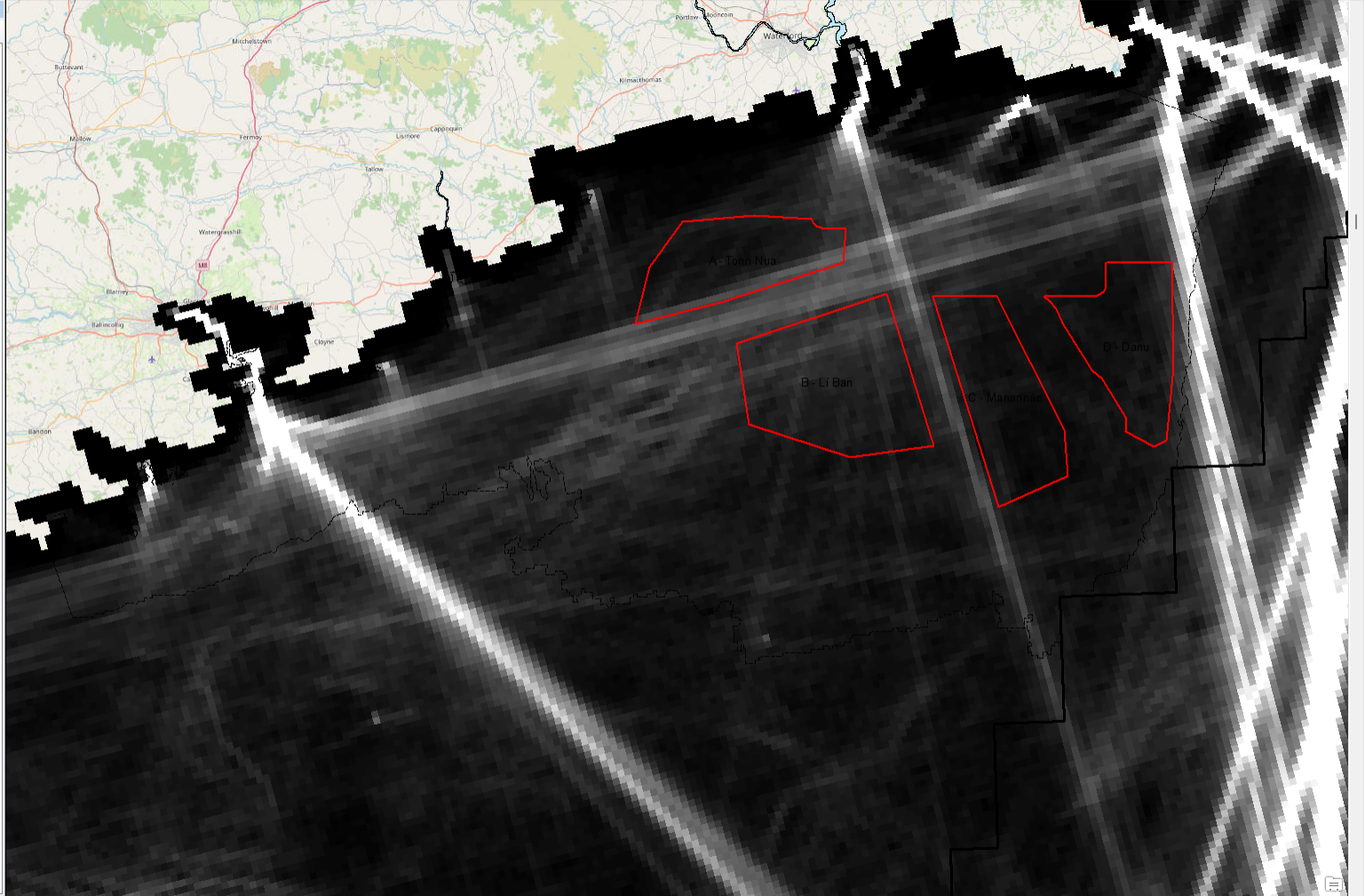
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Georeferencing   MPAAG_2024_Celtic_Sea_Fig1A

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FTSE 350
+0.85%

Route density (all_2023) from EMODnet

Vessel density (all_2022) from EMODnet (all ship types, yearly average, 2022)
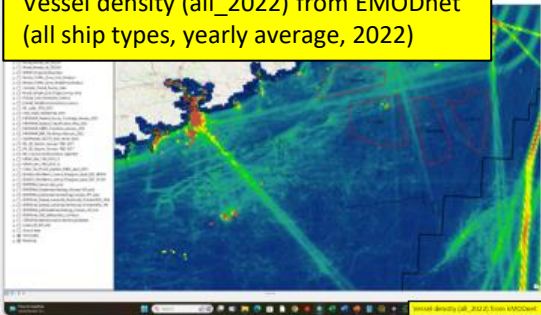
The Vessel density maps are created by Cogea for the European Marine Observation and Data Network (EMODnet). The maps are based on AIS data purchased annually from Collecte Localisation Satellites (CLS) and ORBCOMM. The maps, in GeoTIFF format, show shipping density in 1x1km cells of a grid covering all EU waters and some neighbouring areas. Density is expressed as hours per square kilometre per month. The following ship types are available: 0 Other, 1 Fishing, 2 Service, 3 Dredging or underwater ops, 4 Sailing, 5 Pleasure Craft, 6 High speed craft, 7 Tug and towing, 8 Passenger, 9 Cargo, 10 Tanker, 11 Military and Law Enforcement, 12 Unknown and All ship types. Data are available by month of year. Yearly averages are also available. Data currently available from 2017-2022.

Route density (all_2022) from EMODnet (all ship types, yearly, 2022)
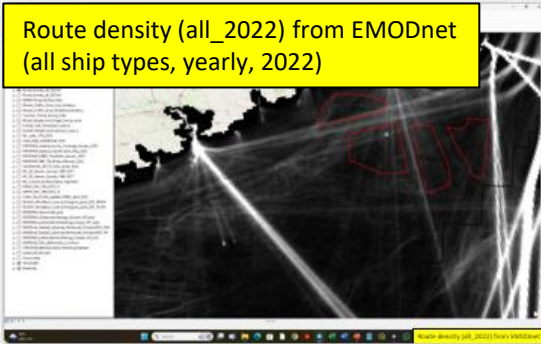
The Route density maps data files are produced and provided to EMODnet by the European Maritime Safety Agency (EMSA). The method selected by EMSA is the ship routes restoring method. This method rebuilds the track of each distinct ship from the recorded positions and counts how many routes are crossing each cell of a grid during a given period of time. The grids used as reference to build the route density maps are constructed to cover all the target areas and have a definition of 1x1 km. In order to build a density map, the first step is to collect ship positions data from EMSA's ship position database. Terrestrial AIS (T-AIS) and satellite AIS (S-AIS) data are collected by using an SQL query (filtering). Each ship position is collected with the indication of the ship's type. The traffic density map is created by counting the number of routes (polylines) crossing each grid cell and applying a colour code corresponding to the number of crossings. The system counts the number of polylines crossing boundary of each cell. The output of this process is a grid data file containing the number of vessel route crossings per cell. The data files are created for all combinations of the predefined criteria (i.e. area, ship type range and time period). The traffic density (the number of polylines crossing each cell) is presented by using a colour code per the range of values. A corresponding colour code is given to each cell. The output of this process is a georeferenced image file showing a density map with a predefined code by cell. The final route density maps are produced by aggregating (stacking and summing) the intermediate files generated according to the configured time criteria (i.e. monthly, seasonal and annual maps) and ship type ranges (i.e. Cargo, Fishing, Passenger, Tanker, All Other and All traffic) and finally clipping according to the preconfigured geographic area (e.g. All Europe). For each individual map, the following files are produced: a georeferenced image showing a density map with a predefined colour code by cell (e.g. a GeoTiff file); a grid data file containing the number of vessels routes crossings per cell (e.g. GeoTiff 16 bit signed)(Value - 9999 is assigned for cells without data); and, a metadata file, providing information about the route density map. Data currently available from 2019-2023.

Route density (all_2023) from EMODnet (all ship types, yearly, 2023)