

Press release – 11 March 2019

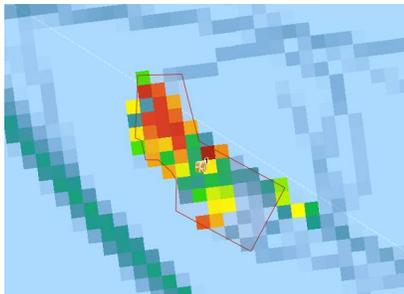
New insights into European maritime traffic

European seas are a hub of human activity. Maritime transport is so widespread that it inevitably affects anybody working in or with the ocean. For the first time those responsible for monitoring shipping emissions, identifying the best routes to lay pipelines and cables, assessing the impact of fishing on the seafloor or planning offshore wind farms can have free and open access to maps and the underlying raster files of vessel activity.

The new EMODnet digital vessel density maps, released today, allows users to visualise vessel movement patterns and the distribution of maritime traffic in European waters. The service provides access to monthly composite maps by ship type for the year 2017 (with more to come). Maps are available free of charge for viewing, downloading, processing and usage for commercial and non-commercial purposes alike from the [EMODnet Human Activities portal \(http://www.emodnet-humanactivities.eu/view-data.php\)](http://www.emodnet-humanactivities.eu/view-data.php).

"With increasing economic activities at sea, not least the large expansion of offshore wind energy, marine space is not only at a premium, but also under growing pressure. When making maritime spatial plans to manage these new activities, planners need to know where and when other activity takes place. The availability and interoperability of these new [vessel density] maps can be an important contribution towards developing these plans," declared Felix Leinemann, Head of the European Commission's unit in charge of maritime spatial planning.

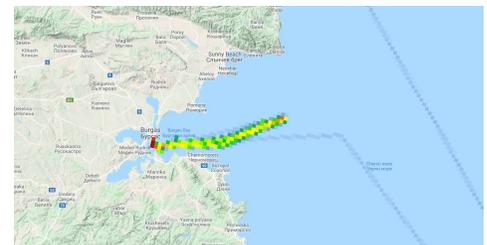
Ana Tejedor, Marine Conservation and Policy Implementation Expert at the European Environment Agency, added: *"Information coming from the new EMODnet digital vessel density maps will supplement the thematic and sectoral assessments of the European Environment Agency. Our platform, WISE-Marine, will ensure the correct linkages to the digital maps – thus allowing information and data to be re-used between Directives and geographical scales without the need to establish new or duplicate data reporting and dissemination structures"*.



Ships at the construction site of an offshore wind farm in the North Sea



Galicia is home to the largest fishing fleet in the EU



Dredging operations in the port of Burgas, Bulgaria

Vessel density maps have been around for quite a while, but this EMODnet data product is different. In addition to being 100% free, it offers comprehensive and regularly updated digital maps that can be used without restriction. That's great value for (no) money for users," explained Alessandro Pititto from COGEA, Coordinator of EMODnet Human Activities. In the open data access principle that EMODnet promotes, users are able to track the data back to its originator and download the raster files behind the map or access data via web services. Use of the maps is unlimited as long as EMODnet is duly acknowledged as the data product provider and the methods used to derive the map are clearly documented or referenced.

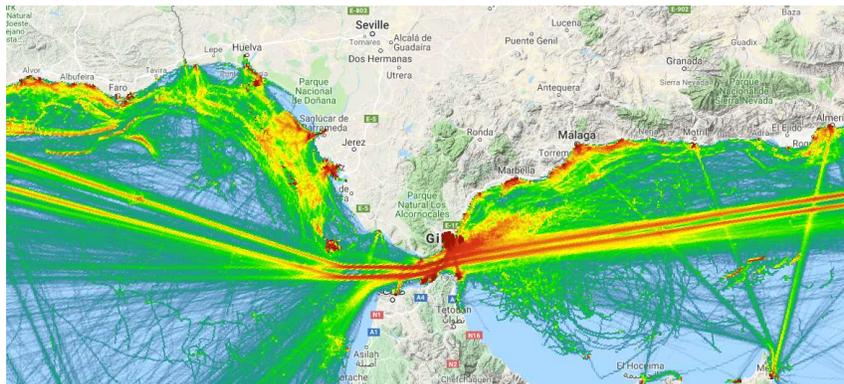
Density is expressed as the number of hours spent by ships in a square kilometre over a month. Data are collected from Automatic Identification System (AIS) receivers that track and transmit the location of the ships' on-board transponders. On the EMODnet vessel density maps, a colour gradient makes it possible to quickly distinguish whether an area is characterised by high or low shipping traffic. Traffic is broken down by ship types: cargo, dredging or underwater operations, high-speed craft, fishing, military and law enforcement, passenger, pleasure craft, sailing, service, tanker, tug and towing, other, unknown.

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Background information

The EMODnet Human Activities team has developed a bespoke method for developing the vessel density maps, in close consultation with the European Commission's [Joint Research Centre \(JRC\)](#). A set of terrestrial and satellite AIS data from 2017 was bought from [Collecte Localisation Satellites \(CLS\)](#), a French company specialised in space-based added value products and services for maritime applications. As ships send AIS signals every few seconds, the raw data were down-sampled to optimise the calculation process. The application of a number of correction filters removed any errors from the dataset which was then imported into a database and further processed to create a set of density maps. Detailed information on the processing methodology will be found in the EMODnet Human Activities portal.

For the moment, the data available in the maps cover 2017, but 2018 data is due later on this year. Regular updates will be released through the portal as they become available. The AIS data can be enriched with information from other databases to create new products such as noise maps, emission maps, etc. An agreement signed recently between the [European Maritime Safety Agency](#) and the [European Commission's Directorate General for Maritime and Fisheries](#) will allow vessel positions collected by national authorities responsible for safe navigation to contribute. Historical data could show the evolution of shipping in Europe over the last decade. User feedback is crucial to decide where to go next and the EMODnet team is looking forward to it.



Zoom of the EMODnet Vessel density map showing high-density vessel traffic as shipping lanes converge upon entering the strait of Gibraltar

To access the vessel density maps, visit the EMODnet Human Activities Portal:
www.emodnet-humanactivities.eu

15 March 2019 10:00-10:45 CET: A live tutorial with Alessandro Pititto (EMODnet Human Activities Coordinator), Luigi Falco (GIS Coordinator) and William Adnams (GIS Developer) will show how the maps work and will give a quick overview of the method used. Register now at webinar@emodnet.eu

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Source and information:

Andrée-Anne Marsan
Communication and Coordination Officer
European Marine Observation and Data Network (EMODnet Secretariat)
Phone : +32 (0) 59 34 14 29 / Email : andree-anne.marsan@emodnet.eu

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