

Questions and answers

EMODnet vessel density maps webinar

15 March 2019

Q: May we a copy of questions and answers?

A: Yes, you'll receive it via email. The list will also be uploaded on the EMODnet Human Activities portal (FAQs section).

Q: Could we please get the list of Q & A (if the answer is not already contained in the methodology docs coming out next week)?

A: Yes, you'll receive it via email. The list will also be uploaded on the EMODnet Human Activities portal (FAQs section).

Q: Could you please specify, what is the 'raster format' available to download? I guess the most of us needs gridded density in some numeric format.

A: The format is GeoTIFF floating raster, with density values (hours) stored in it.

Q: Since you initially cut the cells according to the coastline, there is no effect of the land present in the cells close to the coast, having an effect (bias) on vessel density in that areas, right?

A: Cells close to the coastline may include land areas, but there is no effect whatsoever on vessel density.

Q: Is it possible show 6 month at the time?

A: Right now it's not available, but we can provide 6-month averages in the future if our users so request. In the meantime, you can contact the EMODnet Human Activities team.

Q: which email/contact to be used for contact, questions?

A: You can contact the EMODnet Human Activities team either via live chat or through the 'Contact us' form: <http://www.emodnet-humanactivities.eu/contact-us.php>

Q: What will the format of data be beside raster maps?

A: No other format is envisaged for now. If you think other formats may facilitate access from a wider range of users, please contact the EMODnet Human Activities team either via live chat or through the 'Contact us' form: <http://www.emodnet-humanactivities.eu/contact-us.php>

Q: Are you going to split fishing data into fishing gears? Very important for a lot of analysis.

A: At the moment, there is no easy and reliable way to do so. Information on fishing gear is included in the EU fleet register; however, (i) it is only an indication, and there's no way to link our AIS data with the fleet register. If we had access to VMS data, we could do it. Please consider that even Global Fishing Watch (which has Google as a sponsor) finds it difficult to get data on fishing gear. They're using machine learning algorithms, but the results are not very accurate because they have very limited datasets for training.

Q: Nice work! we have done something similar to calculate UK shipping emissions. Slightly different method. Be good to talk soon about this. <https://ricardo-aea.maps.arcgis.com/apps/StorytellingSwipe/index.html?appid=b52b396c0f314723a166aa552209f544>

A: It's possible that in the future we'll use AIS data to estimate shipping emissions. Is there any online reference to the method you used? If yes, could you please contact the EMODnet Human Activities team either via live chat or through the 'Contact us' form: <http://www.emodnet-humanactivities.eu/contact-us.php> ?

Q: What about coverage in the Arctic which is an area of interest within EMODnet? ref. Arctic checkpoint

A: Part of the Arctic is covered as you can see from the online map. The EMODnet Human Activities contract with the European Commission requires that a vessel density map be created for EU waters. However, we may increase coverage in the future if users so request.

Q: I was easily able to download monthly densities, but average density gives me an error.

A: It is a known issue affecting some users. It may have to do with the software used to open the files. We recommend using 7zip. We're working on it. In the meantime, if you have any difficulties please contact the EMODnet Human Activities team either via live chat or through the 'Contact us' form: <http://www.emodnet-humanactivities.eu/contact-us.php>. They will send you the files.

Q: Are the data specifications available

A: Yes. INSPIRE-compliant metadata are available here: <http://www.emodnet-humanactivities.eu/search-results.php?dataname=Vessel+Density>+. A publication detailing the full method has just been released and is also available on the EMODnet Human Activities portal.

Q: What about timeseries from earlier years and until today?

A: The maps will now be updated regularly as long as EMODnet is funded. At the moment there are no plans to make available historical data, although enquiries have been made with commercial providers to purchase historical data. Depending on user feedback, it's possible that we'll make available historical data in the future.

Q: I have had issues downloading your WMS into ArcGIS Pro, please can you confirm the link is working properly? I have been in touch about this already

A: Our services are OGC-compliant and are supported with ArcGIS desktop. There is a known (and strange) issue with ArcGIS online. We are soon to move our services to a new server with a new URL and these test links work OK in ArcGIS online. Please be patient. In the meantime, for any problems please contact the EMODnet Human Activities team either via live chat or through the 'Contact us' form:

<http://www.emodnet-humanactivities.eu/contact-us.php>.

Q: When you've created the AOI, you removed the land, what about the idea to extend also to the inland waters the maps?

A: As we also have data on inland waterway traffic, it's quite likely that we'll include it in the next update of the maps, which is due later in 2019.

Q: I didn't understand the format of the data we download

A: The format is GeoTIFF floating raster, with density values (hours) stored in it. If you have any problems opening it, please contact the EMODnet Human Activities team either via live chat or through the 'Contact us' form: <http://www.emodnet-humanactivities.eu/contact-us.php>.

Q: Is it possible to receive a copy of these presentation?

A: The webinar was recorded and the video is now available on the EMODnet portal.

Q: Do you have plans of offering these data through a WCS / WCPS?

A: Yes! It'll be available over the coming weeks. We're migrating to a new server.

Q: Why buy data from commercial businesses when such data are offered through free governmental services?

A: It's a tricky question. The EMODnet Human Activities team have a contractual obligation with the EU Commission to make available vessel density maps of EU waters. As of today, there is a number of Member States which give access to their AIS data, but not all of them. In addition, Member States normally have terrestrial AIS data, while satellite AIS data – which are necessary for the areas beyond the range of coastal receivers – are property of commercial providers who own a satellite constellation. Therefore, our only option was to purchase data from a commercial provider. While the situation could improve in the future, it

should also be noted that commercial providers may give you good value for money too. True, they charge you a fee for their data, but they also carry out additional services such as quality control.

Q: will data be added for 2018 and 2019, if so, when?

A: Data on 2018 will be added later this year. We'll need to wait 2020 for the data on 2019

Q: Trying to download data, I see that the database is still under construction. When will the download option of vessel densities become available?

A: The 'database under construction' notice is there to warn users that for many datasets (not the vessel density maps) we still don't have full coverage. However, it seems that several users are confused instead, so we'll probably remove it. Back to the point, it is already possible to download the raster files:

www.emodnet-humanactivities.eu/search-results.php?dataname=Vessel+Density+

Q: What is effect of monthly varying meteorology on coverage, or is density varying in reality?

A: We haven't yet looked into that.

Q: It seems no interpolation is used to fill areas where there is no AIS reception, correct?

A: Correct!

Q: Reporting shipping density in hrs / (km² * month), does that mean an 8m Sailing vessel (speed 4kn) crossing a grid cell is weighted higher than 200m cargo vessel (speed 20kn)

A: Yes! What you point out makes a lot of sense when you're calculating "intensity" or pressure on the seabed. But here, we're calculating density, i.e. the average number of ships in a cell over a month. So a container ship and a sailboat are exactly the same when it comes to density. In the future, we might develop other products which take into account ships' size, tonnage, draught etc.

Q: Have you got any downloadable documentation of your methodology?

A: Yes! It's just been published on the EMODnet portal.

Q: (i) plans to enhance coverage in north sea, (ii) plans to add more derived ship type categories used on external data? (iii) plans to include VMS data/ or is it included? (iv) plans to include statistics (e.g. percentiles) besides mean shipping density) (v) plans to include option to include length, draught, speed as additional sorting criteria? (relevant for feeding models)

A: (i) As far as we know, the North Sea is fully covered. (ii) We contacted several providers to buy additional data on ship types: either they didn't want to sell us the data after they learned what we were up to, or in one case the quote we received was far out of our price range. We'll keep on trying, though.

Q: What is the source of the data? Are you using Marine Traffic data or another source?

A: We bought satellite and terrestrial AIS data from "Collecte Localisation Satellites" (CLS French company specialised in space-based added value products and services for maritime applications. They are a reseller of AIS data, which means they buy them too from various providers.