

BSBD-WG Report to the BSHC 27th Conference

The Baltic Sea Bathymetry Database Working Group has not held any meeting during the last year.

1. Status of the work of BSBDWG

Since the last conference the portal has been up and running without interruptions on the portal itself. The earlier issues with timeouts on downloading of datasets has been solved.

Alarms to identify any malfunctions in the Domain Name Server has been implemented.

As mentioned last year, the current physical servers has been announced to be retired by Amazon.

Presently work is ongoing to move the portal to new, updated and faster servers where the updated 500 and 200m DTM will be published.

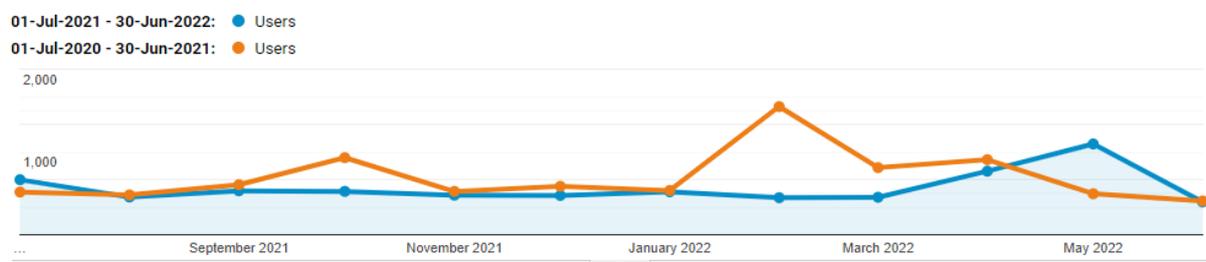
2. The use of the bathymetric database

2.1. The portal

The portal address remains as data.bshc.pro and with dev.bshc.pro as backup.

It is still widely used and the number of visits on the portal between the first of July 2021 and 30th of June 2022 is 8452 (11515 visits 2021) made by 6215 unique visitors (7877 unique visitors 2021).

A significant spike can be seen on the 2 February 2022 when 1098 visits was made to the site in one single day.



The last year Sweden, Poland and US has been the most frequent users of the BSBD portal and together they account for nearly 36% of the visitors.

	Country	Users	% Users
1.	 Sweden	1,753	 28.25%
2.	 Poland	567	 9.14%
3.	 United States	410	 6.61%
4.	 Finland	409	 6.59%
5.	 China	384	 6.19%
6.	 Germany	325	 5.24%
7.	 Russia	147	 2.37%
8.	 Denmark	142	 2.29%
9.	 United Kingdom	142	 2.29%
10.	 Estonia	125	 2.01%

Figure 1 Top ten countries using the portal July 2021-July 2022

The number of registered active links to the portal has dropped this year to 38 (previous year 59). The anticipation is that this will increase when the updated DTMs has been published.

- 10% (43% for previous year) of the visitors, that use active links to reach the portal, use the link on the BSHC homepage. This link is no longer on the home page of the BSHC website.
- 49% of the visitors used direct addressing to the portal.

2.2.Downloads

We have had 8 support questions sent by email to SMA, and as usual they mainly concern downloads, format and/or questions about higher resolutions.

A Google Scholar (<https://scholar.google.com/>) search for "baltic sea bathymetry database" gives 168 (123 last year) hits for articles referencing to that phrase, and 23 of them has been published during 2022.

2.3.Use of OGC services

The WMS service is used by many users including regional administrations and other governmental organisations. Some users also have an internal cache service for the use in their own GIS systems. This internal cache reduces the number of downloaded tiles from our servers as they only need to download each tile once.

As an example the number of DNS-Queries for the month of April was 448,017 (305,160 year 2021). This is only an indication and not an actual number of requests, but indicates >25% increase of the traffic to our servers during the last year.

3. Work Group participants

Mr. Hans Öiås has during the last year been acting as the Chair of the WG. The activity during the year has been low.

The current WG members and points of contact is:

Country	Name	E-mail address
Denmark	Jens Peter Weiss Hartmann (point of contact)	jepha@gst.dk
Estonia	Peeter Väling Signe Paevere	peeter.valing@vta.ee signe.paevere@vta.ee
Finland	Juha Tiihonen Leila Rapeli	juha.tiihonen@traficom.fi Leila.Rapeli@traficom.fi
Germany	Jürgen Monk	juergen.monk@bsh.de
Latvia	Normunds Duksis	normunds.duksis@lhd.lv
Lithuania	Emilis Tertelis (point of contact)	emilis.tertelis@ltsa.lrv.lt
Poland	Witold Stasiak	w.stasiak@ron.mil.pl
Russia	(No contact person appointed)	main@gunio.ru
Sweden	Hans Öiås	Hans.oias@sjofartsverket.se

4. Performed work

The updated BSBD 500m grid as well as a 200m model is aimed to have the same download functionality via WCS extraction. We hope this will be functional at the time of the meeting.

Even though the EMODnet HRSM model seems to have higher resolution (115x57.5m at LAT 60deg.), it is still built on the similar (often sparse) source data and gets an uneven distribution as it is not based on a projected grid and often extreme amounts of interpolations. As an example given the restrictions for bathymetry in Swedish territorial waters, maximum 2 out of 13 Emodnet cells will be populated by true soundings and the rest is interpolated.

5. Presentations

No presentation has been held or is planned for the near future.

6. Cooperation's

6.1.GEBCO

GEBCO still recognizes the BSHC database as a Regional Mapping Project. The last two GEBCO models has though used EMODNET as their main source

6.2.EMODnet

At SMA we have been actively participating in the development of the Emodnet HRSM 3 project and that terrain model is planned to be published during October. The resolution is still 1/16 arc-min (115x57m at Lat 60°).

Anna Wall at SMA acts as Project Manager for SMA, as well as regional coordinator for the Baltic region.

SMA as well as BSH (Germany) and MAL (Latvia) are partners in the present EMODnet “High Resolution Seabed Mapping III”. DGA (Denmark) has been subcontracted by the consortium.

The possibilities of becoming subcontractor is limited to a certain % of the total project budget, but there is no limitation to the number of partners in the consortium.

Partners (and subcontractors) are expected to provide Metadata over separate surveys residing in their databases, as well as delivery of prepared national DTMs in the Emodnet format to the regional coordinator. National restrictions regarding resolution is respected. Participation on a few meetings and training sessions is required and the costs is included in the partner budgets.

If you want to be updated when a new call for tender is issued, please inform Thierry Smith thierry.schmitt@shom.fr and Dick Schaap dick@maris.nl and you will get the invitation when it is published.

6.3.Seabed 2030

The project has been presenting its result in the form of webinars under the name “Map the Gaps Symposium”, and now they have announced a hybrid event in Southampton Oct. 26 - Oct. 29, 2022

The symposium held Nov. 30 - Dec. 3 has its recorded presentations available on YouTube: <https://www.youtube.com/channel/UC21WLaPiEEOmF24cUoOjMyg/videos>
In addition some of the Seabed 2030 regions have held similar webinars.

Seabed 2030 held a “Side Event” during the UN Ocean Conference, 29 June 2022

In addition to the symposiums, Seabed 2030 also issue a newsletter several times a year.

Seabed has their own homepage at <https://seabed2030.org/>

As SDB is a large source to Seabed 2030, it is also worth to mention that there will be SDB Day 2022 on October, 4th 2022, as a hybrid event combined with the EO Technology Conference 5-6th October. <https://sdbday.org/> It is an opportunity to get to know the technology and its capability during the presentations.

For the Baltic region, we already participate in the work for Seabed 2030 as we make bathymetry available via BSBD and EMODNET for inclusion in the GEBCO grid. However in several places higher resolution data would improve the bathymetric models.

6.4. Crowd Sourcing CSBWG

The WG held the 12th CSBWG Meeting, as a VTC, 7 - 10 March 2022. During the meeting a draft version 3 of the Guidance on Crowdsourced Bathymetry was presented. The meeting notes has not been published yet.

No known activities from the BSHC region.

7. Future plans

Finalize the migration of the servers and publish the updated 500m and 200m models, less smoothed and interpolated than the Emodnet model.

Update of the coastline is planned to be made after the publication of the 200m resolution grid.

We will not request any new deliveries of data for use in BSBD before we have managed to publish the presently prepared models.

When the new servers are up and running we will continue which including the basin borders and names for presentation in the portal.

- Optimization of the used code, production tools and documentation.
- Compile and provide additional bathymetric layers with higher resolution where the data providers and legislation permit (Germany and Estonia).
- Enhance the coastline for cutting, masking and presentation in the portal.

8. Actions for the BSHC 27th Conference

The BSHC 27th Conference is requested to:

1. Note this report
2. Recommend MS to participate in future Emodnet consortiums.