



EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR MARITIME AFFAIRS AND FISHERIES

Second meeting of the expert group on Marine knowledge



ESGEMAR, S.A.
ESTUDIOS GEOLÓGICOS MARINOS

How and why *ESGEMAR* shares bathymetry data

EMODnet
European Marine
Observation and
Data Network
Associated partner

More than 30 years dedicated to Marine Environment





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ESGEMAR is a Technical consultancy private company which operates in a diverse range of areas and sectors from marine technical assistance, support, training, research and scientific cooperation.

The company is based in Málaga, South of Spain. We have recently become an associated partner of EMODnet.

ESGEMAR has a vast experience in marine geophysical exploration, marine geology, submarine resources, submarine hazards cartography, seafloor mapping and charting, underground hazards mapping for fishing, biodiversity studies, marine environment and underwater environmental impact reports.





ISSUE OF USING DATA FROM EMODnet

Data shared in EMODnet platform is very useful for the Industry and specifically for ESGEMAR.

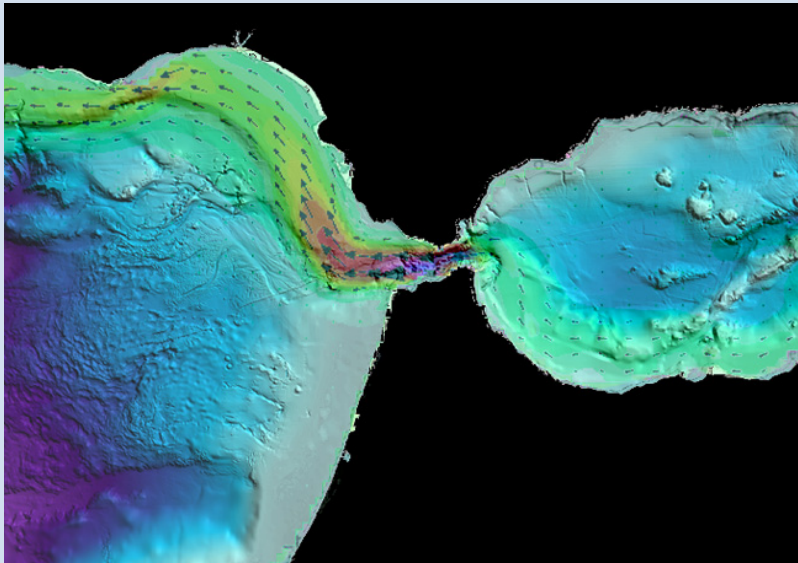
ESGEMAR has been using data (mainly bathymetry) since 2015

Uses for EMODnet data within ESGEMAR projects.

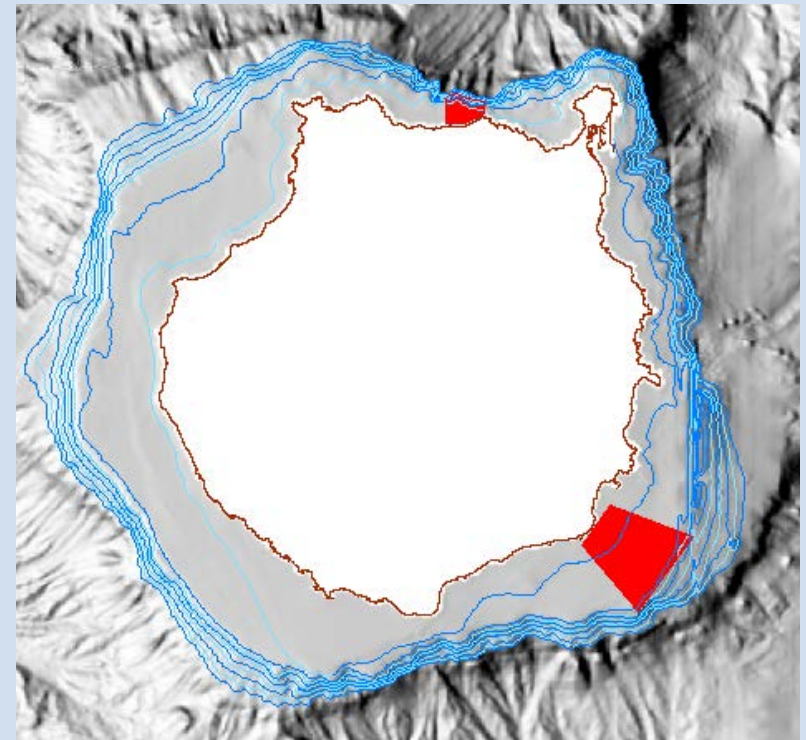
- Planning of survey tracks
- Assist in the tendering processes to calculate km survey lines
- Preparation of maps: Background data



ISSUE OF USING DATA FROM EMODnet



METOCEAN STUDY OF THE STRAIT OF GIBRALTAR
Aug 2015 – Aug 2015



**BATHYMETRY AND BIONOMIC MAPPING
IN GRAN CANARY ISLAND**
Ongoing project





ISSUE OF SHARING DATA FROM THE INDUSTRY

In most bathymetry survey contracts, data property belongs to the clients, and thereby, we would need an explicit permission to share data.

In some contracts, bathymetry is not the main objective of the field survey; is an ancillary technique to get the final product.

Bathymetry data assist us to better understand the seabed morphology, and aid to other geophysical techniques as Side scan sonar or reflection seismic. In those cases, bathymetry data belongs to us, so we are free to share.

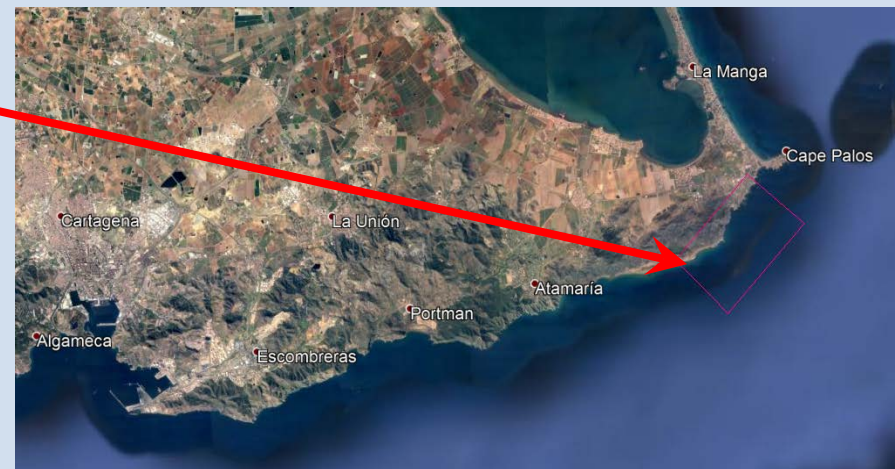
This data can be ingested to EMODnet to permit a wider use.



ESGEMAR EMODNET USE CASE

Sonar survey for bionomic characterization in Calblanque (Murcia, Spain)

The study area is located on the coast of Calblanque, Southern-east of Spain, near the Mar Menor and Cabo de Palos.



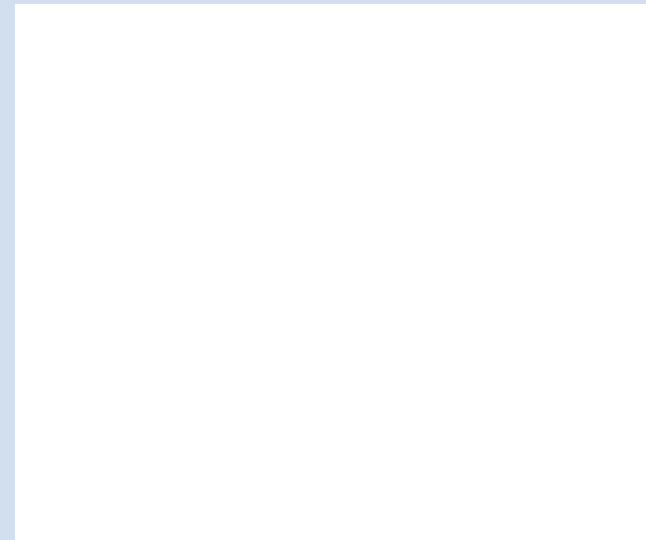


ESGEMAR EMODNET USE CASE

Sonar survey for bionomic characterization in Calblanque (Murcia, Spain)

In order to plan the survey lines in the best way (optimizing boat navigation time), data from EMODnet was used, to get a rough estimation of the bathymetry we would find in that area.

Data downloaded from EMODnet was 200x200m cells, but resulted Enough to calculate the survey lines.



EMODnet dataset used to plan the survey



ESGEMAR EMODNET USE CASE

Sonar survey for bionomic characterization in Calblanque (Murcia, Spain)

Using the data collected in real time with the sonar unit, a sonographic mosaic was obtained from the prospected area, and with the help of the observations taken by the client in a total of 9 control points, by means of video filming, has been possible to identify The morphological characteristics of the seabed were obtained with the aid of the shaded terrain model from the bathymetric data, differentiating types of bottom, as well as other elements (submarine outfall, blocks, scars ...).

Bottom classification map obtained



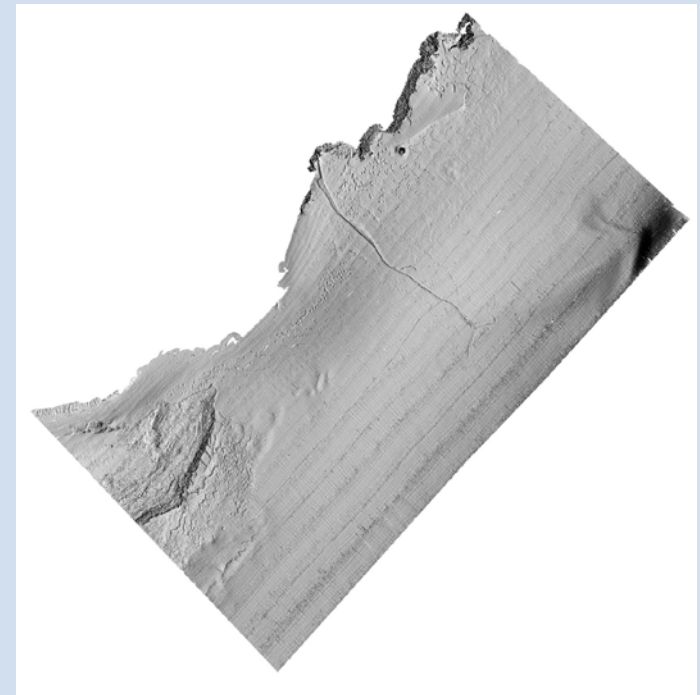
ESGEMAR EMODNET USE CASE

Sonar survey for bionomic characterization in Calblanque (Murcia, Spain)

Finally, the bathymetry, with a density of 0.5 meter cell, was not provided to the client, so ESGEMAR decided to share it in EMODnet

| | |
|-------------------------------|--|
| RESOLUTION (GRID in m) | 0.5 |
| DATA DATE | 03/03/2017 |
| STUDY AREA | Al sur de cabo de Palos |
| MIN. DEPTH (m) | -5 |
| MAX. DEPTH (m) | -70 |
| VERTICAL DATUM | MSL-ALICANTE |
| SURFACE SURVEYED (km2) | 9 |
| ECHOSOUNDER | NORBIT iWBMSe |
| PROCESSING SOFTWARE | HYPACK HYSWEEP |
| EPSG CODE | 32630 |
| FILE NAME | C_PALOS-02_03-032017-IGN-WGS84-UTM30-0.5 |

Summary of data ingested to EMODnet



Shaded terrain model produced





QUESTIONS

There is a plan to develop Multi-resolution DTM ($\frac{1}{4}$ of an arc minute). For the industry, specially in coastal areas, would be very useful to have more resolution, with direct download DTM.

Q1 : Would be interesting for you to be developed a high and very high resolution DTM in coastal areas for direct download, from bathymetry data ingested? Are you willing to upload your own data? If not, what is the reason and what needs to change to make you uploading your data?

Sometimes, download data is subject to negotiation. We have been denied some data from EMODnet partners, because its use is not plan for commercial activities, but in the industry, almost 95% are commercial activities.

Q2: Are there unreasonable restrictions for commercial uses of data? How can we remove them? How to convince people to remove such restrictions?



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THANK YOU VERY MUCH FOR YOUR ATTENTION



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European Marine
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How and why ESGEMAR shares bathymetry data. 12 September, 2018. Brussels