“History, Tradition and Culture in the Port-cities from the Istro-Pontic Space”

Romanian Contribution in the Black Sea Underwater Heritage Researches

9 May 2022

The National Institute for Research and Development on Marine Geology and Geoecology – GeoEcoMar
www.geoecomar.ro

- GeoEcoMar is a National Institute for Research and Development established in 1993, under the co-ordination of the Romanian Ministry of Education and Research. GeoEcoMar represents the focal point of national excellence in research and consultancy on marine, coastal, river and lacustrine geology, geophysics and geoecology, as well as a reference centre for Marine and Earth Sciences.
- It is a representative institution for Romanian research in Earth Sciences, its activity being focused on geology and geoecology of marine,coastal, deltaic, lacustrine and fluvial aquatic management.
- Its main research goal is the study of the Danube River-Danube Delta-Black Sea system, but with focus on any acqueous environment.
- Scientific domains are: geology, geoarchaeology, geophysics, geochemistry, biology and hydrology. It also has an extensive practical experience in harmonization of strategies, procedure and methodologies at regional level.
- GeoEcoMar has the headquarters in Bucharest and a branch in Constanta.
- GeoEcoMar has been always involved, either as coordinator or as partner in many environment projects funded by the 5th, 6th and 7th Framework Programmes , RO-BG CBC program (MARINE GEOHAZARD, HERAS), Horizon 2020 Besides the European programs, GeoEcoMar has been involved in many national projects (generally funded by the Ministry of Research and Innovation) and marine environment related contracts with authorities and economic operators.

MARINE RESEARCH INFRASTRUCTURES

The GeoEcoMar's infrastructure consists of many laboratories, offices (located either in Bucharest, where the institute headquarters are, or in Constanta), a research fleet (two research vessels and some motorboats), offshore moored observatories, coastal monitoring stations, online GNSS stations and auto facilities.

The main research facilities from Bucharest include geophysics, bathymetry, hydrochemistry, geoarcheology, paleo-oceanography labs, a data center and a conference room (capacity up to 50 people). At the Constanta branch of GeoEcoMar there are four fully equipped laboratories (geochemistry, sedimentology, biology and seismo-acoustics) and a conference room (capacity of up to 30 people).

- **R/V "Mare Nigrum"** – its technical characteristics (displacement of 3,000 t, length of 82 m and width of 13.6 m), accommodation (can host up to 25 scientists) and research facilities (7 laboratories, various scientific equipment) make R/V Mare Nigrum to be considered the largest research vessel operating in the Black Sea.
- **Onboard equipment**

✓ Multibeam bathymetric system SEABEAM 1050 Elak Nautik;
✓ Seismo - acoustics CHIRP Star Full Spectrum;
✓ Magnetometer Geometrics G-87;
✓ On-board (GMNKM) and bottom (GDK) gravimeters;
✓ ROV (1000 m water deep);
✓ Sub-bottom profiler;
✓ Side Scan sonar
✓ Multi-corer Mark II-400;

- **Onboard labs**

✓ Sedimentology
✓ Hydrology
✓ Geophysics
✓ Biology
✓ Geochemistry
✓ Seismo-acoustics
✓ Computer room

Romanian Contribution in the Black Sea Underwater Heritage Researches
LEGISLATION

- The UNESCO Convention on protecting underwater character which have been partially or totalcultural heritage, adopted on 2nd November 2001, is the international treaty targeting the safeguarding of underwater cultural heritage.
- Underwater cultural heritage means all traces of human existence having a cultural, historical or archaeological ly under water, periodically or continuously, for at least 100 years.
- The objectives and general principles of the UNESCO Convention are: to provide and improve the protection of the underwater cultural heritage.
- The convention encourages responsible non-intrusive access to observe or document in situ underwater cultural heritage, to create public awareness, appreciation, and protection of the heritage.
- Romania and Bulgaria have joined the UNESCO Convention on the protection of the underwater cultural heritage.
- The Western Black Sea shelf was defined entirely as an archaeological site. The underwater cultural heritage (UCH) of the Black Sea represents the unique history and identity of the region.
- In Romania, the UNESCO Convention on protecting underwater cultural heritage was adopted through the Law no. 99/2007.
- All the works that take place in this area and which may have an impact on the submarine archaeological heritage, must obtain a favorable Permit from the Ministry of Culture.

Projects coordinated by NIRD GEOECOMAR

The "HERAS" project is the acronym of "Submarine archaeological heritage of the western Black Sea continental shelf "

-period of implementation -2015-2018 financed under the Cross-border Cooperation Programme Romania – Bulgaria 2007-2013.

The purpose of the project - to explore the western Black Sea continental shelf and identify underwater archaeological sites in order to promote them in the "Scuba Diving" adventure tourist circuit.

The" HERAS" project promoted Scuba Diving adventure tourism in order to increase the tourism potential of the western Black Sea,

through the identification and promotion of the underwater archaeological heritage.

- TOTAL VALUE : 1,197,414.74

Lead Partner : GeoEcoMar

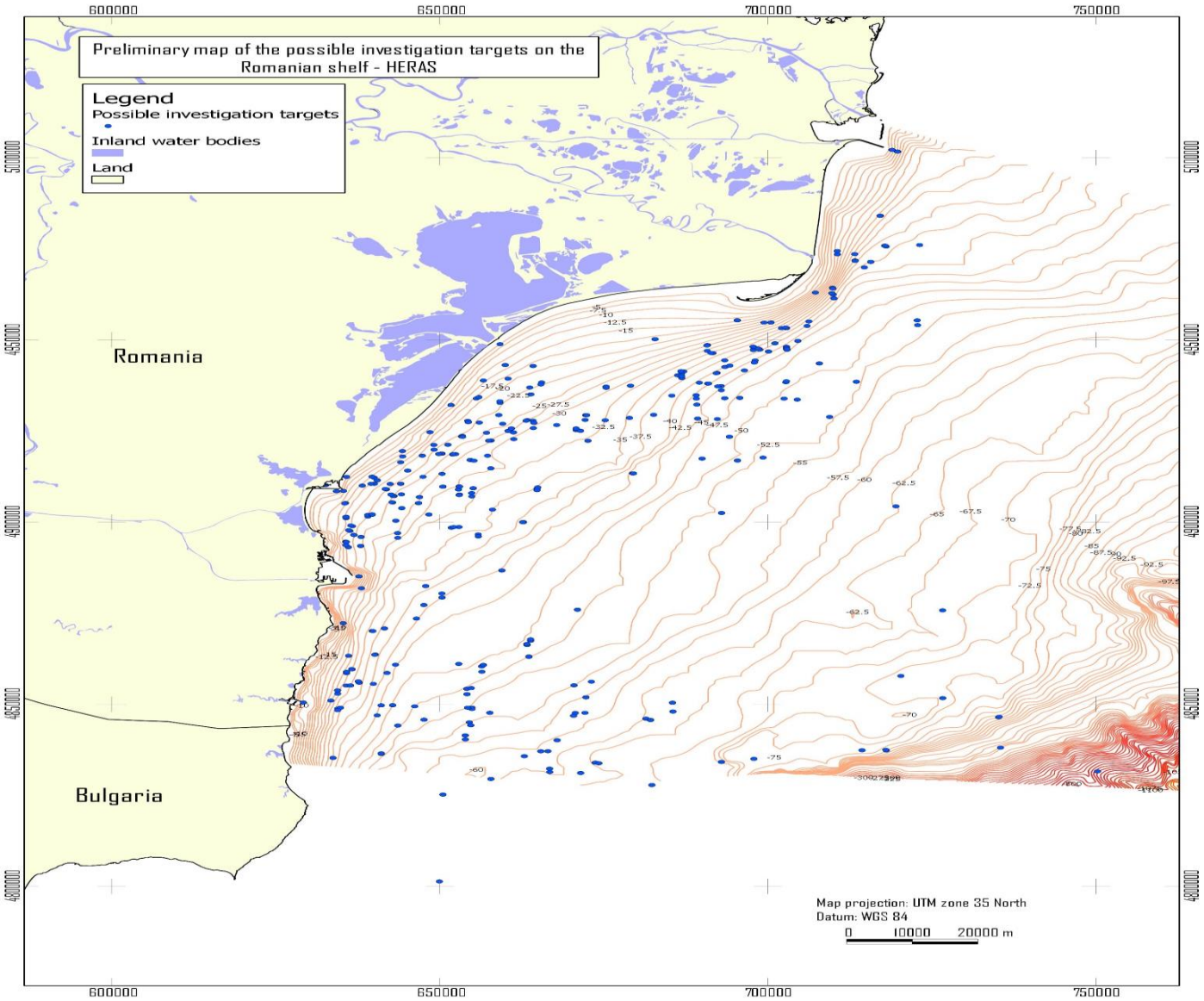
MINAC, IO-BAS, Kavarna Museum ,Respiro- ONG

Project General Objective:

Development of the touristic potential of the western Black Sea coast by the identification and promotion of the common underwater multi-millenary cultural heritage resources.

"HERAS" Project results:

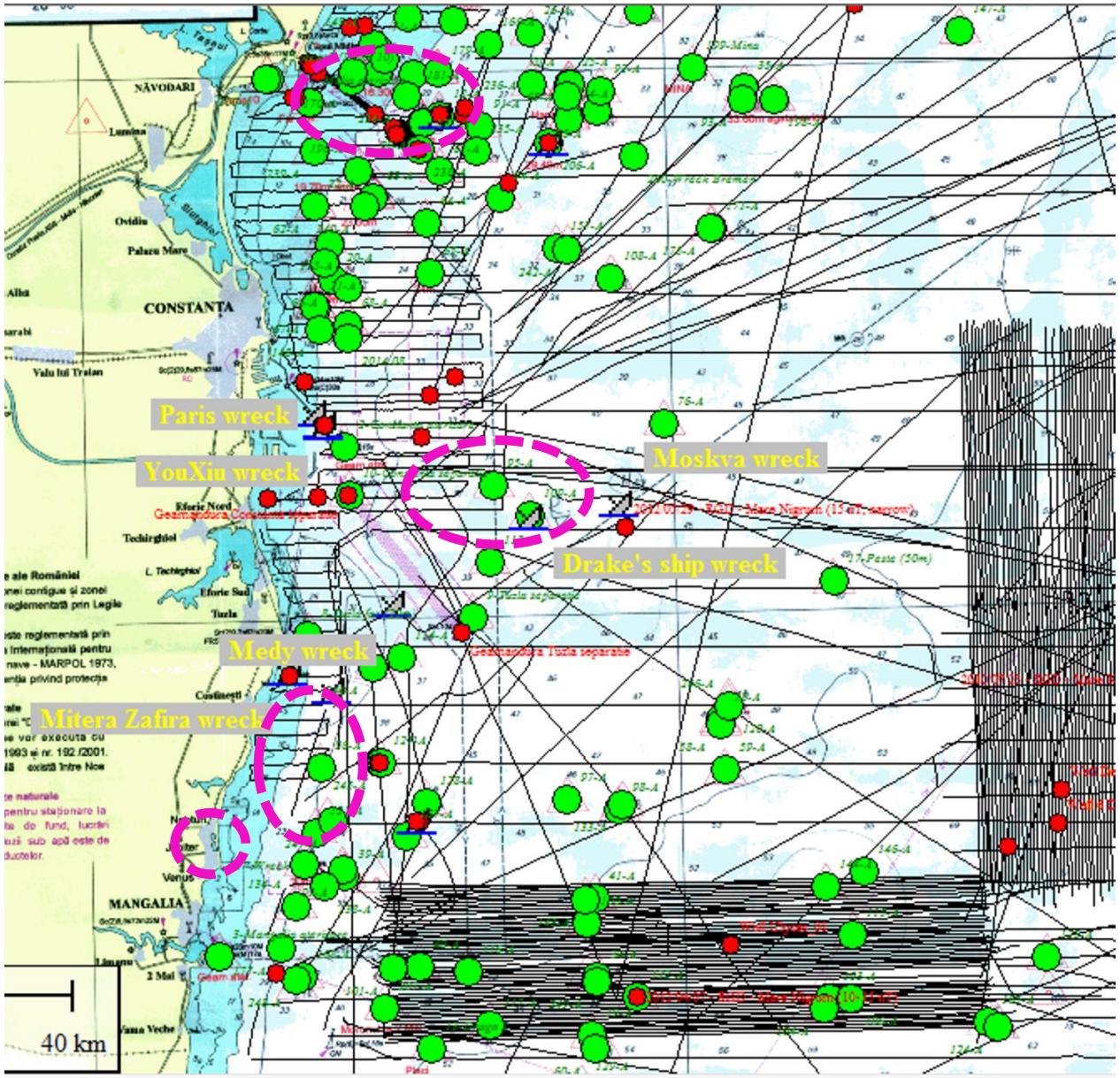
Project webpage www.herasprojectcbc.eu / Database organized according to the UNESCO model./ Magnetometric investigations of the submarine archaeological heritage on the Romanian offshore with the RV"Mare Nigrum"/HERAS Book/ Management Plan- Guide for underwater archeology tourism on the Black Sea;/2 Conferences, 9 workshops and 2training sessions./1 Promotional film


Preliminary map of the possible investigation targets on the Romanian shelf - HERAS
Legend
Possible investigation targets
Inland water bodies
Land
Romania
Bulgaria
600000
650000
700000
750000
5100000
5050000
5000000
4950000
4900000
4850000
4800000
Map projection: UTM zone 35 North
Datum: WGS 84
0 10000 20000 m

Submarine Archaeological Heritage of the Western Black Sea Shelf “HERAS", MIS-ETC-CODE 578

Cruise of R/V Mare Nigrum

Magnetometric mappings covered clusters of sites

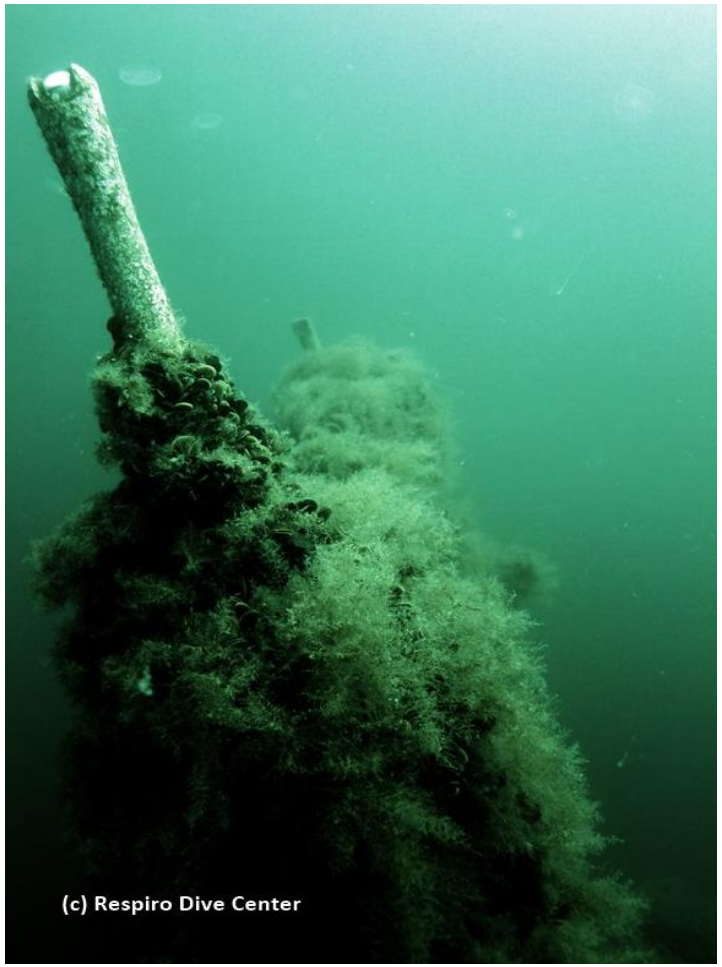


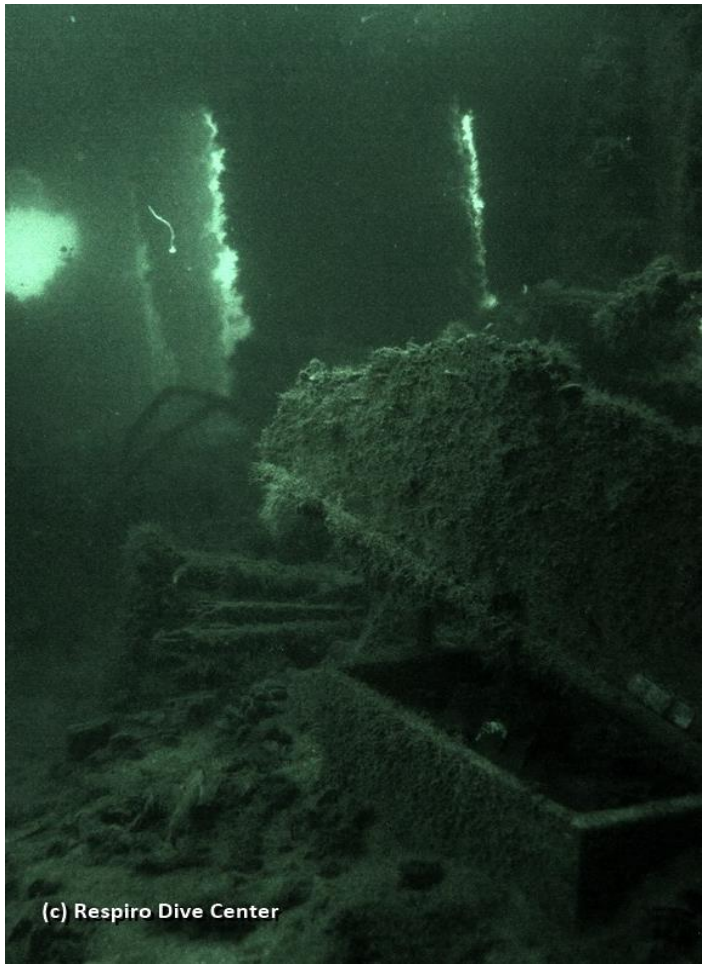
Cruise of R/V Mare Nigrum

Magnetic mapping of Moskva site

- The site of Moskva wreck is included on the short list of known wrecks, which are lying on the Romanian offshore;
- A narrow, weak (15 nT) magnetic anomaly was also measured (2015/05/29) about 1 nm SSE from the wreck site;

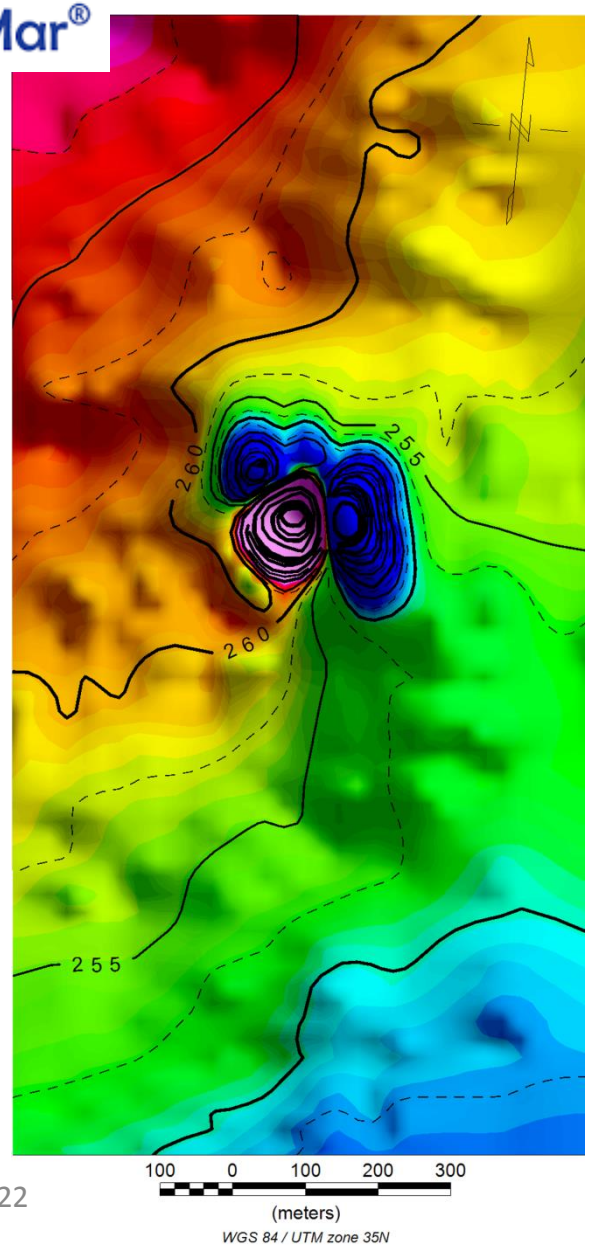
SOVIET SUBMARINE" SCHUKA 213"
WRECK



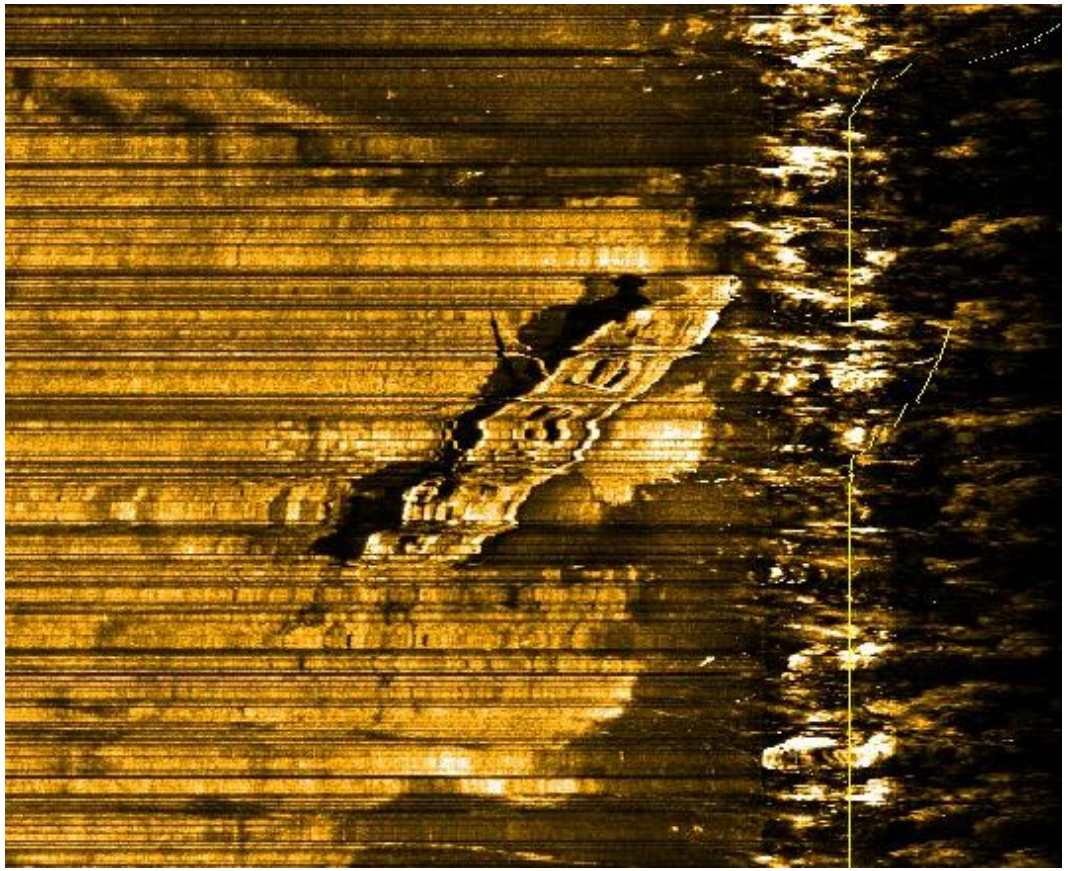


Cruise of R/V Mare Nigrum

Magnetic mapping of Drake's site

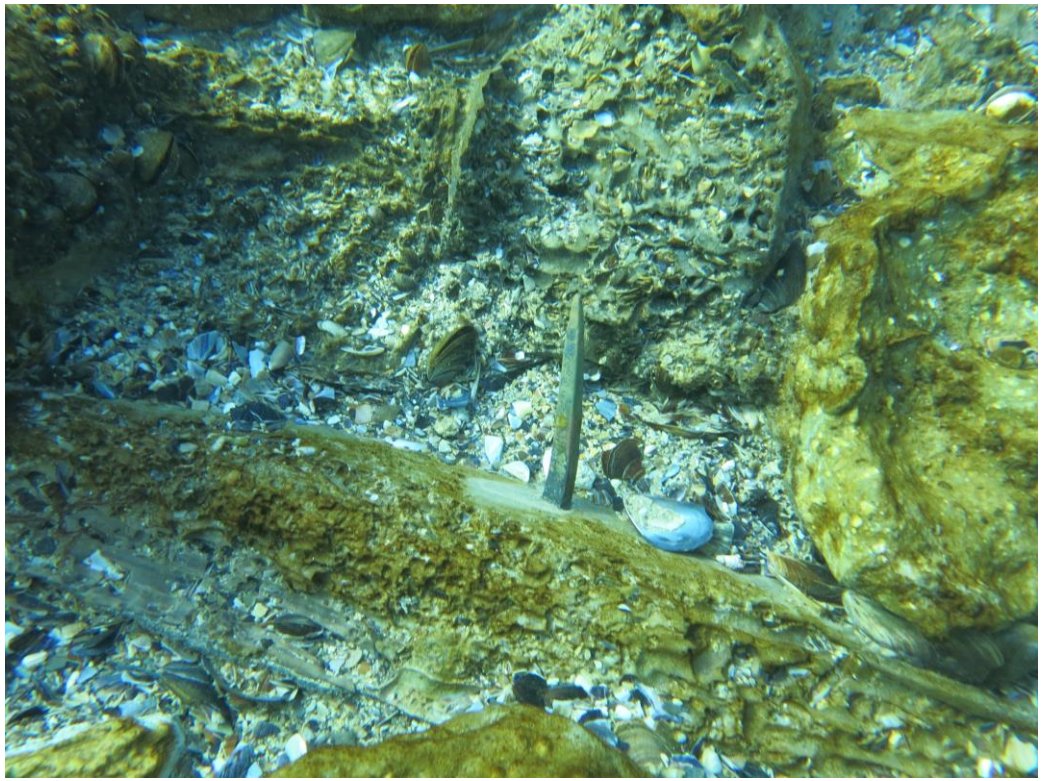


Amplitude of mapped magnetic anomaly: -90 to 820 nT;
Magnetic detection range: 120-150 m in 42.5 m water depth.



Antique wreck photos

Eforie South antique Wreck



Costinesti antique Wreck

PROJECT : “Rute Turistice Subacvatice Culturale in Vestul Marii Negre “

“Western Black Sea Underwater Cultural Tourist Routes”

http://wbsunderwatertours.eu/

European Maritime and Fisheries Fund Work Programme 2015

Action 1.2.1.8 – Thematic tourist routes on underwater cultural heritage

- EASME/EMFF/2015/1.2.1.8 / Duration : 16 months

Project General Objectives:

To promote the competitiveness of the Black Sea coastal tourism sector and to diversify the tourism offer by introducing a new touristic package

Project Results:

- Project Website
- Establishment of the new touristic product: “Western Black Sea Underwater Cultural Touristic Routes.
- The proposed tourist routes are:

1). Wrecks and Artificial Reefs.

2). “Ancient Underwater Trade Route” (underwater archaeological sites and artefacts).

3). Natural Heritage Route.

4). Underwater Archaeological Artefacts Inland Route.

- “Western Black Sea Underwater Cultural Tourist Routes” **BROCHURE**
- ”SME Exchange of Best Practices” Workshop.
- Workshops and conferences with Coastal Stakeholders.

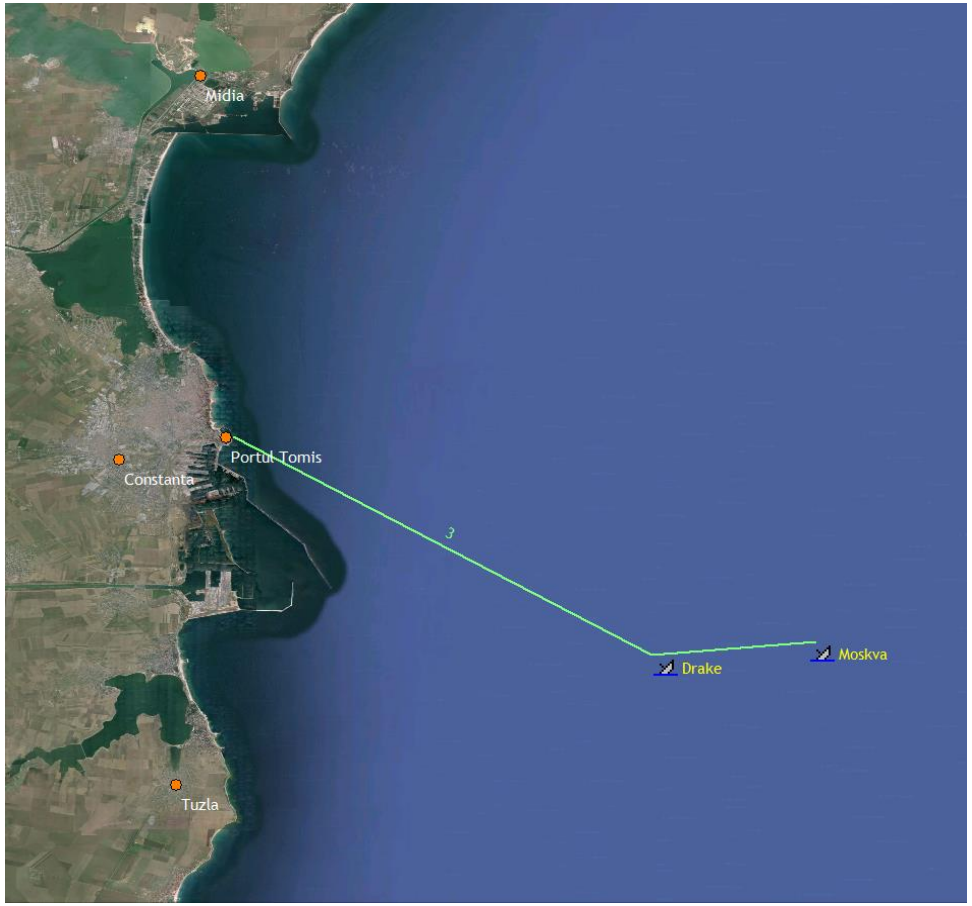
ROUTE I: WRECKS AND ARTIFICIAL REEFS ON THE WESTERN BLACK SEA -RO

Route I : Marina Tomis Constanta, „Arkadia" wreck , „Schuka 213" wreck, back to Marina Tomis Constanta 26.7 NM

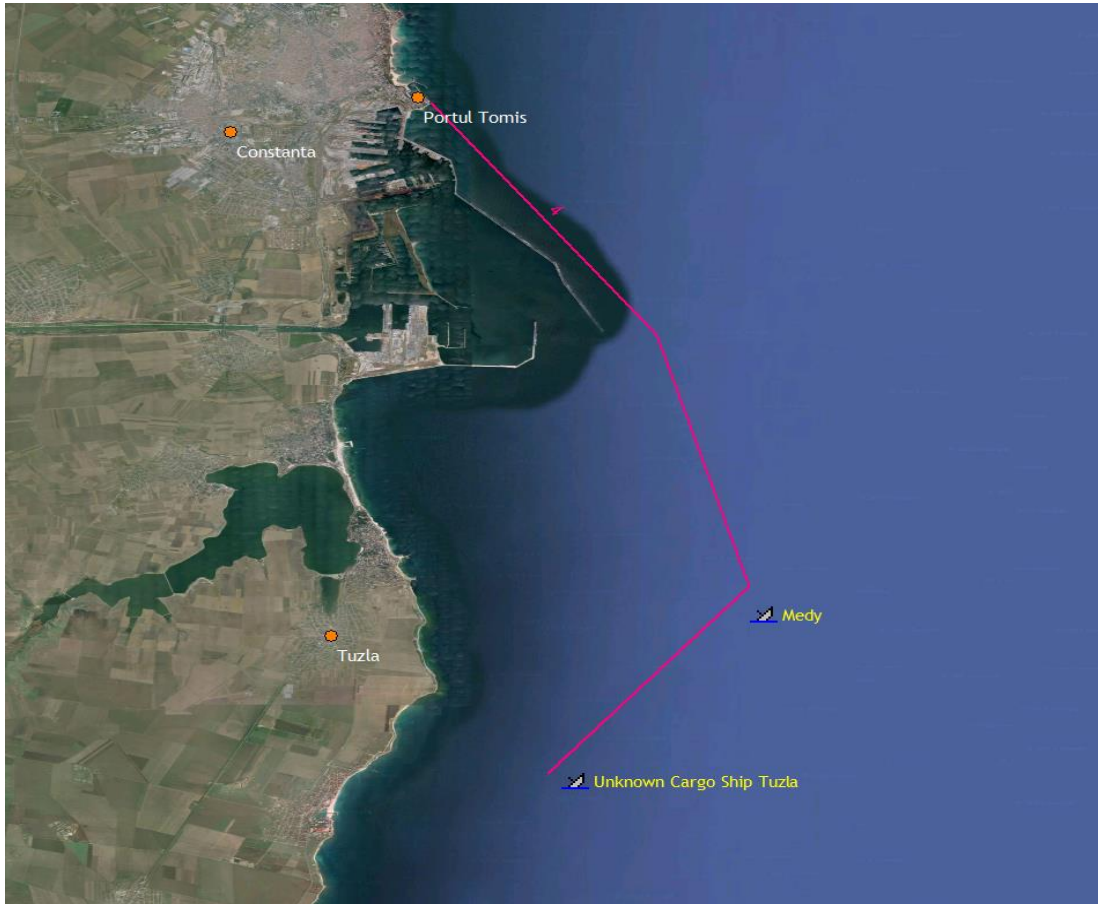
Route II : Marina Tomis Constanta, Sadu wreck , You Xiu wreck , Paris wreck back to Marina Tomis Constanta - 7.2 NM.

ROUTE I: WRECKS AND ARTIFICIAL REEFS ON THEWESTERN BLACK SEA -RO

Route III : Marina Tomis Constanta, “Moskva” wreck , “Sophie” wreck –back to Marina Tomis Constanta – 28.7 NM.



Route IV: Marina Tomis Constanta , Medy wreck , Nicholas wreck – back to Marina Tomis Constanta – 28.5 NM.



NEXT STEPS IN COOPERATION:

PROJECT : **“PRECUHER”**

“PRESERVATION OF CULTURAL HERITAGE (LAND AND UNDERWATER) ALONG THE EUROPEAN COAST”

HORIZON-CL2-2022-HERITAGE-01-08

Coordinator: University Gustave Eiffel-Paris- France

Project value : 4 mil Euro.

Partners: 19- NIRD GEOECOMAR-Partner .

- **Period: 36 months (starting date september, 2022)**
- **The overall objective:**

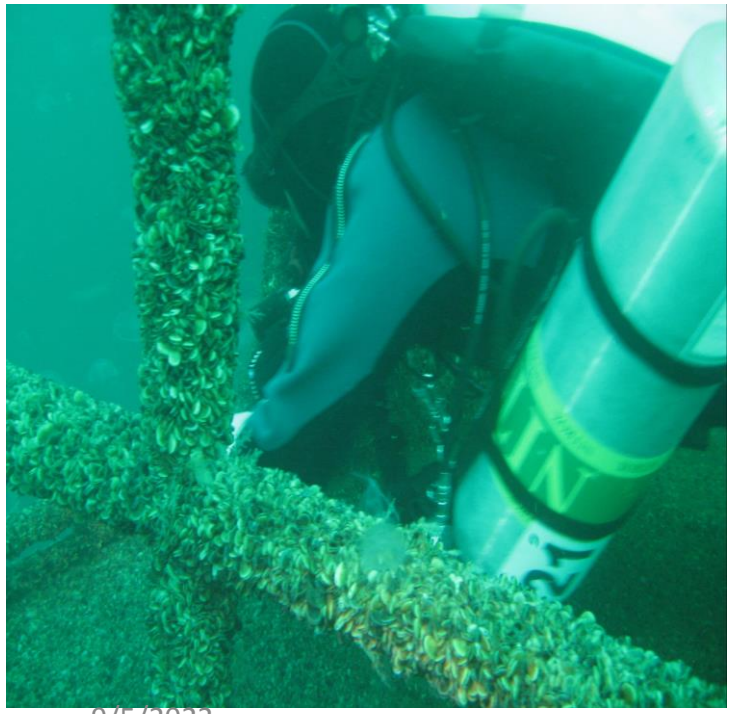
Protection of the European Ground and Underwater Heritage, found under Climate Changes and Human impact, through increasing the level of awareness; proposals for protective measures, including environment education.

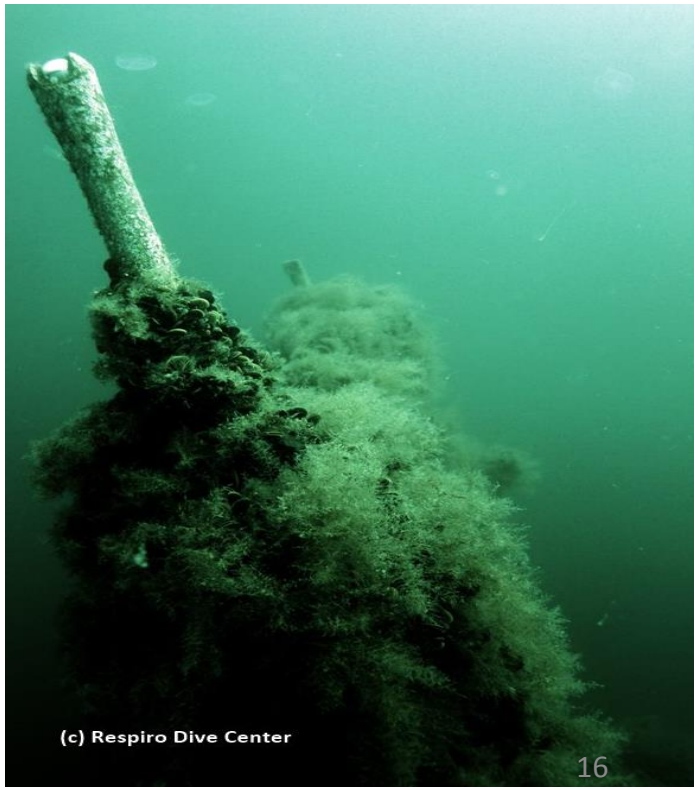
CONCLUSIONS:

The underwater cultural heritage (UCH) of the Black Sea represents the unique history and identity

of the region.

These shipwrecks are subject of interest for researchers and tourists (scuba divers).
The scuba diving tourism can be a source of local tourism development.





Thank you !

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