



COMMON MARITIME AGENDA FOR BLACK SEA

UNDERWATER CULTURAL HERITAGE AND EXPLORATION OF POTENTIAL
SITES IN THE BLACK SEA

13 April 2021



Romanian Contribution in the Black Sea Underwater Heritage Researches

The UNESCO Convention on the Protection of the Underwater Cultural Heritage, adopted on 2 November 2001 is an international treaty aimed at saving the underwater cultural heritage.

In Romania the Western Black Sea shelf was defined entirely as an archaeological site.

The adoption of the UNESCO Convention as international treaty to save the underwater cultural heritage facilitates joint exploration of the Western Black Sea coasts. In Romania, the UNESCO Convention on protecting underwater cultural heritage was adopted through Law no. 99/2007.

According to the provisions of this law, activities directed at underwater cultural heritage must use non-destructive techniques and survey methods in preference to recovery of objects.

Also, activities directed at underwater cultural heritage shall avoid the unnecessary disturbance of human remains or venerated sites.

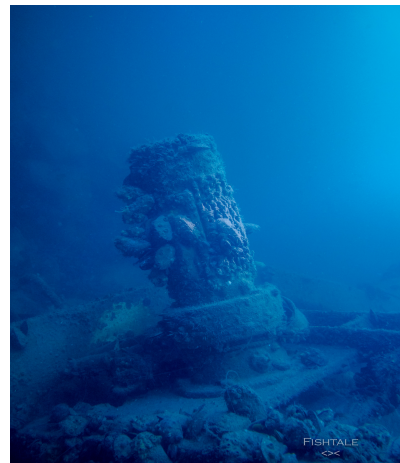
Public access to in situ underwater cultural heritage shall be promoted, except where such access is incompatible with protection and management.

Historical sites, both on land and underwater in particular, became attractive to tourists around the world.

Vestiges of this common history were studied on shore, where ancient cities and towns are known to archaeologists and transformed into tourism interest areas. Eg:

(Histria), Tomis (Constanța) - Callatis (Mangalia) . citadels,

Wrecks: „Arkadia” wreck , „Schuka 213” Sadu wreck , You Xiu wreck , Paris wreck





The National Institute for Research and Development on Marine Geology and Geoecology – GeoEcoMar



www.geoecomar.ro

- It was founded in 1993 as the Romanian Centre of Marine Geology and Geoecology, under the coordination of the Ministry of Scientific Research. Due to its technical capabilities and scientific performance achieved in a short period of time, the centre has become in 1996 an “institute of national interest”, its main research goal being the complex study of the Danube River-Danube Delta-Black Sea macro-geosystem.
- Results obtained within the research projects, accomplished with Romanian and international partners, led to getting the statute of “European Center of Excellence (Euro-EcoGeoCentre Romania)” within the 5th Framework Programme.
- GeoEcoMar has been always involved, either as coordinator or as partner in many significant marine environment projects funded by the 5th, 6th and 7th Framework Programmes of the EU (e.g. FP6 – SESAME, FP7 – PERSEUS, HYPOX, COCONET), RO-BG CBC program (MARINE GEOHAZARD, HERAS), Horizon 2020 (DANUBIUS-PP, Sust-Black), etc. 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
 - ✓ 2D seismics
 - ✓ CTD SBE 25 Sealogger with Rosette sampler
 - ✓ Gravity corers;
 - ✓ Multi-corer Mark II-400;
 - ✓ Grab sampler;
 - ✓ Nets for biology and microplastics
- Onboard labs
 - ✓ Sedimentology
 - ✓ Hydrology
 - ✓ Geophysics
 - ✓ Biology
 - ✓ Geochemistry
 - ✓ Seismo-acoustics
 - ✓ Computer room



The traditional Bulgarian partner was IOBAS Varna



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 Bulgarian partner was IOBAS from Varna.**

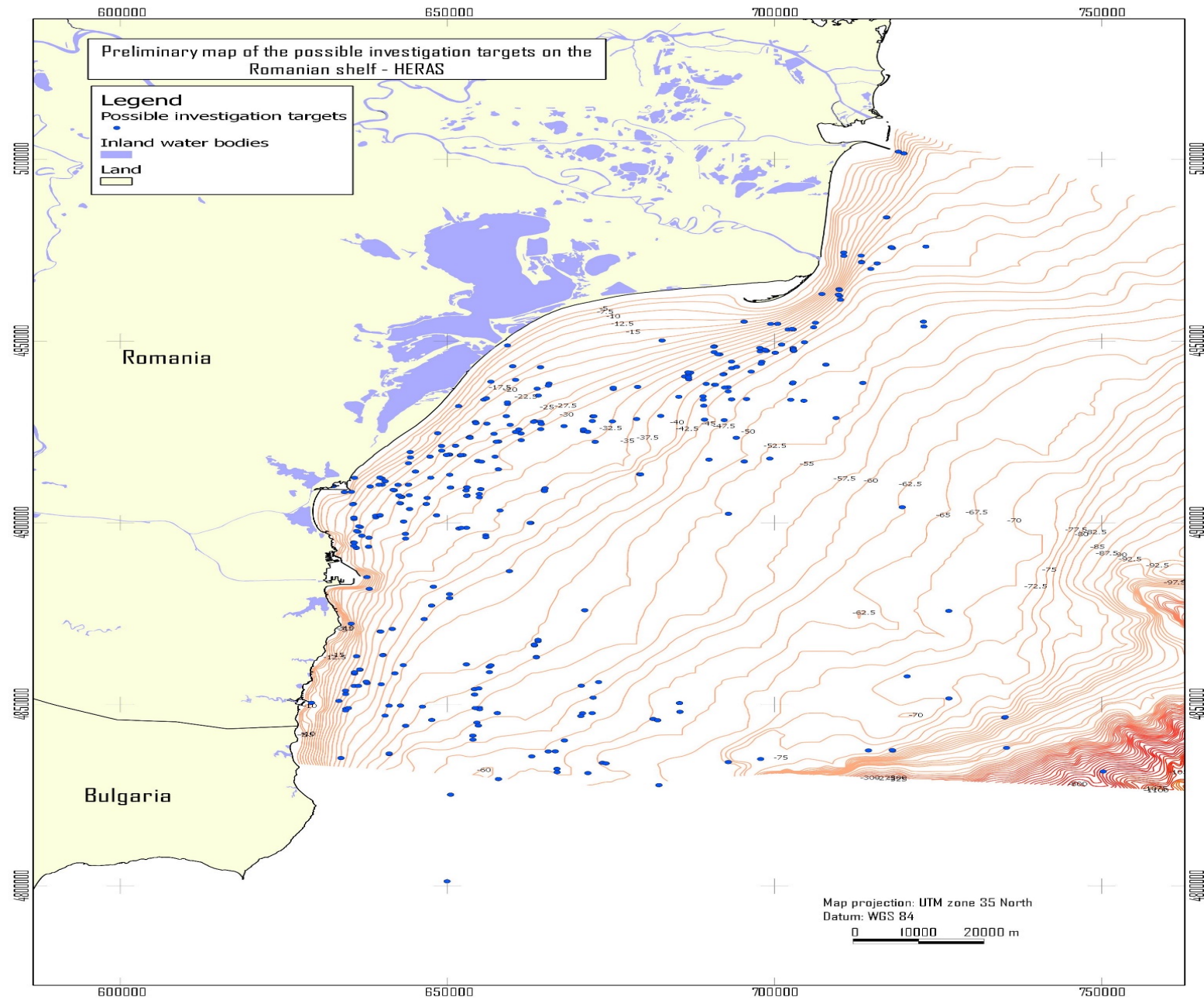
The purpose of the project - to explore the western Black Sea continental shelf and identify underwater archaeological sites in order to promote them in the "Scuba Diving" adventure tourist circuit.

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.

"HERAS" Project results:

Project webpage www.herasprojectcbc.eu

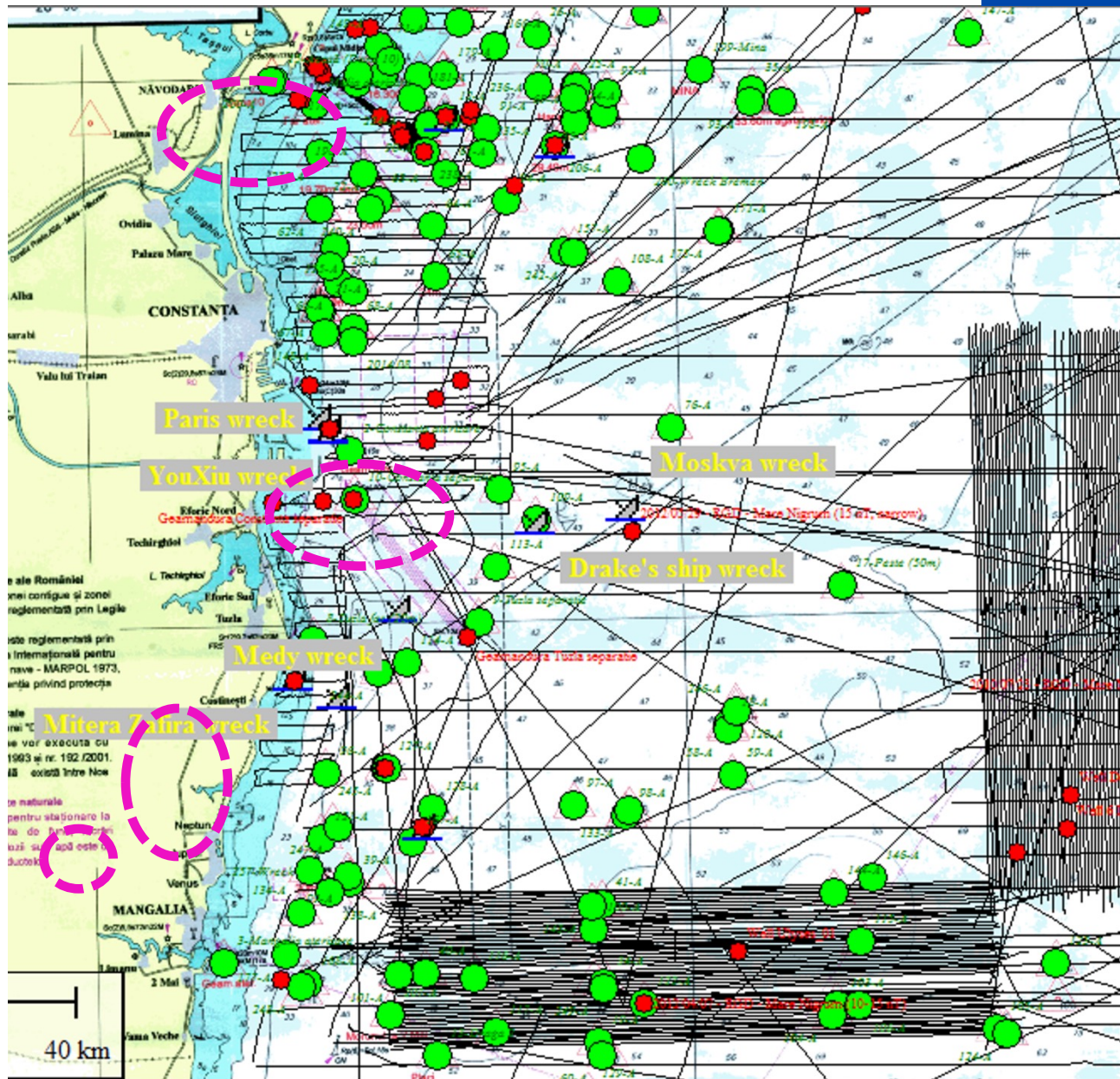
- Database organized according to the UNESCO model.**
- Side Scan Sonar and Magnetometric investigations of the submarine archaeological heritage on the Romanian offshore with the RV "Mare Nigrum"**
- HERAS Book**
- Management Plan- Guide for underwater archeology tourism on the Black Sea;**
- 2 Conferences,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





Cruise of R/V Mare Nigrum

Magnetometric mappings covered clusters of sites





Cruise of R/V Mare Nigrum

Magnetic mapping of Moskva site

Amplitude of mapped magnetic anomaly: -225 to 1300 nT;
Magnetic detection range: 200-220 m in 44 m water depth.

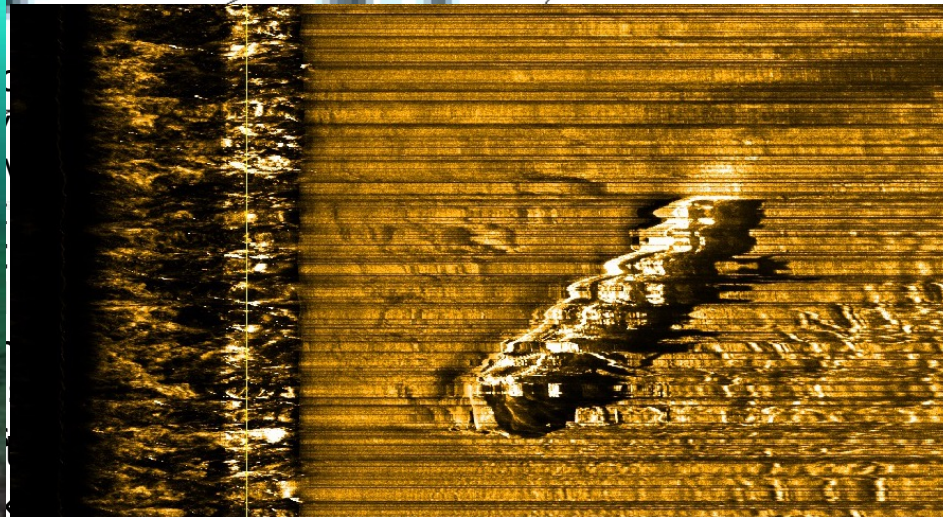
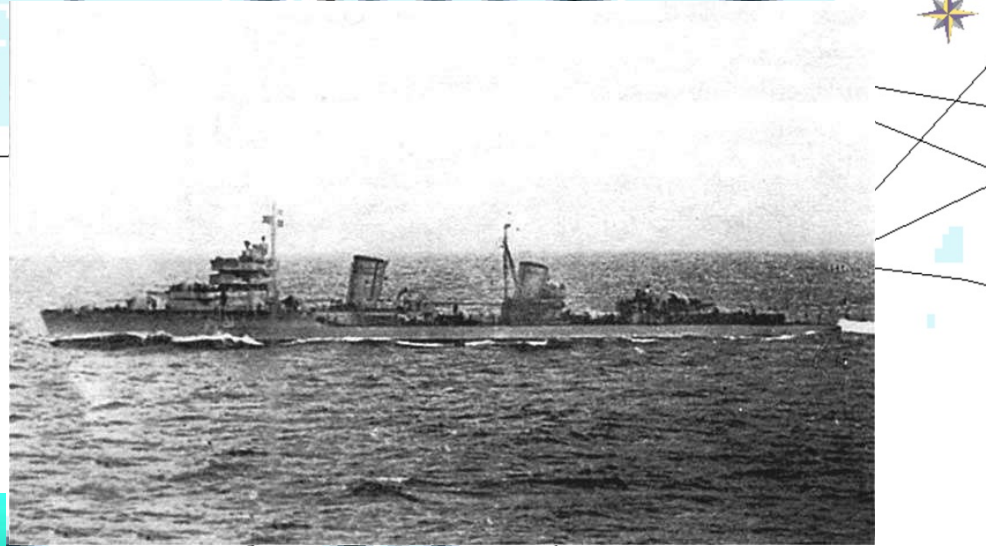
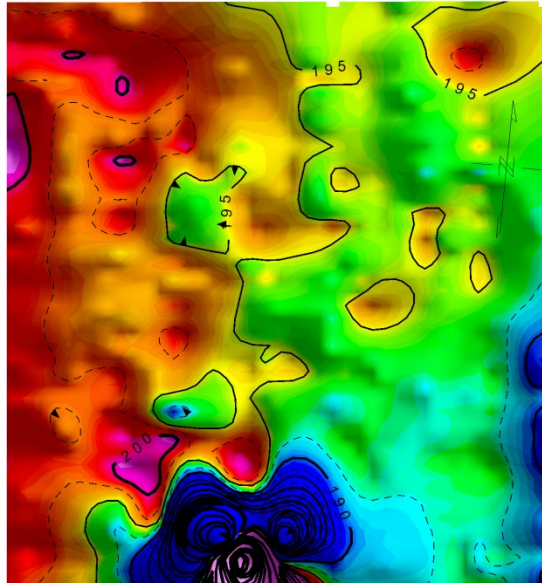


photo Rene Lipmann

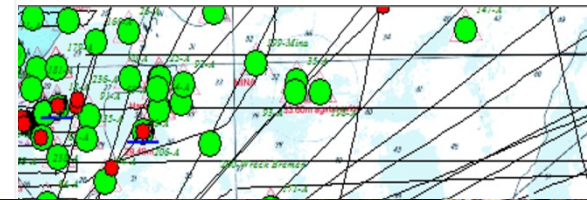
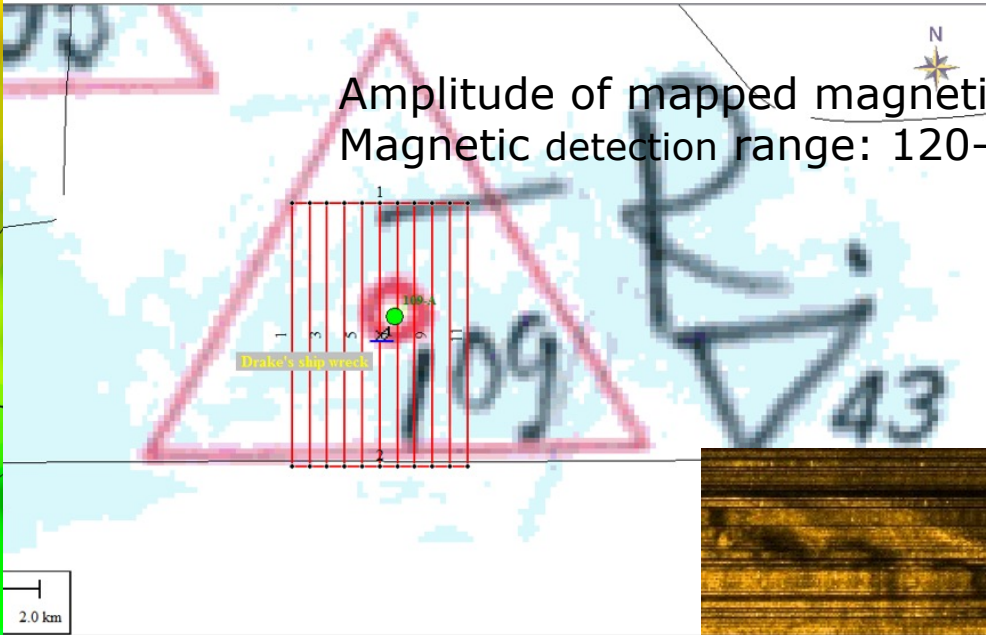
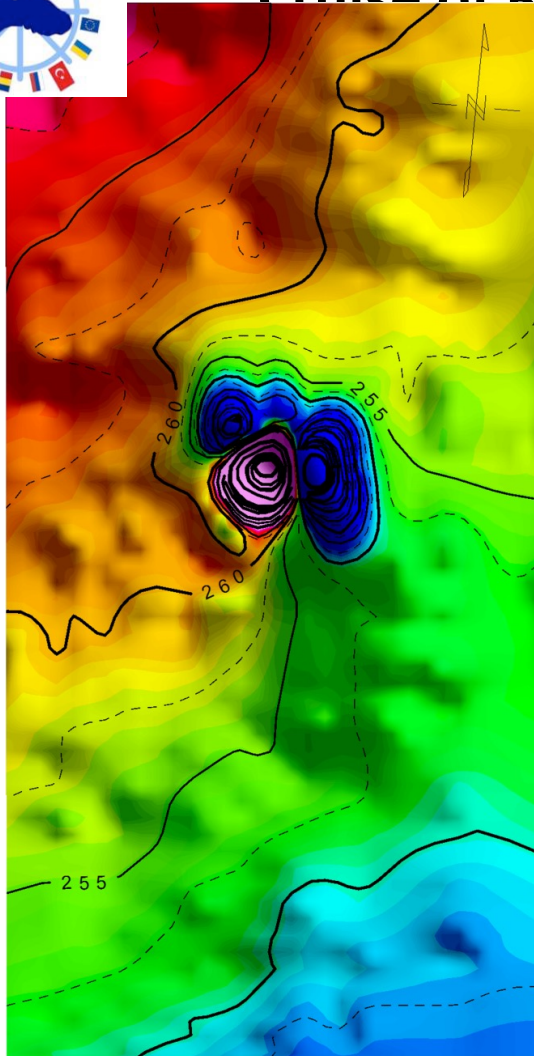
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Cruise of R/V Mare Nigrum

Magnetic mapping of Drake's site

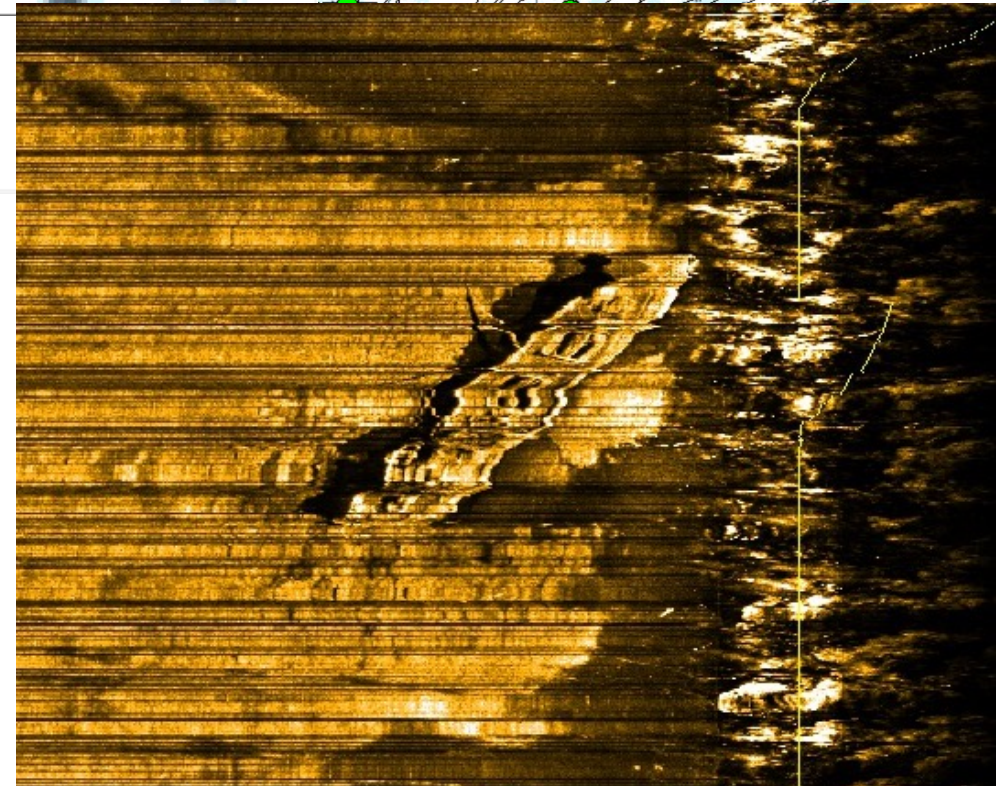
Amplitude of mapped magnetic anomaly: -90 to 820 nT;
Magnetic detection range: 120-150 m in 42.5 m water depth.



ardly from Moskva site,
reck was not crossed by any previous

included on the short list of previously

❖ The site overlaps with one nets hanger.



Project coordinated by NIRD GEOECOMAR

PROJECT : “Western Black Sea Underwater Cultural Tourist Routes “

- European Maritime and Fisheries Fund Work Programme 2015 Action 1.2.1.8 – Thematic tourist routes on underwater cultural heritage with the same traditional bulgarian partner- IOBAS Varna, and SME of scuba divers.
- EASME/EMFF/2015/1.2.1.8 / Duration : 16 months

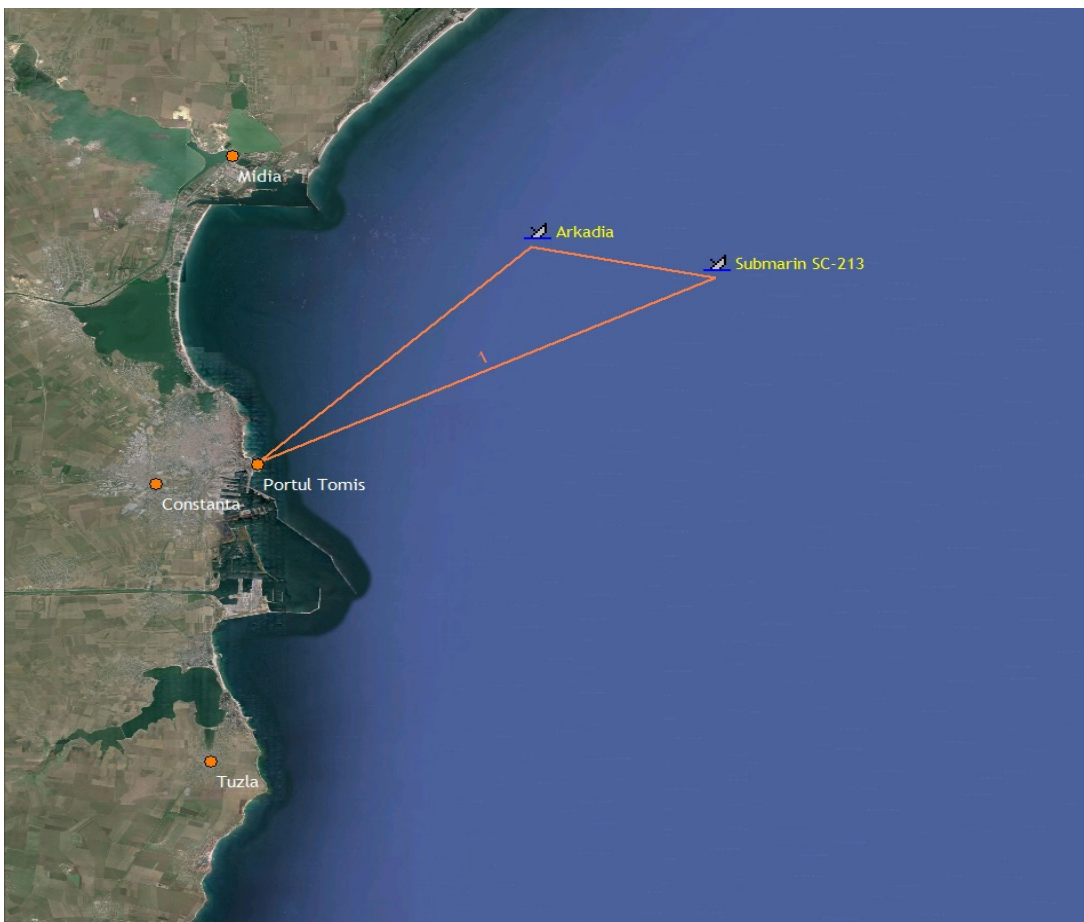
Project General Objectives: To promote the competitiveness of the Black Sea coastal tourism sector and to diversify the tourism offer by introducing a new touristic package

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.

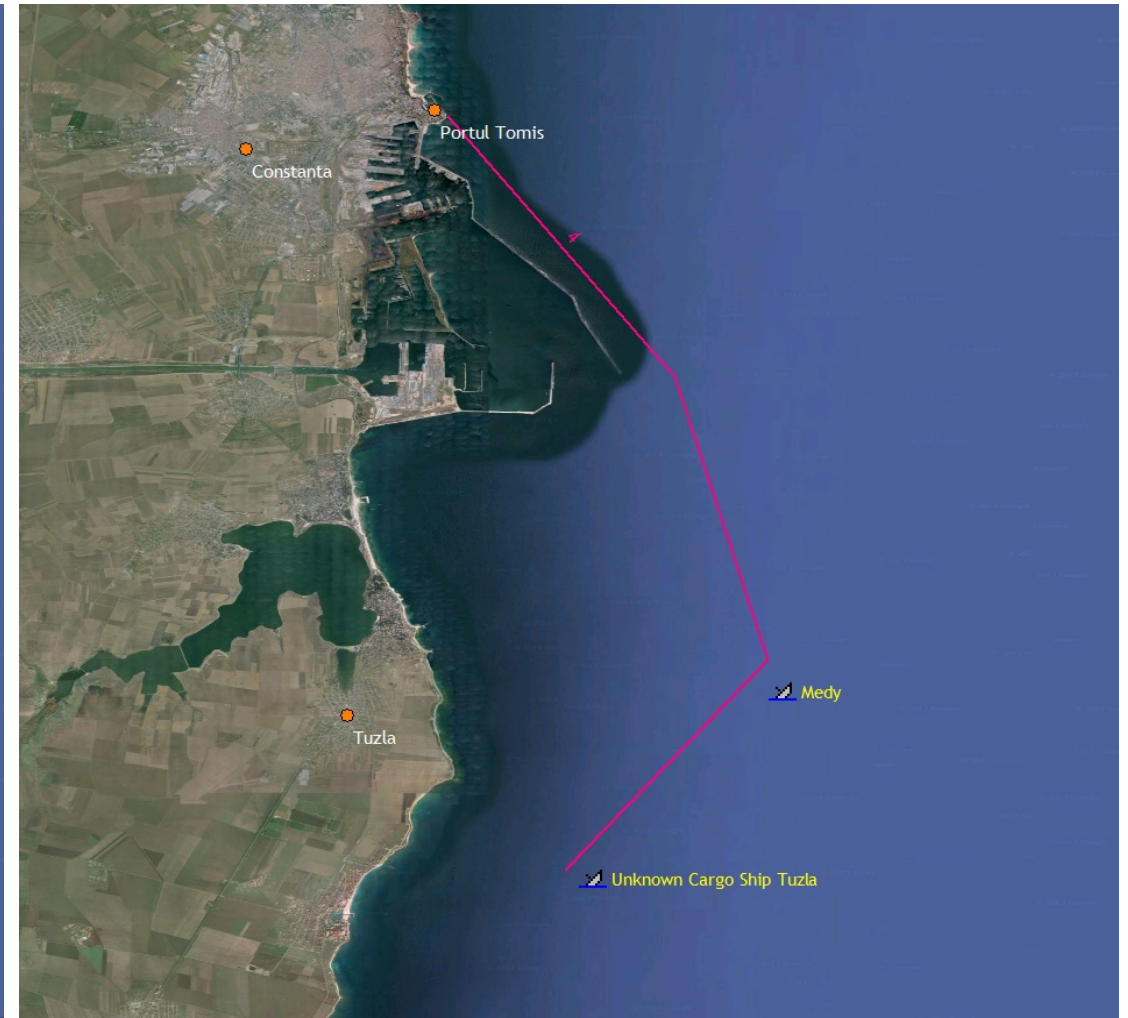


ROUTE I: WRECKS AND ARTIFICIAL REEFS ON THE WESTERN BLACK SEA -RO

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 : BRIDGE-BS**

- Research and Innovation Action under Horizon 2020/Grant Agreement No: 101000240

Coordinator: MIDDLE EAST TECHNICAL UNIVERSITY (Turkey)

- **Partners: 32 (7 partners from Turkey) NIRD GEOECOMAR-Partner**

- **NIRD GeoEcoMar Coordinator-Dr. Dan Vasiliu**

- **Period: 2021 – 2025 (starting date June 1, 2021)**

- The overall objective of BRIDGE-BS is to advance the Black Sea's marine research and innovation to
- co-develop Blue Growth pathways under multistressors for the sustainable utilization of the
- ecosystem services.
- As a critical contribution to the science-based policy needed to preserve the Black Sea ecosystems,
- BRIDGE-BS proposes a multidisciplinary, multisectoral program building on regional and international
- initiatives.
- The project aims to develop predictive tools and capabilities necessary to understand and predict the
- impacts of climate-driven and anthropogenic multi-stressors on the services stemming from Black
- Sea ecosystems. BRIDGE-BS Project is structured around “three” interconnected nodes: Service
- Dynamics, Blue Growth Incubators and Empowered Citizens.



Thank you !



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