



Experience from the Interreg Baltic  
Sea Region Programme  
project “BalticRIM” and  
Relevant Ideas  
for the Black Sea

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Webinar on Underwater Cultural Heritage and Exploration  
of Potential Sites in the Black Sea. 13 April 2021





Phanagoria, 1st century BC. Depth 2 m.



Patrey, VI-V centuries BC. Depth 2 m.



Submarine "Gagara", 1918. Depth 60 m.



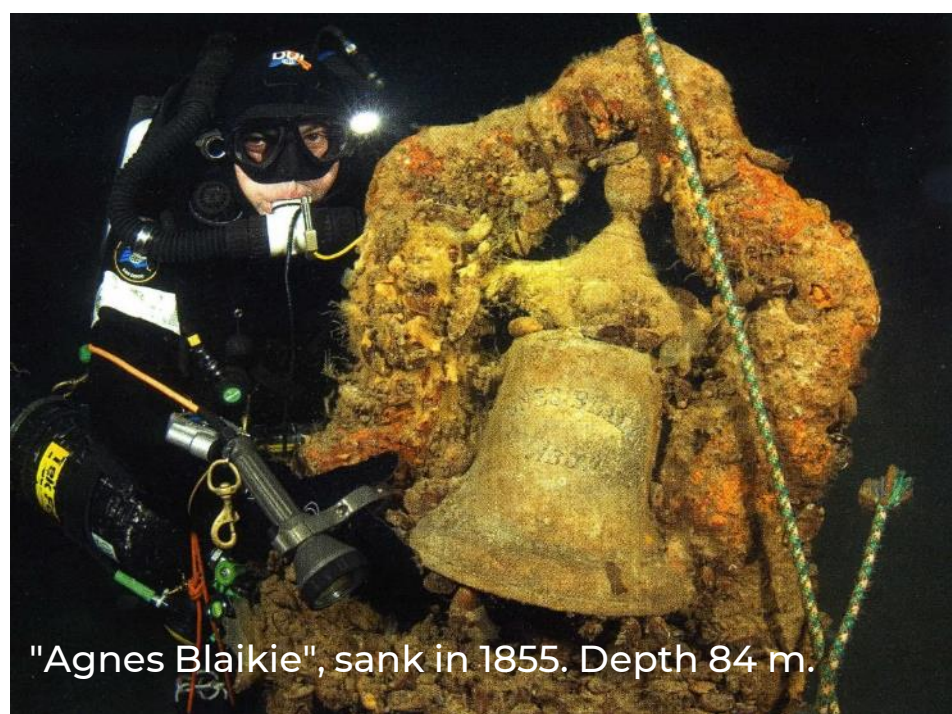
Phanagoria, 1st century BC. Depth 2 m.



The underwater heritage of the Black Sea is very rich. More than 6000 UCH objects in a whole are identified in Russian marine areas.

The Likhachev Russian Heritage Institute produced Lists (Vault) of underwater cultural heritage sites of the Black and Baltic Seas, Arctic and Far East, as well as Russian underwater cultural heritage sites sunk abroad (2000-2015).

- UCH List of the Black Sea contains:
- Antique period (VIII BC - VI AD)
  - Middle Ages (VII - XVI)
  - Modern times (XVII -1918)
    - World War I (1914-1918)
  - Newest time
    - Civil War (1918-1920)
    - World War II (1941-1945)
    - Post-war period (1946-present)

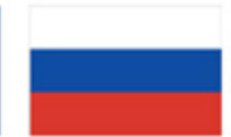


"Agnes Blaikie", sank in 1855. Depth 84 m.



Italian merchant ship. 13th century. Depth 10 m.





EUROPEAN UNION  
EUROPEAN  
REGIONAL  
DEVELOPMENT  
FUND

WITH FINANCIAL  
SUPPORT OF THE  
RUSSIAN  
FEDERATION

BalticRIM Russian partnership -  
AO IO RAS and associated partners

# BalticRIM

[www.submariner-network.eu/balticrim](http://www.submariner-network.eu/balticrim)

The BalticRIM project developed Baltic Sea wide principles and elaborated national practices for integrating maritime cultural heritage into maritime spatial planning. The project strived to contribute to a culture of sustainability, where the diversity and accessibility of maritime attractions and landscapes will strengthen the well-being of citizens and visitors, and raise the awareness for and the protection of the Baltic Sea.



## BalticRIM: Baltic Sea Region Integrated Maritime Cultural Heritage Management

### About the project

BalticRIM brings together archaeologists and spatial planners from Baltic Sea countries to integrate the maritime cultural heritage into maritime spatial plans for a sustainable management and protection of underwater sites.

[www.balticrim.eu](http://www.balticrim.eu)

Duration: October 2017 – September 2020  
Total budget: EUR 2.6 million  
European Regional Development Fund: EUR 2.3 million  
European Neighbourhood Instrument: EUR 150,000



# BalticRIM Outcomes. Cases



Finnish cases: four case study areas



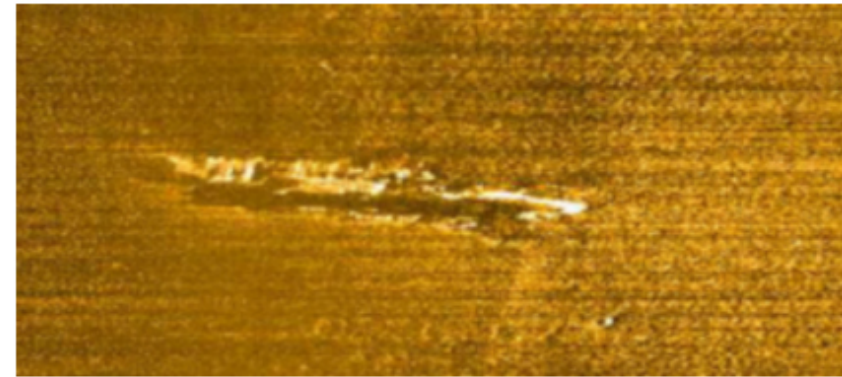
Russian case: South-Eastern Baltic & Gulf of Finland



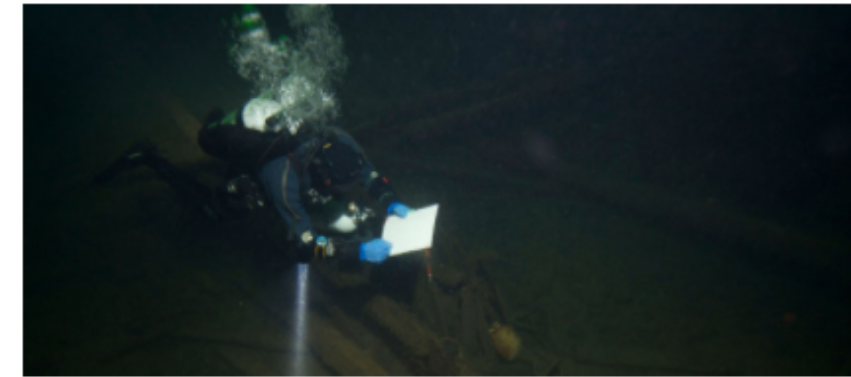
Danish case: The Oeresund and the Bay of Koege



Danish-German case: Flensburg Fjord



Lithuanian case - Relict forest area



Polish case: Puck Lagoon & Gulf of Gdansk



Finnish-Estonian case: Gulf of Finland



Finnish case: Underwater landscape in the Baltic Sea MSP context

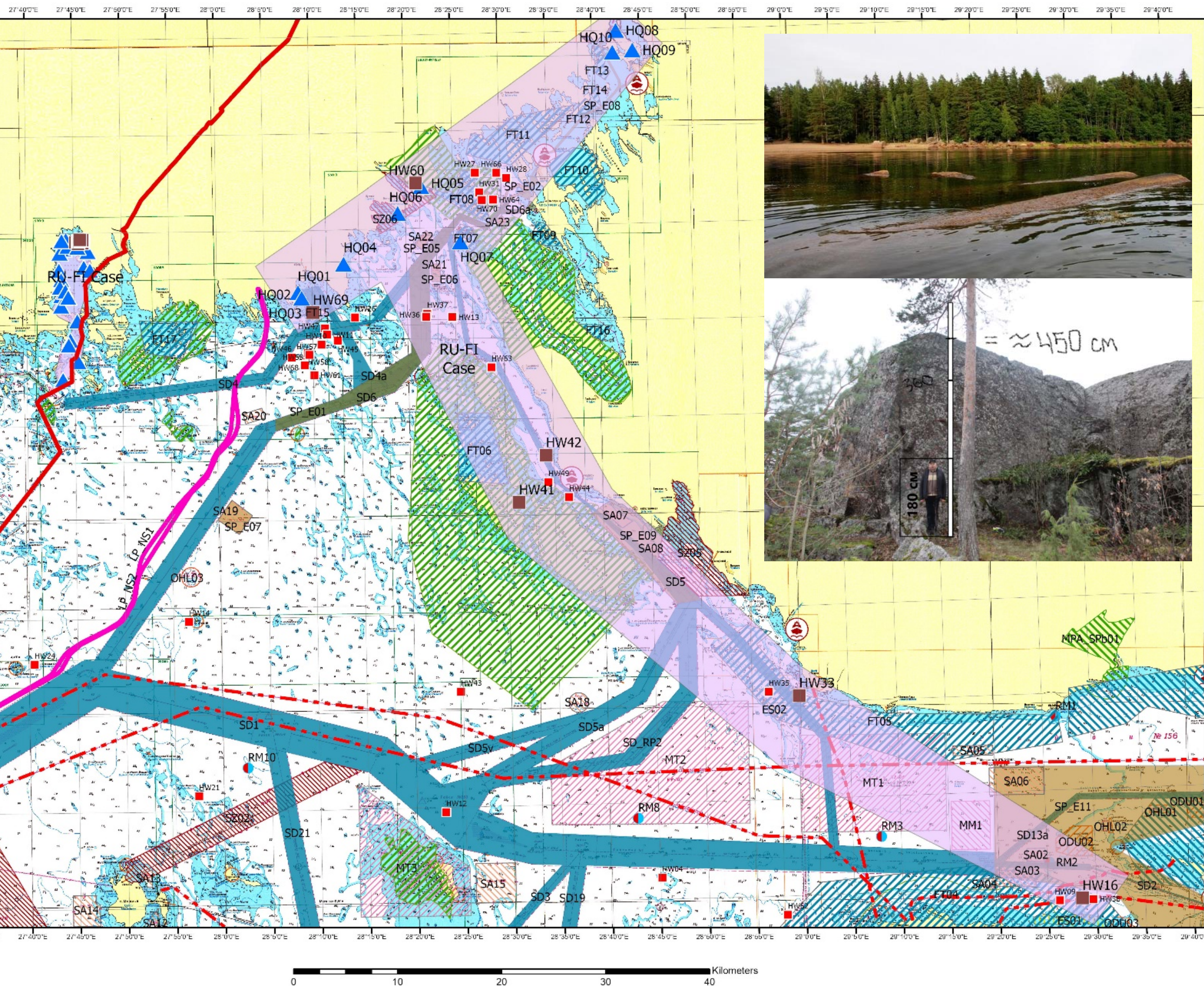


German case: Schleswig-Holstein's maritime cultural heritage Consistent approach for the heritage management

The project has completed 9 cases, 3 of which were of the cross-border nature



# RU-FI case. WAY OF THE STONES



## RU-FI Case

- State Border
- RU-FI Case Area
  - RU-FI Case area\_RU
  - RU-FI Case area\_FI Virolahti
- RU-FI Case objects
  - HW\_Wrecks\_Stone cargo\_RU
  - Wrecks Stone cargo\_FI
  - HQ\_Historical quarries\_RU
  - Historical quarries Virolahti\_FI
- Other Underwater cultural heritage
  - HW\_Wreck\_Non\_Stone cargo
- Transport
  - SA\_Anchorage
  - SP\_E\_Ports\_existing
  - SD\_Deep water routes
  - SZ\_Forbidden shipping
- Line infrastructure
  - LT\_Telecommunication cable
  - LP\_Pipeline NordStream 1
  - LP\_Pipeline NordStream 2
  - LE\_Electricity cable
- Agriculture
  - FT\_Fishing trawl
  - FI\_Fishing\_inshore\_SPb
- Extraction
  - ES\_Sand and gravel
  - EF\_Ferromanganese nodules
- Nature and species protection
  - MPA\_LO Specially protected nature areas
  - MPA\_SPb Specially protected nature areas
- Scientific research
  - RM\_Monitoring stations
- Military areas
  - MT\_Military training areas
  - MM\_Military mines training areas
- Tourism and recreation
  - TS\_E\_Leisure boating existing
- Special zones
  - ODU\_Dumping
  - OHL\_Explosive hazardous landfill

**RUSSIAN-FINISH CASE**  
**RU: 6 cargo vessels with stones and 10 quarries**  
**FI: 15 quarries**

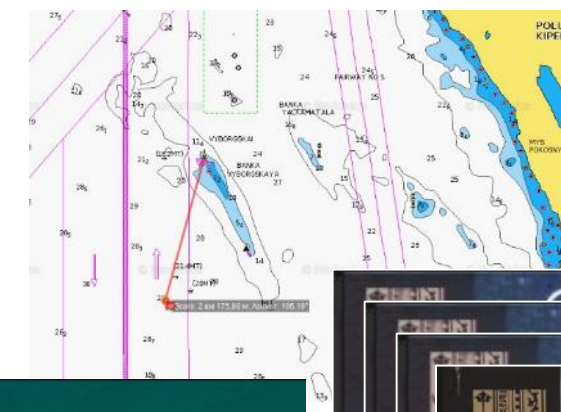
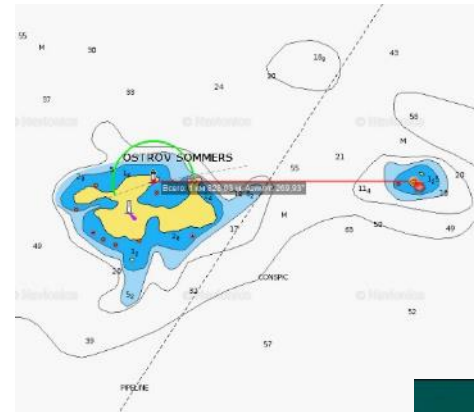
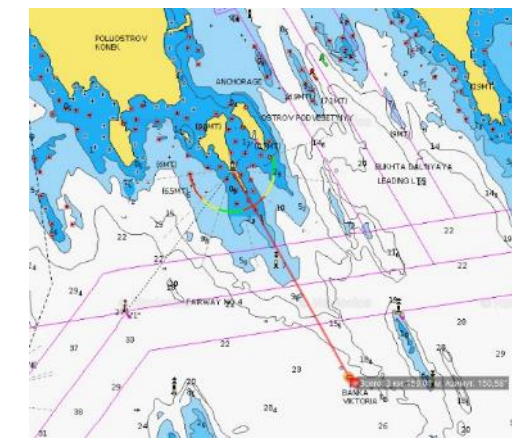
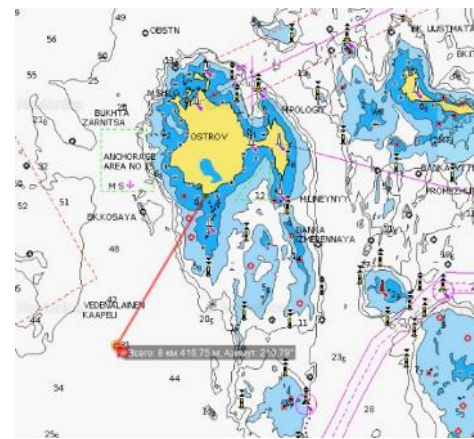
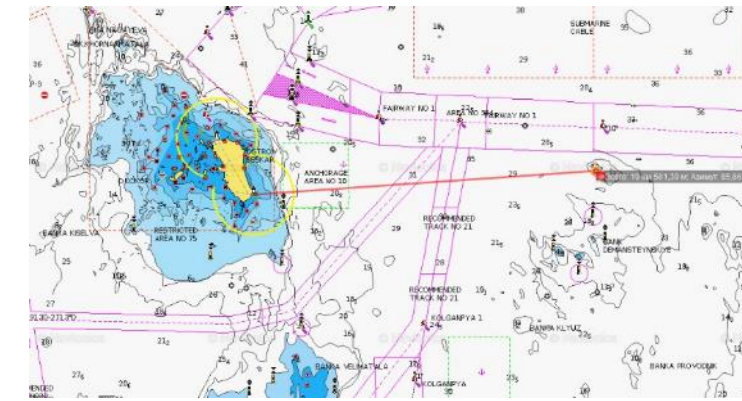
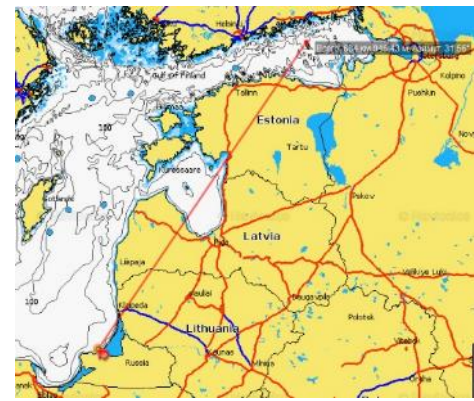
The Russian-Finnish case named "The Way of the Stones" gathered data on granite quarries where granite was mined for the construction of St. Petersburg in the 17th century, as well as on sunken vessels that transported granite.

The case offers GIS data, a history of quarries, an eventful tourist route, and an exhibition. Scientists, researchers, divers, pathfinders and planners took part in the development of the case.

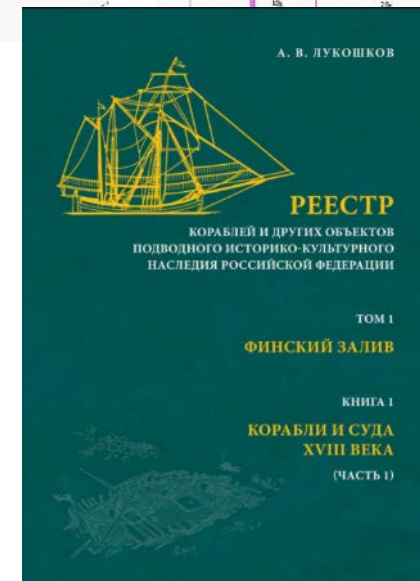
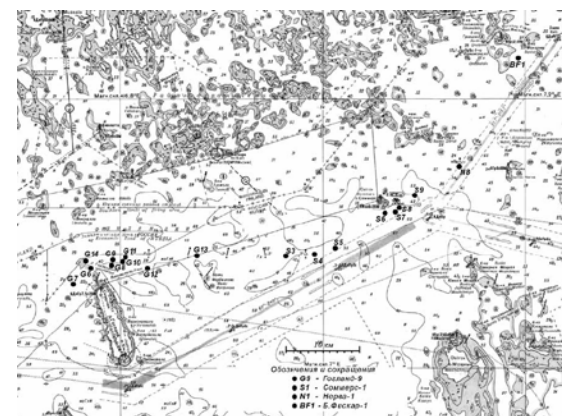


# BalticRIM Outcomes. sites analyses

| № п/п | Наименование   | Географические координаты           | Описание местонахождения  | Фактическое местонахождение по геогр. коорд.                                     |  |
|-------|--|-------------------------------------|---|--|--|
| 1.    | Неопознанное деревянное двухмачтовое грузовое судно (18 век) под названием «Hogland13»   | 55° 1.532424' N<br>20° 29.160024' E | В 13км на северо-восток от северной оконечности о. Гогланд                  | В 684,946км, по азимуту 31,65град., от сев. окон. о. Гогланд                     |  |
| 2.    | Неопознанное деревянное парусное судно (18-19 века) под названием «Hogland9».  | Теже, что и в п.1                   | ?   | ?  |  |
| 3.    | «Die Engiel Рафаил», торговое судно (17 век)/на юго-восточной оконечности о. Большой Березовый (ранее остров Бьоркё) у южного входа в пролив Бьоркё Зунд (Финский залив) | отсутствуют                         | Будет показан в виде площадного объекта                                     | Неизвестно   |  |
| 4.    | «Сибирь», военный транспорт  | 60°01,8'N<br>28°45,9'E              | Балтийское море, Финский залив, недалеко от острова Сескар                  | В 19,561км, по азимуту 85,86град., от юго-вост. окон. о. Сескар                  |  |
| 5.    | «Атис Кронвалдс», военный транспорт  | 59°55' N<br>27°45'E                 | 8 км к юго-западу от острова Мощный   | 8,416 км, по азимуту 210,79град., на юго-запад от мыса Опасный                   |  |
| 6.    | «Дусма», военный транспорт   | 60°03,1'N<br>26°55,0'E              | 3 км к западу от острова Гогланд  | 2,536км, по азимуту 279,86град., на запад от мыса Лимонникова                    |  |
| 7.    | «Щ-405», дизель-электрическая торпедная подводная лодка  | 60°00'3449"N<br>28°07'1610"E        | Неизвестно  | 13,441км, по азимуту 84,84град., к западу от острова Сескар                      | По открытым данным ЭПРОН                   |
| 8.    | «М-95», дизельная подводная лодка  | 60°05'13"N<br>27°03'53"E            | на северо-востоке от побережья острова Гогланд                              | 4,255км, по азимуту 72,77град., на северо-восточной мыса Лилуаними               |  |
| 9.    | «Щ-406», дизель-электрическая торпедная подводная лодка  | 59°52'92"N<br>27°10'90"E            | в миле к северу от о. Большой Тютерс  | 1,960км, по азимуту 340,37град., на север от о. Большой Тютерс                   |  |
| 10.   | «Гавриил» эсминец  | 59°51' N<br>28°56'E                 | Копорский залив   | 4,820км, по азимуту 21,76град., на северо-восток от мыса Наволок                 |  |
| 11.   | «Константин», эсминец  | 59°51' N<br>28°56'E                 | Копорский залив   | 4,820км, по азимуту 21,76град., на северо-восток от мыса Наволок                 |  |
| 12.   | Русский 54-пушечный линейный корабль «Портсмут»  | 60°00'31,22"N<br>29°27'39,79"E      | на южном побережье Невской губы, напротив острова Котлин, Лондонская отмель | 5,557км, по азимуту 89,16град., на восток от створного знака в Красной Горке     | X  |
| 13.   | Шведская королевская (военная) яхта «Аврора», 1790 г.  | 60°28'51"N<br>28°11'39"E            | вход в Выборгский залив   | 3,169км, по азимуту 150,58град., на юг от маяка на о. Оритсаари                  | По открытым данным "Память Билтики" 2006г. |
| 14.   | Шведский 44 -пушечный фрегат линии "Земир"   | 60°28'58"N<br>28°11'43"E            | вход в Выборгский залив   | 3,013км, по азимуту 147,55град., на юг от маяка на о. Оритсаари                  |  |
| 15.   | «ГМС Виттория», эсминец  | 60°05'0"N<br>28°23'0"E              | 5 миль к северу от острова Сескар   | 5,220км, по азимуту 5,85град., к северу от острова Сескар                        |  |
| 16.   | Корпус парохода "Ипатия"   | 60°30'36,63"N<br>28°24'49,51"E      | к северу от островов Рондо и Северный Березовый                             | Неизвестно   | X  |
| 17.   | Русский военный шлюп "Свирь", 1824   | 60°14'38,36"N<br>27°57'15,87"E      | на юго-западной оконечности острова Нерва                                   | Неизвестно   | X  |
| 18.   | Двухмачтовое судно (шхуна или бриг) с грузом угля 1850-х-1860-х годов  | 60°00'38,87"N<br>27°02'37,40"E      | на восток от южной оконечности острова Гогланд                              | Неизвестно   | X  |
| 19.   | Финский корабль (лайву) с грузом камней 1855 г.  | 60°00'27,92"N<br>29°29'29,76"E      | Лондонская отмель   | 5,557км, по азимуту 89,16град., на восток от створного знака в Красной Горке     | X  |
| 20.   | Русский 12-пушечный военный транспорт "Америка"  | 60°05'56"N<br>26°56'29"E            | северная оконечность острова Гогланд  | 0,802км, по азимуту 134,48град., на северо-запад от маяка "Северный Гогландский" |  |
| 21.   | Русский 84-пушечный линейный корабль «Лефорт» 1857   | 59°55'27"N<br>27°16'38"E            | 8 км к северо-востоку от острова Большой Тютерс                             | 9,235км, по азимуту 213,05град., на северо-восток от маяка                       |  |
| 22.   | Сарматская яхта "Сармат" 1857  | отсутствуют                         | северная оконечность острова  | Неизвестно   |  |



Data collection  
Data verification and clarification  
classification of heritage sites  
After checking the coordinates, UCH sites were classified, their formal status, regional and national value, social benefits were discussed.

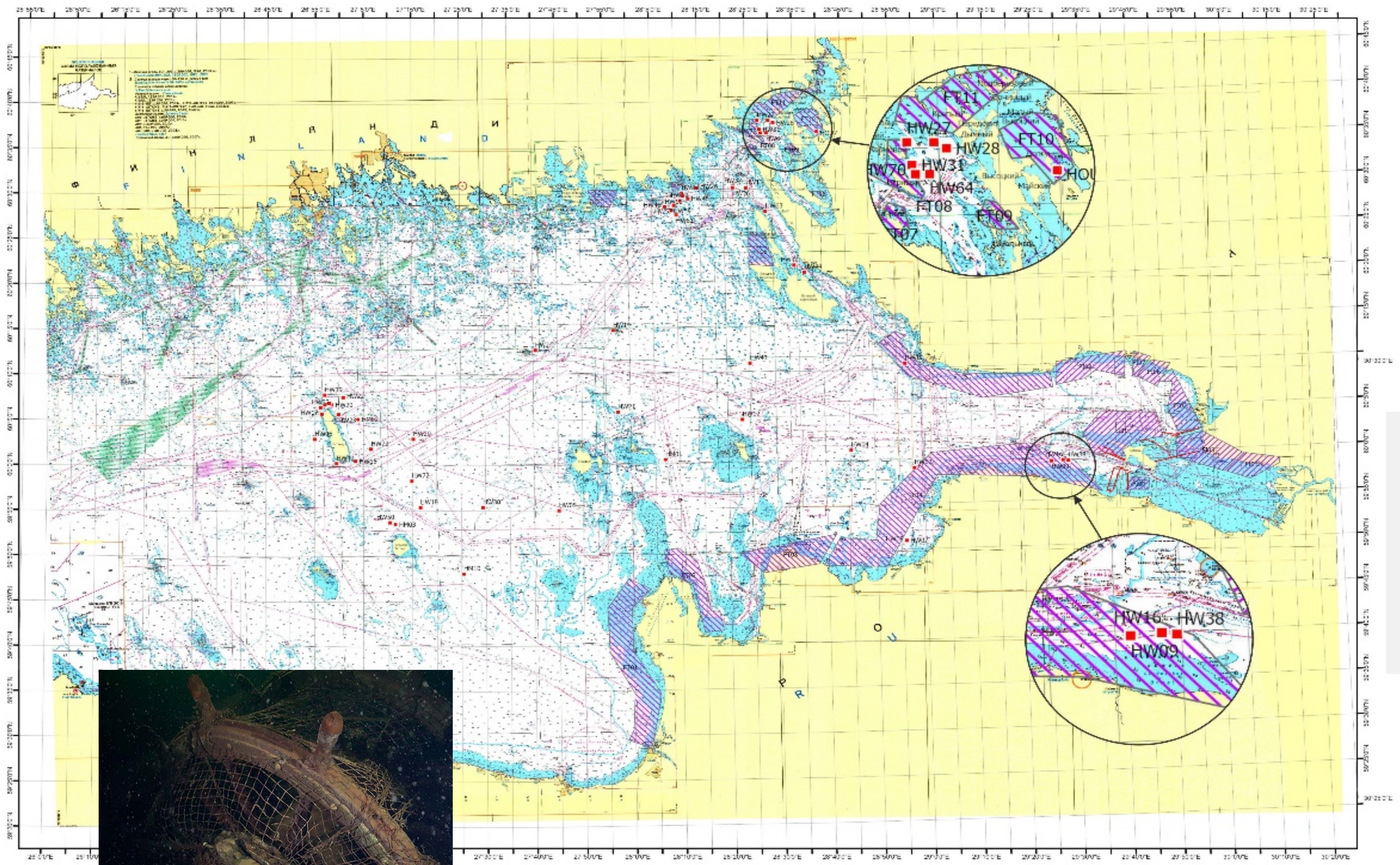




# BalticRIM Outcomes. Sites analyses

| HERITAGE WRECKS - HW |         |         |   |  |  |  |   |  |  |  |   |  |  |
|----------------------|---------|---------|---|--|--|--|---|--|--|--|---|--|--|
| HU-HW-GF-01          |         |         | Nonidentified wooden two-masted cargo                               |  |  |  | d |  |  |  |   |  | Discovered in 2006–2009 when surveying the water area along the North European gas pipeline. Received the name   |
| HU-HW-GF-02          |         |         | Nonidentified wooden sailing ship (18th – 19th                      |  |  |  | d |  |  |  |   |  | Discovered in 2006–2009 when surveying the water area along the North European gas pipeline. Received the name   |
| HU-HW-GF-03          |         |         | “Die Engiel Raphail” (Verkkomatala 1), merchant ship (17th century) |  |  |  | d |  |  |  |   |  | It was discovered in 2002 at a depth of about 15 m. And was surveyed in subsequent years by the expedition of the Center for Underwater Research of the Russian Geographical Society. The ship was built in 1693 at the  |
| HU-HW-GF-04          | 60,0300 | 28,7650 | “Sibir”, military transport   |  |  |  |   |  |  |  | + |  | He followed from Tallinn to Leningrad under the command of Captain Chugunov, having 890 wounded and 410 people   |
| HU-HW-GF-05          | 59,9167 | 27,7500 | “Atis Kronvalds”, military transport                                |  |  |  |   |  |  |  | + |  | Former German cargo ship. Built in 1900 (NeptunWerft AG, Rostock, Germany). The total capacity is 1,423 brt.   |
| HU-HW-GF-06          | 60,0517 | 26,9167 | “Ausma”, military transport   |  |  |  |   |  |  |  | + |  | Former English cargo ship. Built in 1889 (Turnbull, Thomas & Son, Whitby, UK). Full capacity 1791 brt. Dimensions 78.9   |
| HU-HW-GF-07          | 59,9839 | 28,9669 | “Gavriil”, destroyer  |  |  |  |   |  |  |  | + |  | Built in Revel (Tallinn), launched on 12/23/1914 (01/05/1915), entered service in October 1916. Length 98  |
| HU-HW-GF-08          | 59,8500 | 28,9333 | “Constantin”, destroyer   |  |  |  |   |  |  |  | + |  | During the autumn battle for Petrograd in 1919, together with the destroyers Gabriel, Svoboda and Azar produced mine obstacles in the Koporsky Bay. October 21, 1919, at 5 hours and 50 minutes, hit a mine. During the explosion, a detonation of mines prepared for staging occurred, as a result of which the hull broke in half and the destroyer instantly sank with the whole crew |
| HU-HW-GF-09          | 59,9886 | 29,4360 | Russian 54-cannon ship of the line “Portsmouth”, 1719               |  |  |  | d |  |  |  |   |  | Sank on September 30 - October 1, 1719, stranded on the southern shore of the Neva Bay, opposite the island of Kotlin, from where it was demolished by a “depth” storm, where it sank. The remains represent a 24-meter fragment of the central and aft parts of the hull, which lies at a depth of 8 m.   |
| HU-HW-GF-10          | 60,4847 | 28,1817 | Swedish military yacht “Aurora” (Krestovyy III), 1790               |  |  |  | d |  |  |  |   |  | Beams, whales, deck decks, bulkheads, hull formwork and partial spacing around the ship within a radius of 20 meters. Most of the structural elements lie around the   |
| HU-HW-GF-11          | 60,4936 | 28,1914 | Swedish 44 (40)-  |  |  |  | d |  |  |  |   |  | The project of the frigate was developed by the  |





### Agriculture

### Underwater cultural heritage

- HW\_Wreck
- HM\_Underwater\_memorial\_objects
- HOU\_Historical cribs barriers
- HOU\_Other UCH

### Agriculture

- ▨ FT\_Fishing trawl
- ▨ FL\_Fishing inshore

Example:  
Overlapping  
of the UCH  
and trawl  
fishing  
in the Gulf  
of Finland

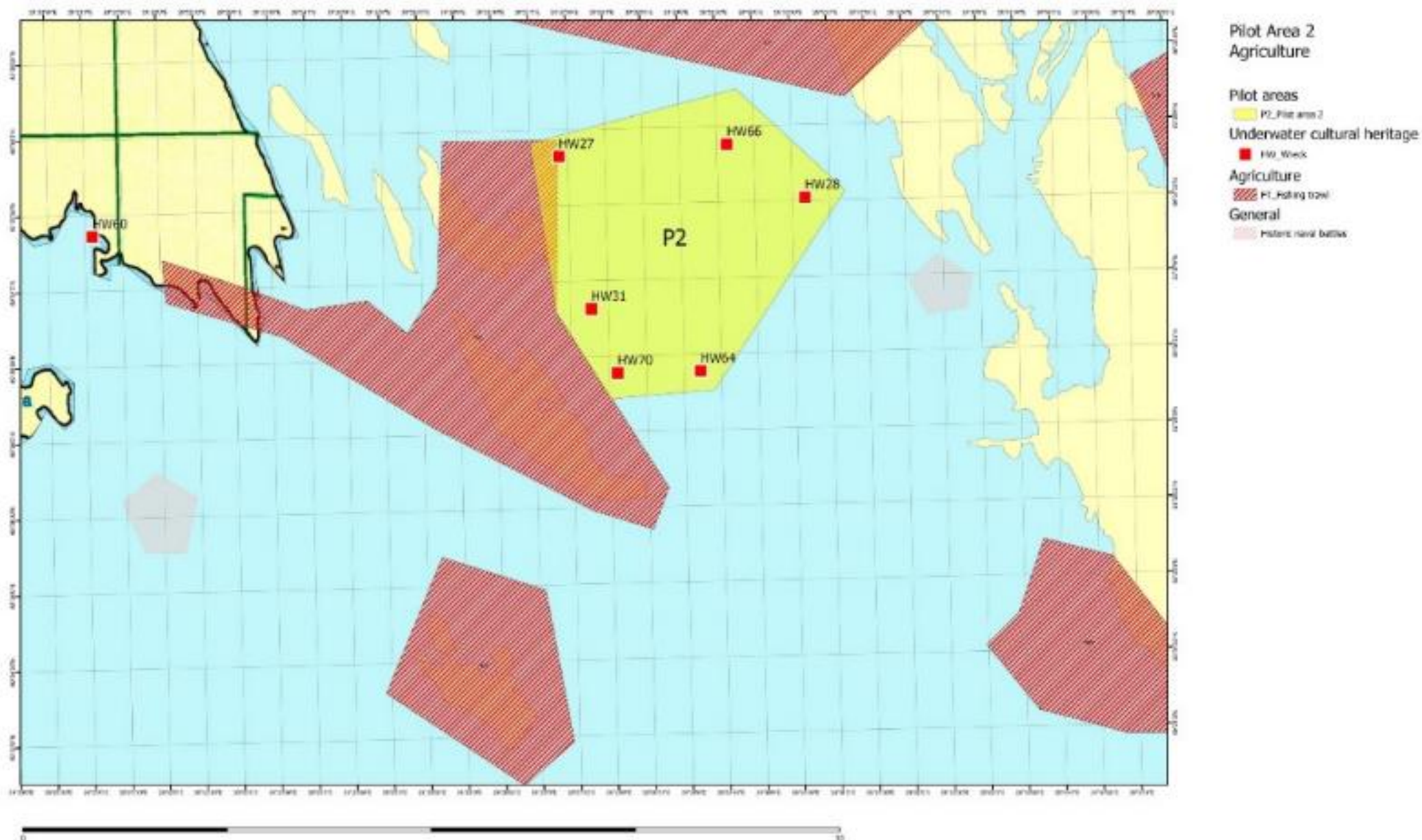




# BalticRIM Outcomes. Blue Growth and planning

Example: Pilot Area 2, Gulf of Finland

## Mapping



## Zoning

| SubBasin | Priority use                |
|----------|-----------------------------|
| sBS2-1   | MPA and UCH protection      |
| sBS2-2   | UCH                         |
| sBS2-3   | Shipping and UCH protection |

## Matrix of conflicts

| Marine sectors              | Compatibility with UCH Pilot area 2 |
|-----------------------------|-------------------------------------|
| Shipping, incl.             | does not overlap                    |
| – fairways                  | does not overlap                    |
| – ports                     | does not overlap                    |
| – anchorage                 | does not overlap                    |
| Military areas              | does not overlap                    |
| Mining                      | does not overlap                    |
| Trawl fishing               | partially overlap                   |
| Pipelines and cables        | does not overlap                    |
| Offshore wind energy        | does not overlap                    |
| Aquaculture                 | does not overlap                    |
| Turism and recreation       | does not overlap                    |
| Nature protected areas      | does not overlap                    |
| Habitats and spawning areas | partially overlap                   |
| Scientific research         | does not overlap                    |

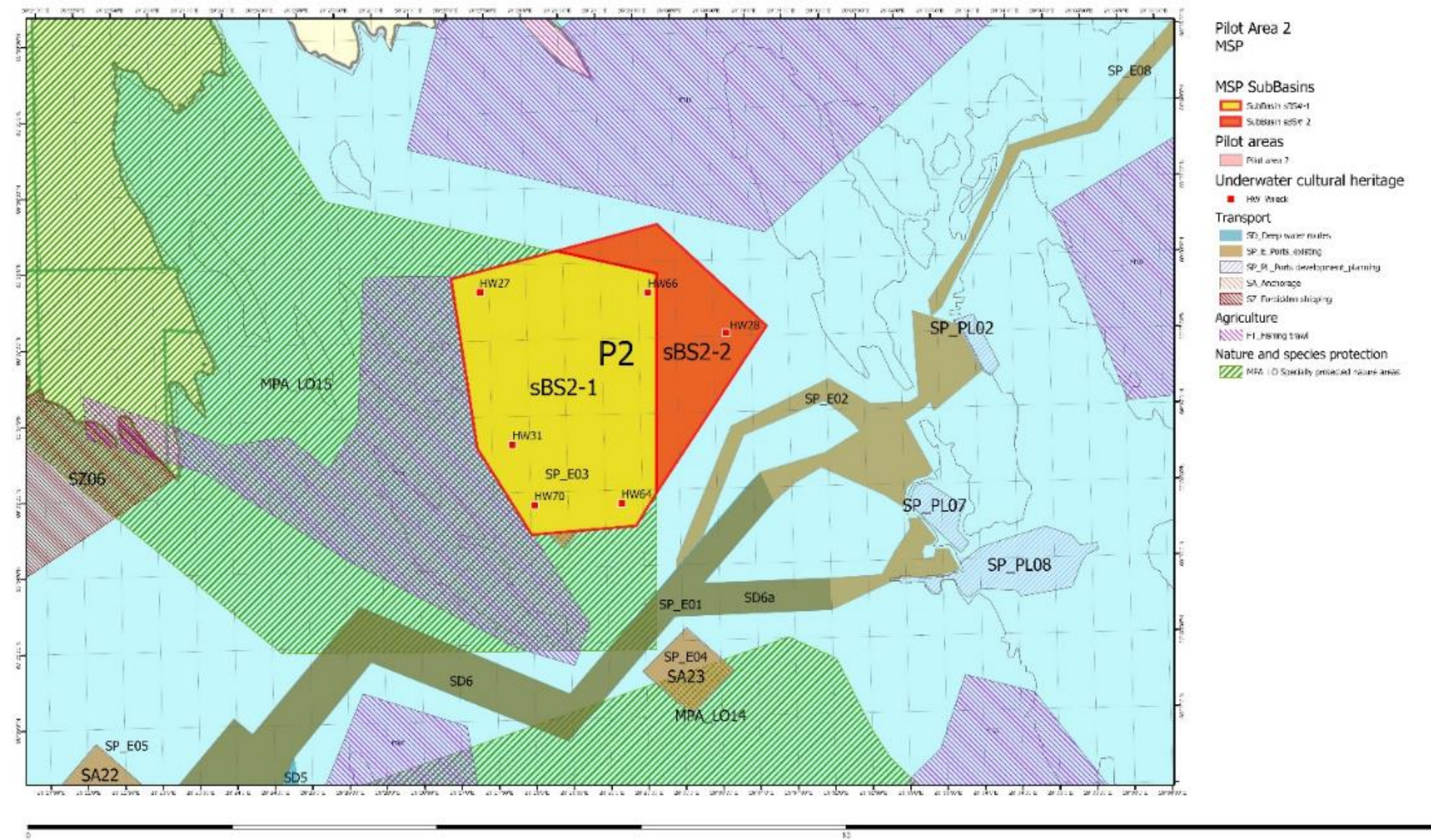
- *conflict*
- *partially compatible*
- *conflicts are unlikely*



# BalticRIM Outcomes. Blue Growth and planning

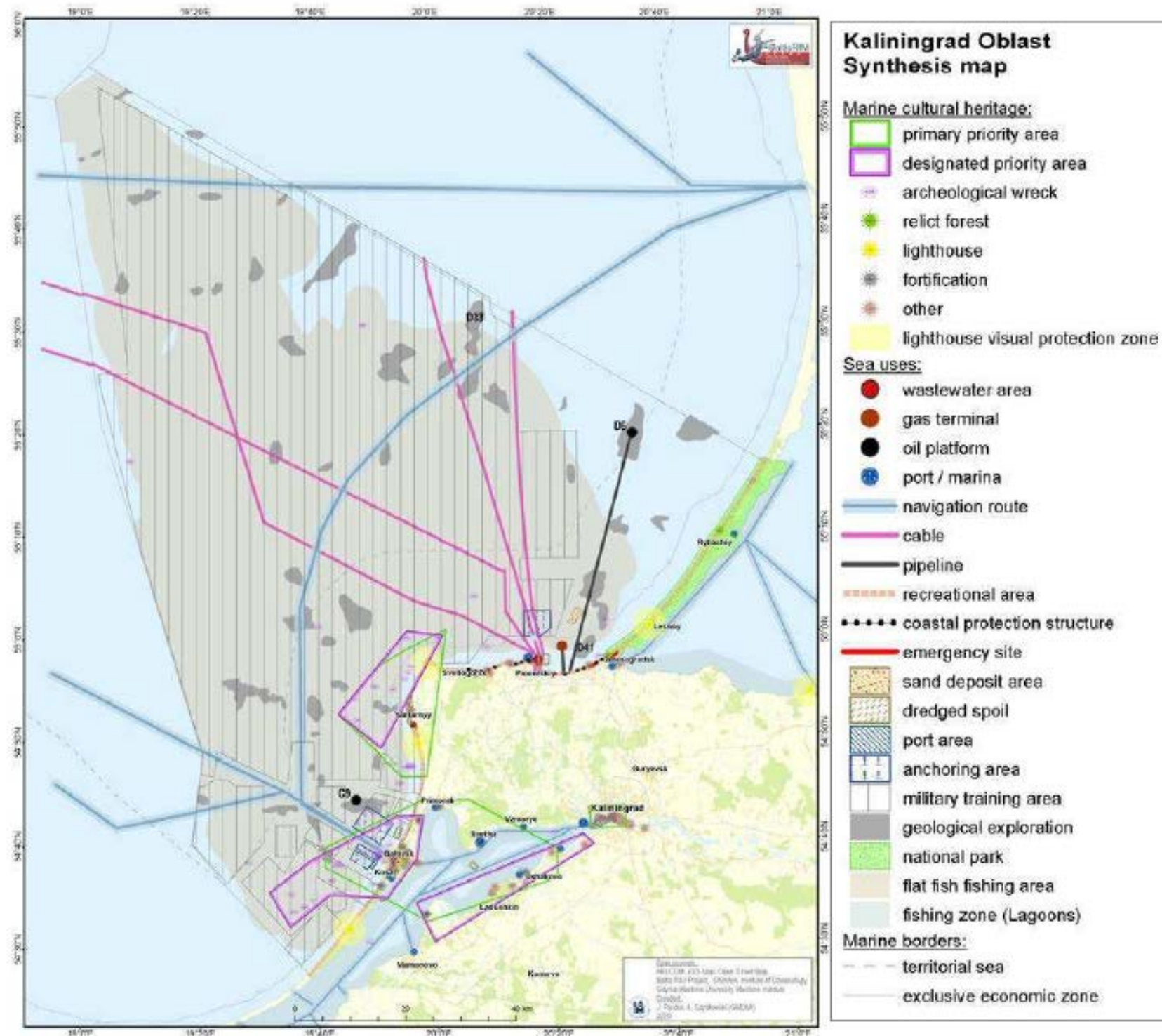
Example: Pilot Area 2, Gulf of Finland

| Attributes  | Attribute value  |
|-------------|--|
| Shape       | Polygon  |
| Name        | <b>SubBasin 03</b>   |
| PilotArea   | <b>Pilot area 2</b>  |
| ID          | sBS2-1   |
| FullName    | Nature protection and Underwater cultural heritage   |
| Priority    | MPA and UCH protection   |
| Reserved    | HU   |
| Allowed     | ND, TD, TW, TL, OR, R  |
| Restricted  | TS, TR, M, L, FR   |
| Forbidden   | I, E, S, A, O, FT, FI, ODU, OHL  |
| Explanation | SubBasin of MPA and UCH determines the activities that ensure the protection of biodiversity and UCH protection. |





# BalticRIM Outcomes. Blue Growth and planning



Pilot MSP for the south-eastern part of the Baltic Sea including two types of the MCH sites:

- Listed in the National cultural heritage register of Russia
- Revealed cultural heritage sites

## Conflicts in the coastal zone

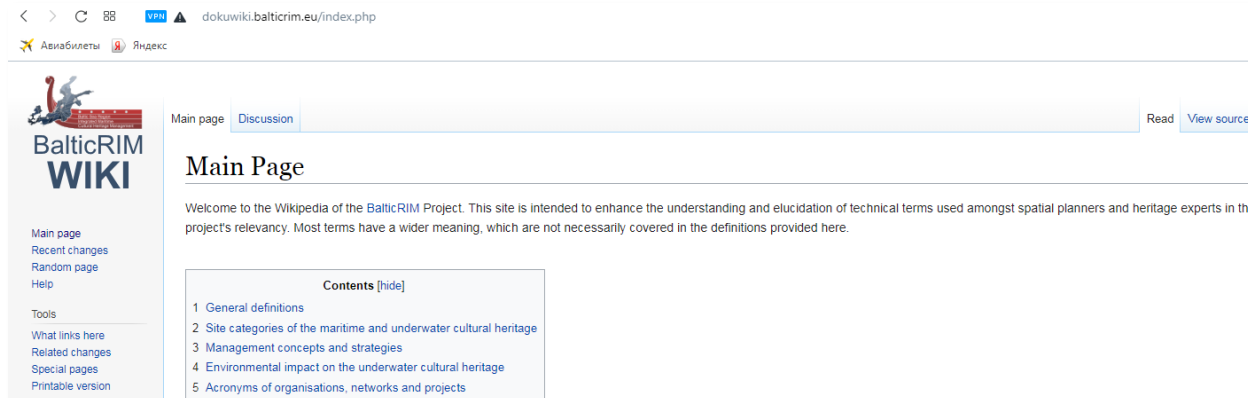
- Dumping
- Fishing, fish farming, and aquaculture
- Hydrocarbons exploring
- Mining operations

Synthesis map of the BalticRIM recognized MCH priority areas and the threatening sea uses in Kaliningrad Oblast, Russia. Elaboration of content by Jacek Zaucha, Magdalena Matczak, Joanna Witkowska (GMUMI), Iwona Pomian, Krzysztof Kurzyk (NMM), data processing and maps by Joanna Pardus (GMUMI).

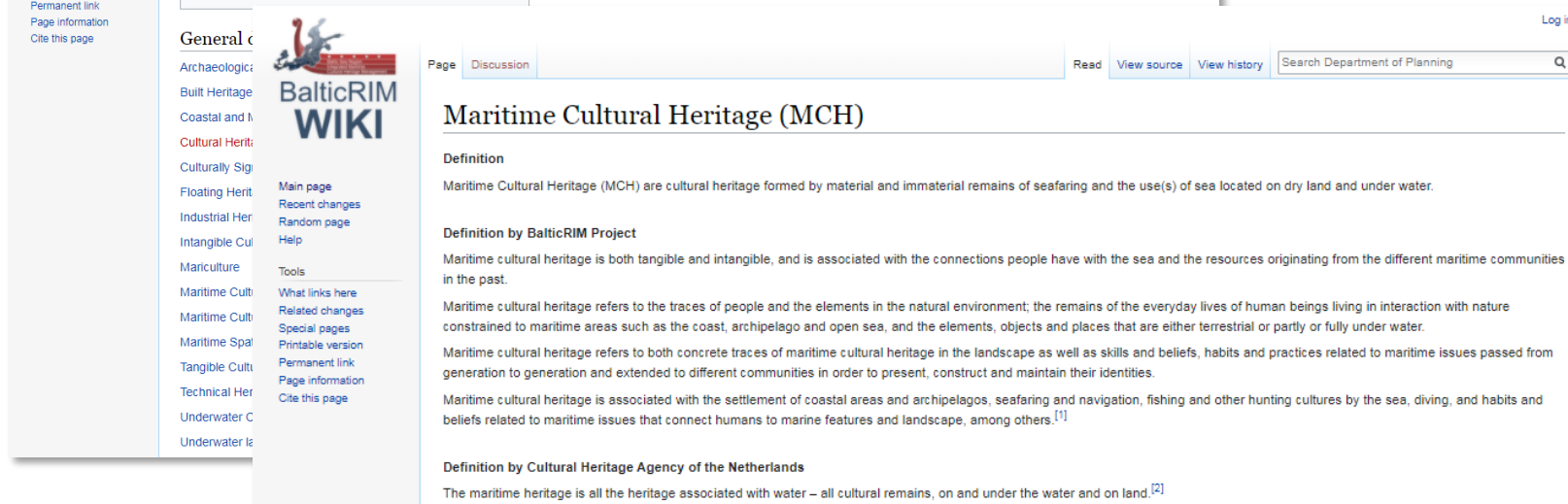


# BalticRIM Outcomes. WIKI

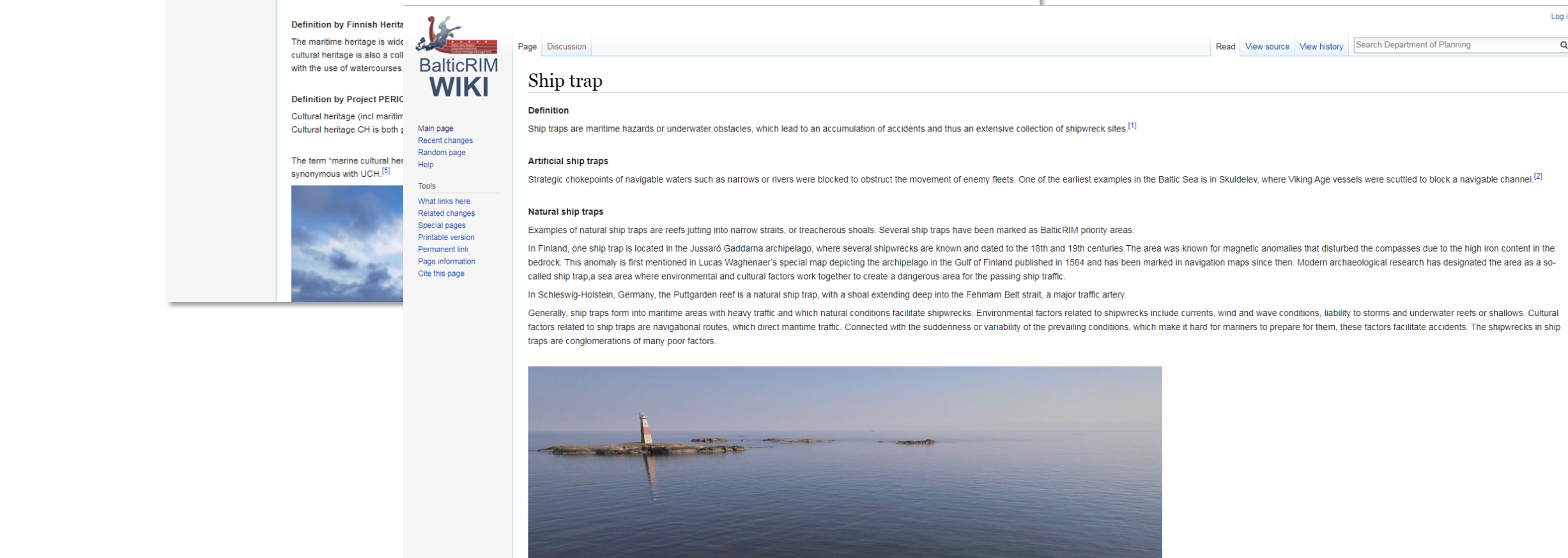
<http://dokuwiki.balticrim.eu/>



The screenshot shows the 'Main Page' of the BalticRIM WIKI. It features a navigation menu on the left with options like 'Main page', 'Recent changes', and 'Random page'. The main content area includes a 'Contents' table of contents with five items: 'General definitions', 'Site categories of the maritime and underwater cultural heritage', 'Management concepts and strategies', 'Environmental impact on the underwater cultural heritage', and 'Acronyms of organisations, networks and projects'. A 'Log in' button is visible in the top right corner.



The screenshot displays the 'Maritime Cultural Heritage (MCH)' page. It includes a 'Definition' section stating that MCH are cultural heritage formed by material and immaterial remains of seafaring and the use(s) of sea located on dry land and under water. Below this, there are sections for 'Definition by BalticRIM Project' and 'Definition by Cultural Heritage Agency of the Netherlands'. The page also features a search bar and a 'Log in' button.



The screenshot shows the 'Ship trap' page. It contains a 'Definition' section explaining that ship traps are maritime hazards or underwater obstacles. The page is divided into three sub-sections: 'Artificial ship traps', 'Natural ship traps', and 'The term "marine cultural heritage" synonymous with UCH'. The 'Natural ship traps' section includes a photograph of a lighthouse on a small island in the sea. The page also features a search bar and a 'Log in' button.

The BaLticRIM WIKI contains selected MCH and UCH terminology with attached definitions and visualizations along with basic MSP glossary. It introduces those heritage terms that have a specific use regarding MSP perspectives. This meant, in particular, maritime and underwater site categories that are geographically large-scale phenomena and thus suitable for the wide scale of MSP.

The BaLticRIM WIKI:

- gathers together selected maritime and UCH site categories, terms and definitions in one location
- is based on an agreement on common MCH and UCH terms and their consistent use in the project
- develops cultural heritage terminology and definitions for less known site categories such as “ship trap”.



# BalticRIM Outcomes. Game «MSP & MCH»



«MSP & MCH» - Interactive Game on maritime spatial planning for marine cultural heritage

OBJECTIVE: MCH stakeholders recognize the importance of applying an integrated and ecosystem-based approach to planning and management of the sea and coastal areas, as well as the needness to harmonize of the marine economic sectors.

Specificity of the game is the emphasis on the MCH sector and its inclusion in maritime spatial plans as a specific object of management and preservation.

MSP Game «MSP & MCH» was developed for the project BalticRIM on a basis of two existing interactive games – «MSP Challenge» (Netherlands, Breda University) and «Maritime spatial planning. If I were a decision-maker!» (Russia, ErmakNW).



# BalticRIM Outcomes



## RUSSIA

301 MCH objects in the Gulf of Finland and the south-eastern part of the Baltic Sea has been mapped and systematized

Book "Marine cultural heritage of Russia. The Baltic Sea" was published

[http://atlantic.ocean.ru/images/publ/Maritime-cultural-heritage-of-Russia\\_The-Baltic-sea\\_compr.pdf](http://atlantic.ocean.ru/images/publ/Maritime-cultural-heritage-of-Russia_The-Baltic-sea_compr.pdf)



## PAN-BALTIC

- BALTIC UCH Data Portal
- UCH WIKI
- Underwater landscape concept
- Inclusion of Culturally Significant Areas and Underwater Landscapes in maritime spatial planning
- Handbook - how to integrate maritime cultural heritage into Baltic MSP

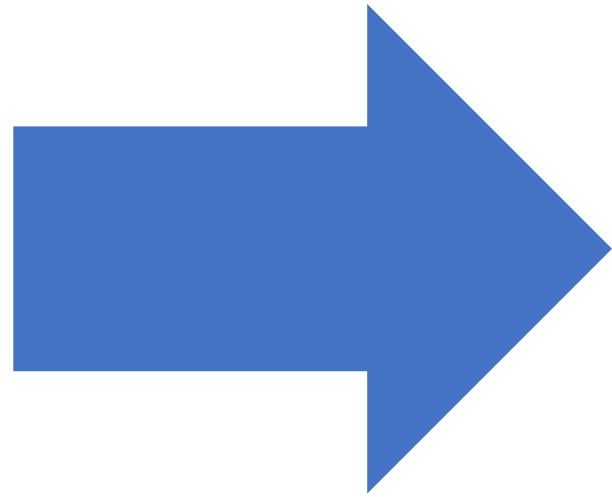


# BalticRIM. Lessons learned

- A large number of UCH sites have not yet been surveyed or even identified
- Management and preservation of UCH depends on specific regional environmental conditions and ongoing economic activity
- International UCH legal framework is strong enough, but weak UCH regional and national framework is typical for most countries and sea basins
- Some of the UCH sites store the history of several countries (who constructed, flag, cargo, place of death)
- UCH sites, especially densely located, contribute to the formation of protected landscapes
- Some underwater objects are still dangerous (fuel, explosives, toxic substances)
- Low temperatures and turbidity of water reduce the availability of UCH sites for divers
- The extension of the tourist season and access to great depths is facilitated by the use of underwater vehicles (bathyscaphes, mini submarines)



# Black Sea. Project Idea



- UCH identification and mapping
- Black Sea Region coherent approaches to the MCH management (probably incl. Sea of Azov)



# Black Sea. Common UCH management objectives

- Research, identification, examination and validation of UCH sites
- Mapping and unified UCH catalog (list) and regional GIS portal
- Assessment of the impact of current and future environmental conditions, taking into account climate change
- Mapping of existing and prospective marine economic activity
- Zoning and establishment of regulations, allocation of UCH protective zones (cultural landscape concept for ex.) in national MSPs

## General approaches to UCH management

- preservation “in site” or in proper underwater place (archeological park)
- lifting of individual items for the museum expositions
- lifting sites as a whole and their museification
- well managed and controlled access to UCH
- international tourist and diving routes
- cross-sectoral interaction, for example with yachting
- strong Black Sea brand as MSH tourist destination



# **Black Sea. First steps for the regional MCH management policy development**

## **Pan-Black Sea**

- Black Sea Region UCH framework formation
- Regional Data set and Data portal development
- Joint MCH working group on the preservation and use of UCH sites
- Development of Principals and Recommendations for the preservation and use of Black Sea UCH
- Mobile and Interactive exhibitions and tours

## **Bilateral cooperation**

- Joint expeditions to UCH sites of common history
- Coherent integrated maritime management plans, incl. spatial planning
- Joint projects for the preservation and use of MCH sites with common history
- UCH tourist traps to places of common history



# Thank you for your attention!

Towards effective management of the Black Sea maritime cultural heritage!



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