# CASE STUDIES: INTERNAL STATUS REPORT

**BalticRIM WP 3: GoA 3.4/O3.4**

*Coordinated by: Coastal Research and Planning Institute*

## Introduction.

This is a complimentary exercise in order to trace the progress and the level of UCH/MCH topic integration into the official MSP. Case studies do reflect the changes while understanding, recognizing and utilizing the underwater cultural heritage objects as a sensitive and valuable assets and further more – guides through the different levels of UCH/MCH recognition, classification, regulatory framework and formal introduction into the planning documents on the equal rights as other sea uses are. Description of the BalticRIM project case studies aims to show the status before and progress after the project implementation.

The UCH/MCH as a topic integration into the national MSP requires different functional components to be established:

- Institutional set-up to provide, update and document the relevant information/datasets;
- Proper database with clear categorization and description of the assets;
- Principles of determination of level of protection (no go, highly protected, under research, open for recreational/educational purposes or similar) and/or utilization character (for science, tourism, education, other);
- Delineation of the "to-be-established MCH/UCH" site including location map and the description of the assets;
- Status of introduction (under investigation, recommended, potential – introduced and under development, established and regulated, under revision etc.) in to the national planning documents (MSP, regional development plan, or others).

Case study description should help understanding - what is/was the status before the project is started, what are the initiatives/activities planned within the project framework, what results are to be expected at the end of the project.

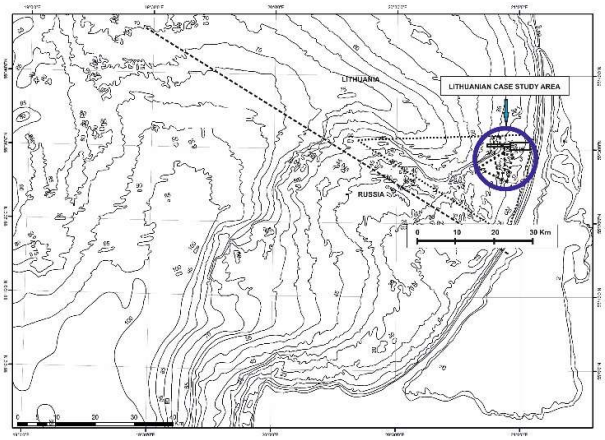
## Contents

# National Case studies:

## Lithuanian case - Relict forest area/wrecks

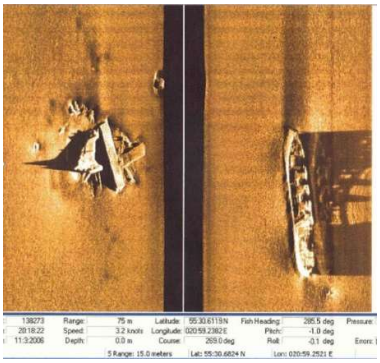
(CS Owner: Klaipeda University)

Area with relics of underwater natural and cultural landscapes including wrecks is to be proposed to embed into the national planning documents in order to regulate the utilization of the identified assets. During the field studies in the area it was planned to delineate the most valuable area and prepare the comprehensive description of the assets in order to be suitable for official planning exercise.




Main characteristics:

- Well-preserved remains of the relic trees underwater – over 100 objects identified as trees and peat are found at the depth of 24.5 to 29 meters;
- Dating of the remains shows the age of 11410–10170 cal. BP (9640–8220 cal. BC) and 9150-8520 cal. BP (7200–6570 cal. BC);
- Dates evidences that underwater landscape with pine forests and small lakes existed before the transgression of Ancylus Lake stage of the Baltic Sea;



- There is suspicion that area during the Yoldia Sea and Ancylus Lake periods have been settled by the Mesolithic inhabitants– early Mesolithic Kunda culture (Pulli stage), and – Maglemose settlers.
- 8 wrecks of wooden and metal hull, aged to 19-20$^{th}$ c. Fishing boats and German cargo ship (steamer) Anna Katrin Fritzen (1938–1942), ex Gerda Kunstmann (1914), ex Vulcan (1911).

Applied methods:

- ~70 km$^2$ sea bed area has been scanned by the side-scan sonar and multi-beam echo-sounder;
- Inspected by divers (provisionally measured, photographed and video-recorded);
- Radiocarbon (14C) dating;

- Studies of historical sources;
- Cooperation with amateur diver NGOs.

Progress summary in short:

- Reason of selecting:

Site had the well coverage of archaeological studies, MCH assets were partly well known, and only proper description, regulatory framework and delineation of the area to be established as a UCH site were missing.

- Expected to achieve:

Expected to have fully documented area with recommendations for the utilization and protection regulations on site. Integrate the proposed MCH site into the national MSP process and by 2021 have first official MCH site mapped.

- Achieved:

Area delineated, assets well documented, introduced into the National MSP as a proposed area for establishment, suggestions for regulatory framework communicated to the Ministry of Culture.

- Progress before and after Project implemented:

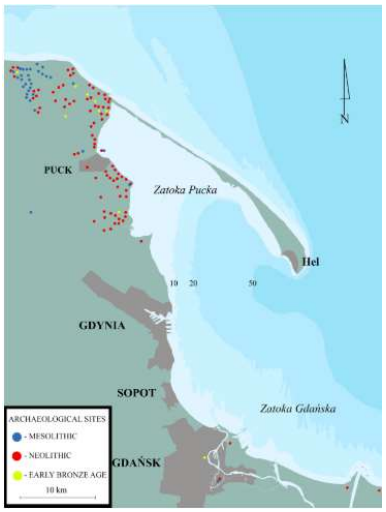
Better quality of archaeological information to be submitted to the national authorities in order to be further used for planning purposes. Reasoning of the needs and benefits of established MCH well communicated and better understood by planners and involved stakeholders.

**PLEASE FIND THE DETAILS OF THE CASE STUDY IN THE ANNEX No 1.**

# Polish case study - Wrecks and submerged landscape

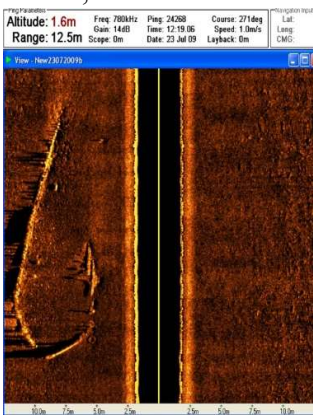
(CS owner: National Maritime Museum in Gdansk)

Area of Gdańsk historical port area (onshore and offshore) rich in wrecks and remains of hydraulic structure and submerged landscape in Puck Bay are being investigated and documented in order to establish the maritime cultural heritage zone. Possibility of indicating the range of these relics and geological data will allow to determine more precisely potential areas of the prehistoric settlement.




**Main characteristics**

- The underwater area of wrecks is divided into three zones. Eastern: 1 wreck reported, probably 1600s-1700s (unverified); Central: 7 wrecks 1400s -1800s and also remains of wooden breakwater at the entrance to the harbour and Western: 7 wrecks, aged 1600s-1800s;
- Wooden breakwater at the entrance to the harbour is from 1600s, the land harbour area with monuments of architecture (Wisłoujście Fortress, Nowy Port lighthouse, historical shipyard area, the historical inner port wharfs);
- 3 sites with submerged tree trunks, 1with radiocarbon dating (6430 ±40 BP)
- Geological cores from seabed and shore with peat dated to early Holocene;
- Stone Age sites in shore zone and few artefacts from seabed;
- Submerged landscape in Puck Bay. In early Holocene after deglaciation Puck Bay (part of Gulf of Gdansk) was a land area which was subjected to flooding by sea-waters about 7500 BP. Today Puck Bay is very shallow, average 2-3 m deep with potential of submerged landscape and archaeological sites and artefacts from Stone Age.




Applied methods:

- Analysis and correction of data recording, definition of protection zones, unification of terminology, description of land/sea interface for maritime cultural heritage management. Verification of the data;
- Fieldwork;
- Archival, registers and literature research;
- Geological analyses;
- Radiocarbon dating;
- Sea bottom investigations by side scan sonar;
- Development of method for determining the boundaries of submerged forest remains in the coastal zone.

Progress summary in short:

- Reason of selecting:

The main reason was to fullfill some missing UCH data and put them to the new national MSP plan to better protection. Prepare some recomendations about new categories of UCH sites like submerged paleolandscape. Missing data:

- Archival research on the shipwrecks in the Gdańsk port area
- Analysis of the Gdańsk port area as the maritime cultural heritage zone (including the underwater area)
- The radiocarbon dating of all submerged relict forests in the Bay of Puck
- Delimitation zones with submerged forests and potential area witch submerged archeological sites and paleolandscapes in the Bay of Puck
- Preparation of recommendations for management and monitoring this zones and introduce them to national MSP plans.

- Expected to achieve:

- After the archaeological surveys, seabottom scans and radiocarbon dating is finished – expected new sites to be added to the EPSA (NMM UCH database) and other official databases.
- Potential submerged UCH sites and palaeolandscape zone introduced into the national MSP.

- Achieved:

Nearly all missing data and planned activities were fulfilled and completed. Only some sea bottom scans will be done after 31.03.2020. The obstacle - bad weather conditions for the survey on site.

- Progress before and after Project implemented:

- BalticRim project allowed to reach MSP planners and national official institutions (f.e. Maritime Office in Gdynia) and introduce with new UCH categories (f.e. submerged cultural paleolandscape) and inform about the potenitial to find new UCH sites and some propositions how we can protect this areas.

-Some new recomendations have been prepared regarding protection of UCH sites and establishment of wider protected zone in the forground of Port of Gdańsk.

**PLEASE FIND THE DETAILS OF THE CASE STUDY IN THE ANNEX No 2.**

## Finish case studies (4) – Underwater wrecks and maritime cultural landscapes

(CSs owner: Finnish Heritage Agency)

**Jussarö ship trap**

The maritime landscape in Jussarö includes several small islands and islets due south from the Jussarö island in the Gulf of Finland. The islands have been collectively called "Raseborgs Gaddarna" since the middle of the 18th century. Raseborg is a medieval administrative region, which centre was the Raseborg castle, built in the 1370s. The area around the islets was known to cause disturbances in navigation compasses already in the 17th century and in 1751 Jonas Hahn was able to explain the phenomenon by the high iron content in the underwater rock formation in the area. The Raseborg's Gaddarna were known to be dangerous to ships, which got too close to the shallows and in 1881 a lighthouse was erected to the island of Sundharu. The area of the ship trap was delineated with a side scan sonar survey, where also one new wreck was discovered from the area. The survey was supplemented by an environmental survey, where the physical and cultural factors, which affect the formation of a ship trap were researched and environmental characteristics around Jussarö were combined with the cultural surroundings to predict where shipwrecks could be most likely found in the area. The expected result was the definition of the ship trap area and a description of the assets as well as MSP applicable categorization.

Main characteristics:

- 6 wrecks of different type and state registered as tentative or protected ancient monument;
- The landscape includes several small islands and islets due south from Jussarö island;
- Jussarö Sundharu lighthouse is the first sea lighthouse built in Finland to be unmanned;
- Two remains of seasonal stone-built huts/walls, iron bolts.

Applied methods:

- Research of old maps and historical sources of the Jussarö area (collections of the Finnish National Archive and the Swedish National Archives (Krigsarkivet));
- Research of archaeological and historical surveys and literature;
- Area survey by side-scan sonar;
- Wreck sites inspected by divers, provisionally measured, photographed and video-recorded.

**Lahia ship trap and the maritime cultural landscape in the Bothnian Sea**

Archaeological survey area near the Swedish border in the Lahia shallows and on selected islands in the sea area between Tornio and Selkä-Sarvi. Islands appeared from the sea due to isostatic uplift and continuing uplift of land leads to a situation, where remains of the fishing structures are situated in the middle of the islands. The structures comprise of net drying mounds, building foundations, landing sites and sea marks. The Lahia ship trap was delineated with a side scan sonar survey. Six new remains of ships and their structural parts were discovered from a restricted area surrounding the shallows in north/north-west direction. The relation of the finds to each other and the number of wrecked ships could not be definitely determined, but they are at least three. The wrecks most likely date to the 19th and early 20the centuries and have been damaged by the underwater cliff, shallow water and wave and ice movement. The expected result - definition of the ship trap area and a description of the assets as well as MSP applicable categorization.

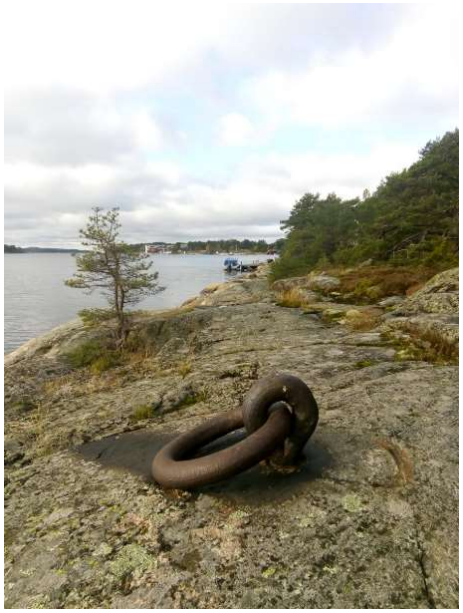
Main characteristics:

- Wreck registered as a protected ancient monument and also wrecks discovered by volunteer divers near the Lahia shallows reported to FHA in 2017 which are not yet introduced to the Ancient Relics Register;
- Traditional fishing villages that were established in the area since the middle ages to the 18th century;
- Remains of the fishing structures in the middle of the islands, comprised of net drying mounds, building foundations, landing sites and sea marks.

Applied methods:

- Archaeological survey
- Archival research, relevant literature

**Natural harbours in the Archipelago Sea and the southern Bothnian Sea**



The aim of the survey was to locate and research historical natural harbours in the archipelagos of the Archipelago- and southern Bothnian Seas, which were used by the local fishermen, merchants and administrative personnel of the Swedish kingdom since the Middle Ages. Harbours have also been places for commerce and trade, some also hold evidence of shipbuilding and –repair activities. Some of these harbour centres developed and villages grew around them. The maritime landscape of the archipelago was divided and fishing grounds were allocated to maritime villages according to seasonal cycle. These harbours contain a sheltered bay, which is easily accessible and where archaeological remains of for example living spaces, net drying constructions and sea marks pointing the way towards safe sailing route, can be found. Historical natural harbours consist of separate archaeological sites, which can be categorized as legally protected monuments according to their age. Over 100 year old remains of fishing huts (tomtningar), fishing infrastructure, landing sites, sea marks and ship wrecks, on land and under water, are legally protected archaeological remains. A natural harbour is a site category consisting of separately protected sites and is often delineated to the register as a culturally significant area, which in itself does not include legal protection.

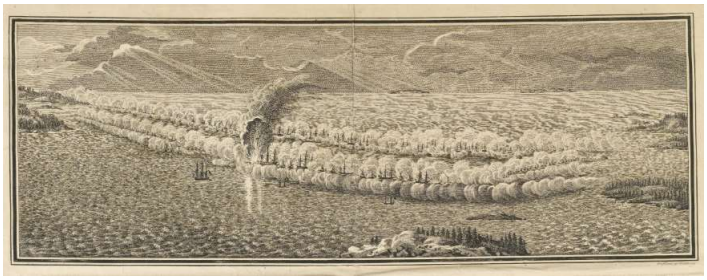
Main characteristics:

- In the Finnish archipelago there are numerous natural harbour sites, which are places with land-sea interaction. The harbours date from the 13th century to the 20th;
- Some harbours are historical administrational harbours, used as a place for commerce and trade, and form a contact network between local inhabitants, merchants and farmers. Harbours have been used as market places, as loading places and sometimes have an inn, where travelers could rest and eat. Some also hold evidence of shipbuilding and -repair. Also village harbours;
- Fishing harbours contain a sheltered bay, which is easily accessible and where there are remains of for example living spaces, net drying constructions and sea marks pointing the way towards safe sailing route.

Applied methods:

- Archaeological and maritime archaeological survey;
- Archival research, relevant literature.

**Ruotsinsalmi Sea Battle Area**



Ruotsinsalmi (Svensksund, engl. "The bay of Sweden") is situated in front of the city of Kotka in the eastern Gulf of Finland. In that area, two sea battles were fought in 1789 and 1790 by the Swedish and Russian navies. The battles were a part of the war fought between king Gustav III of Sweden and tsarina Catharine II of Russia. The second sea battle in 1790 remains the largest ever sea battle fought in Scandinavia measured by the number of men and ships taking part in the battle. Over 60 ships were lost in the battle, some of which still lie in the bottom of the sea in front of the city of Kotka. The best known of the wrecks belongs to the Russian frigate Sviatoj Nikolai, which was discovered already in 1948 and became the first target of wreck salvage in Finland and a lot of objects have been lifted, many of which are now displayed in the Finnish Maritime Museum and the Kymenlaakso regional museum in Kotka. The wreck functioned as the cradle in which Finnish maritime archaeology began to develop from the 1960s onwards. The Sea battle area is represented in the Kymenlaakso council's regional plan "Commerce and Sea area", and it is also represented in the regional plan 2040 of Kymenlaakso in the "Target area for travel and recreation".

Main characteristics:

- Remains of several shipwrecks from the first (1789) and second (1790) sea battles in Ruotsinsalmi/Svensksund in front of the city of Kotka;
- The sea battles were a part of Swedish king Gustav III's war with Catharine the Great's Russia in 1788-90. Battles were fought also on land, but not in the same scale as on sea;
- The first Ruotsinsalmi battle was won by the Russians and the second by the Swedes;
- The second Ruotsinsalmi sea battle remains the largest ever sea battle fought in Scandinavia when measured by the number of men and ships taking part in the battle. The Swedish side had around 13 000 men and 185 ships. The Russians had ca. 20 000 men and 273 ships;
- Over 60 ships were lost in the battle, some of which still lie in the bottom of the sea in front of the city of Kotka.

Applied methods:

- Following the administrative statements concerning the categorization and protection of the area.
- The sea battle area is discussed in the regional planning process.

- The FHA issues statements concerning the sea battle area, which has an affect on the regional planning

**Progress summary of the Finish case studies in short:**

- Reason of selecting the case studies:

The existence of the ship trap phenomenon is scientifically recognised, but it had yet to be defined in the Baltic Sea. Ship trap Case studies were selected to research the ship trap in different sea areas, so that Lahia and Jussarö ship traps could be categorized as a cultural phenomenon in Finland. The FHA and Metsä wanted also to recognise the environmental factors that help create a ship trap. The exercise was suitable to also move from dot-based data to areal information.

The Ruotsinsalmi sea battle area is the first underwater cultural landscape that has been introduced in regional planning. The area is situated in front of an industrial harbour and is a protected archaeological site, which brings challenges into its management. The Kymenlaakso regional council has been active in promoting the underwater landscape in MSP and in its own planning, The area has been used to define the underwater landscape as a concept.

Natural harbours are underrepresented in the FHA's register, there is a lot of missing information concerning their location, protection and management. With this case study, the FHA is filling out gaps in the register and gathering new information of tangible and intangible maritime cultural heritage in the Finnish archipelagos

- Expected to achieve:

To gather as much archaeological information as possible, which could be disseminated and used in defining the terms, categorisation and areal cultural phenomenon analysis

- Achieved:

Three sets of fieldwork research trips were organised in co-operation with the FHA and Metsähallitus Parks&Wildlife, where archaeological sites were surveyed and information gathered. The results were fed into reports, the FHA's register and the online map service kyppi.fi. dot-based data was interpreted and analysed into areal data of maritime cultural phenomena, making it possible to move from geographical locations into description of the cultural data, which was fed into the regions, planning documents and MSP. For example, in the form of the background material that the FHA devised for the Finnish MSP, called "A review of the Finnish maritime cultural Heritage" 04/2019: https://www.merialuesuunnittelu.fi/wp-content/uploads/2019/04/Suomen_merellisen_kulttuuriperinn%C3%B6n_tilannekuva_2019-1.pdf

- Progress before and after Project implemented:

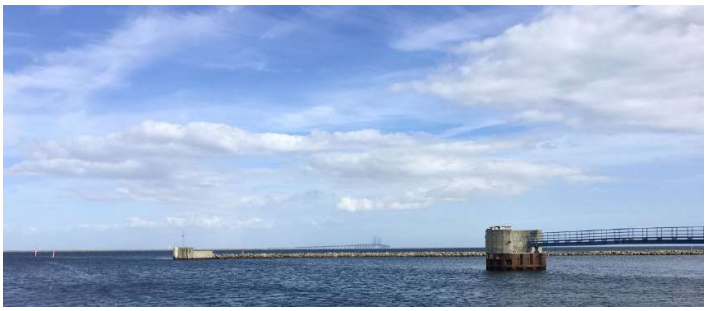
The project has had a real impact into the Finnish MSP process. UCH and MCH have been recognised as a sector of the MSP. The planners are more aware of the MCH/UCH, than before the project, and especially of its many definitions, which include the MCH/UCH landscapes, archaeological sites, land-sea interaction and tourism potential. In Finland, the planners are

prepared to consider MCH/UCH in MSP, possibly due to the non-binding nature of the planning. It is most easily accepted as a part of environmental protection and tourism potential.

**PLEASE FIND THE DETAILS OF THE CASE STUDY IN THE ANNEX No 3, 4, 5 and 6.**

## Danish case study - Maritime Cultural Landscape, shipwreck sites, harbours and settlements, defence systems, Intangible MCH

(CS owner: Aalborg University)



The Oeresund and the Bay of Koege are characterised by inundated prehistoric sites and is one of the most frequented waterways since medieval times. As a result, the city of Koege became a wealthy centre for international trade with the second largest harbour in Denmark next to Copenhagen. Heavy traffic as well as naval battles in the area have caused numerous amounts of wrecks, among those the famous, Dannebroge, sunk by the Swedish fleet in 1710 during the Great Northern War. During the past decades, urban development and tourism has changed the coastal area south of Koege, and the harbour of Koege is now positioned among the ten largest shipping ports in Denmark. The richness of maritime relics in the area is illustrated by the finds from excavations carried out by the Viking Ship Museum due to the further expansion of the harbour, as a fragmented fishweir, which is dated to the transition between the Maglemose and the Kongemose Culture (ca. 6.400 BC.). A neighbouring site with a large material of sharp flint artefacts is interpreted as a settlement area from the Maglemose Culture (about 8.000-7.500 BC). The aims of the case study are to explore the MCH resources, conservation issues and use potentials in a Danish coastal zone planning context, to identify elements, that contributes to the shared PanBaltic maritime history of settlement, shipping and trade, to develop the methodological approach to the schematisation and transformation of cultural heritage data into the maritime spatial planning setting.

Main characteristics:

- Maritime Cultural Landscape. The Oeresund and the Bay of Koege is characterised by inundated prehistoric sites and is one of the most frequented waterways since medieval times. Heavy traffic as well as naval battles in the area have caused numerous amounts of wrecks.
- Shipwreck sites - The famous wreck of Dannebroge sunk by the Swedish fleet in 1710 during the Great Northern War, other wrecks from various periods are also present in the area;
- Port of Koege – historical harbour site with a lot of maritime remains finds both on land and under water.

Applied methods:

- Analysis if the data from the databases and fund of archaeological records;
- Stakeholder involvement (museums, museum harbour, tourist agencies).

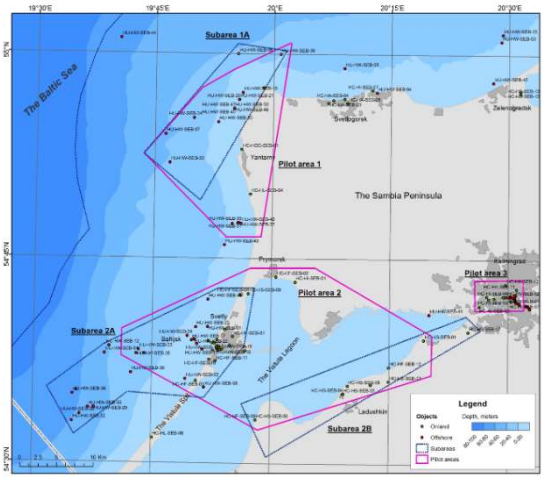
**PLEASE FIND THE DETAILS OF THE CASE STUDY IN THE ANNEX No 7.**

## Russian case studies - Underwater and on-land maritime cultural heritage

(CSs owner: Shirshov Institute of Oceanology of Russian Academy of Sciences)

**South-Eastern Baltic**

A total of 274 MCH objects in the South-Eastern Baltic have been added to the database, of those - 252 objects have been described during the project implementation. In collaboration with divers of different organizations, wrecks and on-land MCH objects were recognized as valuable and grouped to form three pilot areas in the Russian part of the South-Eastern Baltic. The main criterion for the allocation of subareas was the density (number) of MCH objects, their accessibility and potential to add them as attraction to the related tourist routes. Particular attention was paid to the assets primarily requiring conservation and protection.




Main characteristics:

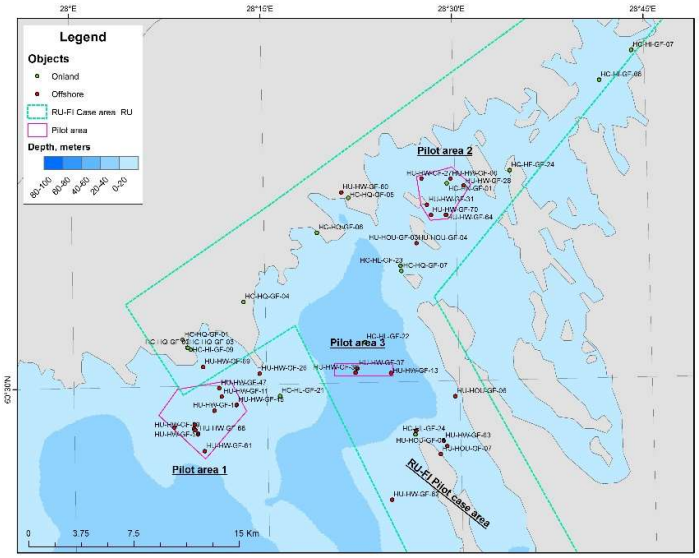
- Pilot area 1, west of the Sambia Peninsula contains a total of 21 MCH objects, those are 2 heritage lighthouses, 18 heritage wrecks, one coastal heritage object. The main facilities are dumped vessels such as guard ship "Barsuk", corvette ASW, dredger Balkhash, non-identified destroyer, Streamship Velox and others. Among the ground objects, the Taran lighthouse can be distinguished.
- Pilot area 2, 49 MCH objects west of the Vistula Spit and eastern coast of the Kaliningrad (Vistula) Lagoon. Many of the on-land objects are in ruined conditions, other need conservation measures. Among them are Neolithic settlement sites, Medieval coastal settlements, sea fortress remains, lighthouses and traditional fishery villages of 19-20th century.
- Pilot area 3, are mainly finding in the Kaliningrad and Pregolya and Deima Rivers and Kaliningrad (Vistula) Lagoon

Applied methods:

- analysis of the previous archaeological surveys data,
- archival research, relevant literature,
- field surveys including multi beam echo-sounder and side scan survey,
- some UCH objects have been inspected by divers

## Gulf of Finland

The database of UCH/MCH in the Gulf of Finland was supplemented with 178 entries. Those do correspond to the assets of the coastal zone, 19 of which are of the direct interest for the planners. Those have been further assessed - three pilot areas have been distinguished in the Gulf of Finland, Vyborg Bay.




Main characteristics:

- Pilot area 1 in the southern part of Vyborg Bay includes 10 HW. This is the site of a major naval battle between the Russian and Swedish fleets in 1790 (the cemetery of ships).
- Pilot area 2 in the northern part of Vyborg Bay includes 6 HW. There are remains of wooden vessels of the 19th century (with the exception of the object of the armoured boat WMO-506).
- Pilot area 3 in the central part of Vyborg Bay includes 3 HW. Objects are the remains of metal vessels made in Russia from the late 19th century. They are of interest for domestic shipbuilding, as well as attraction for tourists and divers.

Applied methods:

- analysis of the previous archaeological surveys data,
- archival research, relevant literature,
- field surveys including multi beam echo-sounder and side scan survey,
- some UCH objects have been inspected by divers

Progress summary in short:

- Reason of selecting:

The number, density and accessibility of the MCH objects has high potential to be used for touristic product creation, important for conservation and protection.

- Expected to achieve:

To collect reliable information on the assets and location of the known and reported shipwrecks and other MCH objects; introduce those to MCH/UCH Database; prepare the Recommendations for the proper inclusion of the findings into the regional/national Register of CH and national development plans.

- Achieved:

All existing information about the sites has been obtained. All the data are uploaded to the BalticRIM Data Portal https://balticrimdataportal.eu/

- Progress before and after Project implemented:

Much better recognition of the MCH topic by the stakeholders and higher readiness to integrate the knowledge into the MSP. The integrated databases with MCH, including UCH objects, of the South-Eastern Baltic and the Gulf of Finland has been created and the data have been collected and classified. Proper dialog with sectoral and cross-sectoral stakeholders established.

**PLEASE FIND THE DETAILS OF THE CASE STUDY IN THE ANNEX No 8 and 9.**

## German case study - Schleswig-Holstein's maritime cultural heritage

(CS owner: State Archaeology Department of Schleswig-Holstein)

Schleswig-Holstein's coastline forms the southwestern extent of the Baltic Sea. Its strategic location between the North and Baltic Seas abetted the formation of transshipment points and commerce since the Viking Age. The coast has become gradually inundated and many prehistoric coastal settlement sites are now under water, especially from the Mesolithic and early Neolithic periods.

Main characteristics:

- Currently, there are some 300 underwater archaeological sites listed for Schleswig-Holstein's territorial waters;
- Planning related case in the Schleswig-Holstein includes entire Baltic Sea coast of 537 km and covers all territorial waters;
- The early maritime past of Schleswig-Holstein is well reflected by the early 4th century Nydam boat, a sacrificial bog find for fallen Iron Age warriors, or Haithabu 1, a wreck of a late 10th century longship set ablaze in the harbour of the Viking Age emporium of Hedeby (Haithabu);
- The entire Schlei region is characterised not only by numerous shipwrecks from the Viking Age and the Middle Ages, but also settlement and fortification structures that were built into the water, like the early 8th century Danevirke at Reesholm;
- Also early modern wrecksites have been investigated in Schleswig-Holstein's territorial waters, several from historical sea battles, like the Danish 'Lindormen' sunk in 1644, or the Swedish 'Prinsessan Hedvig Sophia' run aground in 1715.

Applied methods:

- Analysis and complimentary post processing of the previous archaeological surveys data;
- Inventory of the UCH/MCH database;
- Taking geological, geomorphological and bathymetric data into account to reconstruct Mesolithic coastlines with an increased potential of settlement areas, as well as anomalies, with an uncertainty if they are anthropogenic or natural
- ALSH aims to include the responsible stakeholders of these areas into the planning process in order to insure a consistent approach throughout Schleswig-Holstein;

Progress summary in short:

- Reason of selecting:

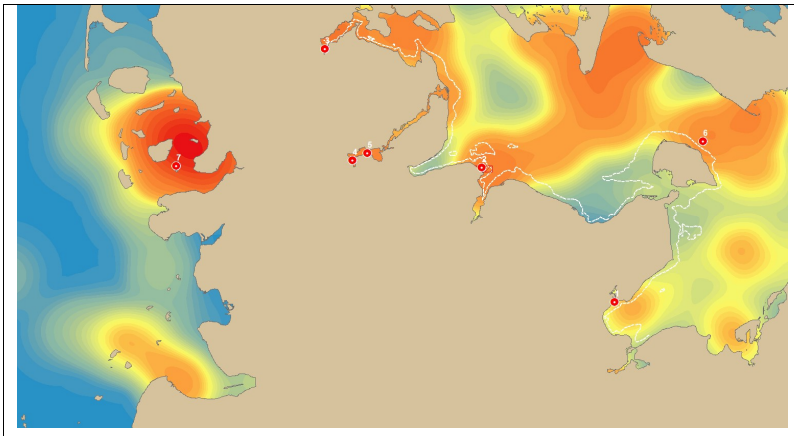
The entire Baltic Sea shore of Schleswig-Holstein was selected as pilot/planning case in order to complement the UCH/MCH database by a systematic evaluation of the marine data (incl. anomalies and geomorphologic features)

- Expected to achieve:

To provide MSP authorities (i.e. the Interior Ministry of Schleswig-Holstein for the territorial waters, and the German Federal Hydrographic Agency (BSH) for the German EEZ) with information on areas of verified or anticipated high archaeological potential, which should be taken into account in the MSP; update ALSH-database on underwater cultural heritage and contribute to the Blue Growth initiative. As a consequence of the data evaluation of the BalticRIM-Project ca. 50 new sites will be listed as protected archaeological sites, while non-listed sites are kept in the BalticRIM-database as anomalies with a certain but unverified potential.

- Achieved:

The MSP authorities of Schleswig-Holstein (territorial waters) and Germany (EEZ) signalised their willingness to take the project's recommendations into account, but stated that archaeological „priority areas" (as defined and mapped as part of WP 2.5 and WP 3.2) cannot be included in the plan itself, as the statutory basis is not sufficient to designate UCH/MCH-areas in MSP. In lieu of a direct inclusion, a description of MCH/UCH protection goals will be included in the MSP-report (official appendix of MSP-plan), in which also illustrations with a high abstraction level such as density-maps can be included.



MCH/UCH density map with a high abstraction level based on the quantitative evaluations of MCH data from Schleswig-Holstein and neighbouring states, which indicates the Mesolithic coastline (white dotted line) and some of the most important MCH/UCH sites, i.e. (1) inundated Mesolithic site in Neustadt Bay, (2) Sea Battle area of 1715 near Kiel, (3) inundated Mesolithic site in Flensburg Fjord, (4) Hedeby's Viking Age harbour area (World Heritage site), (5) early medieval sea-barrier of the Danevirke (World Heritage site), (6) Puttgarden Reef ship-trap, (7) Norderhever inundated medieval settlements

- Progress before and after Project implemented:

MSP authorities became aware and positive about ALSH/BalticRIM input, which they try to take into account as best as the legal basis allows. Through public outreach to the diver-community (workshop in 2018) the willingness to report new findings under water and to cooperate in general, has increased. In general, MCH/UCH topic became better visible/recognized by other marine

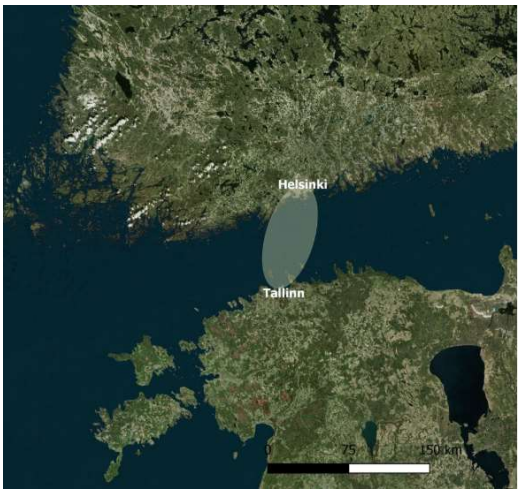
disciplines (e.g. marine geologists, maritime authorities, policy makers); ALSH – was recognized as institution providing reliable information in order to protect the underwater cultural heritage.

**PLEASE FIND THE DETAILS OF THE CASE STUDY IN THE ANNEX No 10.**

# International Case studies:

## Estonia – Finland crossboarder - Gulf of Finland

The case study area consists of a maritime corridor in the Finnish Gulf between the cities of Tallinn and Helsinki. More specifically, the Northern end of the area comprises the historical area of Old Helsinki (modern Helsinki and parts of Sipoo and Espoo as well as Kirkkonummi region) and the Southern end is bordered by the Tallinn Bay (administrative borders of Tallinn), Naissaar and Aegna Islands.




Main characteristics:

- Cultural heritage sites in this area include shipwrecks from different periods, historical harbours of Tallinn bay, historical sea routes between Tallinn and Helsinki, the fortresses in Tallinn (Toompea) and Helsinki (Suomenlinna World Heritage Sea Fortress). Also the Kronprins Gustav Adolf wreck park in front of Helsinki.
-

Applied methods:

- Analysis of relevant legislation concerning MCH in Estonia and Finland;
- require information from different groups of stakeholders (e.g. fishers, divers, entrepreneurs) to assess socio-economic benefits derived from heritage sites;
- mapping of several layers of different types of objects: cultural heritage objects, historical travel routes, modern travel routes, and natural formations;
- addressing (possible) conflicts and issues that rise with different areas of activity (business, shipping, fishing, waste management, recreation).

Progress summary in short:

- Reason of selecting:

The case study was selected to test whether Estonian and Finnish data is compatible with each other and how this can create socio-economical value.

- Expected to achieve:

The overall purpose of this case study area was to provide the MSP planners of both countries, also local municipalities involved and large corporations (e.g. Tallinn harbour, Tallink) with

information on collective cultural heritage in the Gulf of Finland and its socio-economical value/touristic potential.

- Achieved:

MCH information from both Finnish and Estonian side was collected.

- Progress before and after Project implemented:

Expected that the awareness of both Estonian and Finnish stakeholders will increase significantly.

**PLEASE FIND THE DETAILS OF THE CASE STUDY IN THE ANNEX No 11.**

## Denmark & Schleswig-Holstein - Flensburg Fjord


The Danish-German sea boundary divides Flensburg Fjord into two parts under different jurisdictions. Yet, from a historical and physical landscape perspective, the maritime cultural heritage of the region can only be understood in its entirety. In the Mesolithic and early Neolithic this region formed a river valley, which banks were popular settlement sites. With the sudden rise of sea-levels in the wake of the Littorina Transgression, aided by the post-glacial rebound, these prehistoric settlement sites have become inundated and – due to the anaerobic conditions under the sediments – many of its organic remains have survived for millennia. The vast potential of this "underwater archive" has been recognised already in the late 19th century, but relatively few sites have been investigated. In later centuries Flensburg Fjord became an important traffic artery. The inner fjord was protected against seaborne attacks by a sea-barrier even before the foundation of Flensburg, and in more recent times, merchant ships from the Danish West Indies shipped rum to Flensburg, and smaller coastal vessels supplied the markets of Flensburg and Sønderborg with agricultural goods. Aspects of this maritime legacy are preserved up to the present day, with the annual "Rum-Regatta" as northern Europe's largest event for gaff-rigged vessels. Thus, this region has not only great archaeological potential – the tangible heritage –, but offers also an opportunity for an entirely new approach: The integration of culturally significant coastal landscapes – or: the intangible heritage.

Applied methods:

- Regular meetings with stakeholders: Aside from the archaeological heritage and spatial planning sector also tourism agencies, museums, the traditional maritime community as well as scuba-divers are included.
- Exchange of information on the maritime cultural heritage amongst German and Danish colleagues.
- Evaluating historic maps and old records of coastal settlements.
- Evaluating the physical (underwater) landscape of the region, including prehistoric rivercourses, forests and coastlines. For this purpose, data from the earth sciences is assessed, which includes sonar data and high-resolution depth contours from aerial laser scans.
- Concept for the creation of a ship-cemetery for sunken or decommissioned historical vessels, which serves a multi-purpose as underwater/diver attraction, as natural habitat, as tourist magnet, and as object for scientific observation and training.

*Wreck of the historic gaff-ketch OLINE built 1878 and sunk in January 2019. This wreck would be suitable to be relocated to a newly founded ship-cemetery in lieu of scrapping (Photo: NDR).*

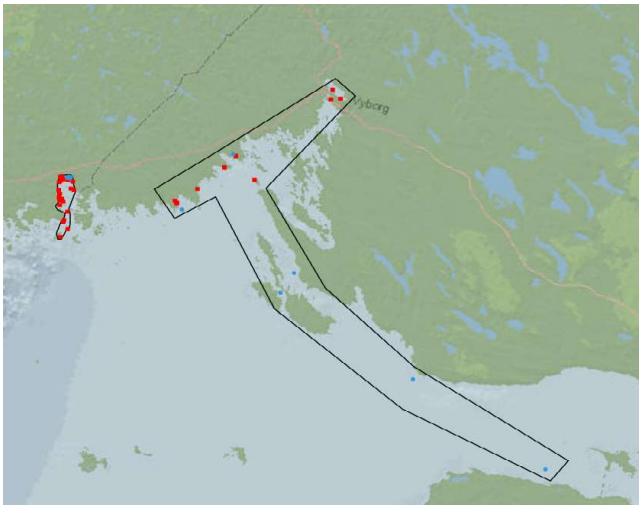
Progress summary in short:

- Reason of selecting: the region's maritime culture has great Blue Growth potential in conjunction with the goals of touristic development. The latter has been already prioritised in current MSP on the German side, so a synergy can be anticipated.
- Expected to achieve: the data from both the Danish and German side will be made objectively comparable by the BalticRIM-dataportal. An integration of areas of high cultural importance in MSP is not expected in the short-run, however, another concept with spatial requirements is currently discussed and may be implemented, i.e. the ship-cemetery for decommissioned historical vessels.
- Achieved: The main achievement is the bringing together of stakeholders, through which a debate was initiated, which reaches beyond the narrowly defined remits of all sectors (e.g. cultural heritage, tourism, municipal development, nature protection, scuba-diving). It also initiated a direct dialogue between the archaeologists responsible for the UCH from both sides of the fjord, i.e. the ALSH (DE) and the Langelandsmuseum (DK).
- Progress before and after Project implemented: Better quality of MCH information via the BalticRIM dataportal

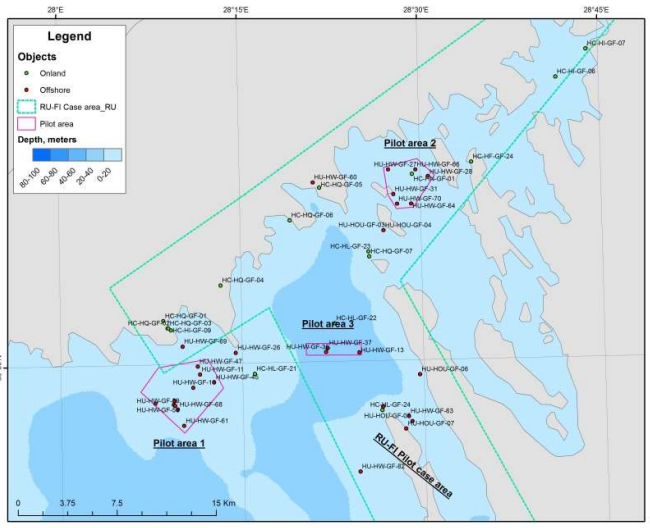
**PLEASE FIND THE DETAILS OF THE CASE STUDY IN THE ANNEX No 12.**

## Russia – Finland crossboarder - Gulf of Finland

The case study has been elaborated by the Finnish Heritage Agency (FHA) in co-operation with the Russian partners (Vyborg museum, Shirhsov institute of Oceanology of Russian Academy of Sciences and Ermak NorthWest). The name of the case has been determined as "Granite development in the Vyborg province and the supply of building material to St. Petersburg by water way" ("Stone Way") and the spatial coverage of the transboundary case from Kotka to Bolshaya Izhora was fundamentally indicated.



The Russian transboundary part of the case is enabled the Bierkezund strait, the Vyborg and the Gulf of Finland at a traffic route of the cargo ships with stones from Primorsk to London shallow, where the remains of sunken ships with a load of granite stones are located.




Main characteristics:

- Cultural heritage sites in this area include stone quarries and wrecks in the Virolahti bay in Finland and in the bay of Vyborg in Russia, along a route of stone, which leads to St. Petersburg and Cronstadt.
- The quarries provided a substantial part of the local economy and towards the end of the 19th and especially in the beginning of the 20th century, also Finns became active in the stone trade and skilled masons. The quarries were worked in traditional methods, but the operation became to its end in the 1920's.

Applied methods:

- Field study to describe several quarries;
- mapping of MCH objects: stone quarries and wrecks;

Progress summary in short:

- Reason of selecting:

The case study was selected along the route of stones, which leads to St. Petersburg and Cronstadt.

- Expected to achieve:

The overall purpose of this case study area was to provide the MSP planners of both countries, also local municipalities involved with information on collective MCH in the Virolahti bay in Finland and in the Bay of Viborg in Russia.

- Achieved:

MCH information from both Finnish and Russian side was collected.

- Progress before and after Project implemented:

It is expected that the awareness of both Finnish and Russian stakeholders will increase significantly. One of the main stakeholder is the the Vyborg United Museum-Reserve.

**PLEASE FIND THE DETAILS OF THE CASE STUDY IN THE ANNEX No 9.**

# LIST OF ANNEXES:

- Annex 1: Relict forest area/wrecks
- Annex 2: Wrecks and submerged landscape
- Annex 3: Jussarö ship trap
- Annex 4: Lahia ship trap and the maritime cultural landscape in the Bothnian Sea
- Annex 5: Natural harbours in the Archipelago Sea and the southern Bothnian Sea
- Annex 6: Ruotsinsalmi Sea Battle Area
- Annex 7: Maritime Cultural Landscape, shipwreck sites, harbours and settlement sites, defence systems, Intangible Maritime Cultural Heritage
- Annex 8: Underwater and on-land maritime cultural heritage in South-Eastern Baltic
- Annex 9: Underwater and on-land maritime cultural heritage in Gulf of Finland
- Annex 10: Schleswig-Holstein's maritime cultural heritage
- Annex 11: Cross boarder - Gulf of Finland
- Annex 12: Cross boarder - Flensburg Fjord