Nordic Council of Ministers

RUTILUS

Strategies for a Sustainable Development of the Underwater Cultural Heritage in the Baltic Sea Region

SWEDISH

*NATIONAL **MARITIME** MUSEUMS*

REPORT dnr 1267/03-51, 2006

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Abstract

This is the final report of the Rutilus project, based on the compilation and analysis of a questionnaire, answered and handed in by each of the nine participating Baltic Sea States (BSS), and the content of which was discussed during a series of workshops throughout the course of the project. The project has enjoyed funding from the Nordic Council of Ministers and their "Adjacent Areas Programme", and has been running from August 2004 until June 2006 with the Swedish Maritime Museums, SMM, as project co-ordinator.

The Rutilus project has the overriding aim of raising awareness of the potential of underwater cultural heritage (UCH) in the Baltic Sea region (BSR), and to develop a joint strategy for its long-term preservation and sustainable use for tourism. Two of the main target groups have been the Underwater Group – a working group within the Baltic Sea heritage co-operation – and institutions working with UCH.

The Rutilus report shows that all of the BSS protect underwater cultural objects within their national maritime boundaries, with the exception of single objects and shipwrecks originating from the 20th century, where the level of protection differs. In 40% of the BSR UCH remains under the sole protection of international conventions and thus, in effect unprotected.

The management and sustainable use of UCH depends upon discovery, registration and designated protection under cultural heritage legislation – processes that vary greatly within the region. Currently, 0.8% of all protected cultural heritage objects in the BSS are located in the sea. The level of education available in the subject varies greatly, perhaps one of the main contributors to the relative neglect of UCH in comparison to heritage on land. However the number of theses produced on the subject is increasing although only two international projects have been run in the past five years.

This report further shows that there are some 235,000 divers in the region. The numbers of divers in the BSR as well as the depth to which they can safely dive using modern diving equipment are both increasing. Divers are one of the main contributors to new discoveries of underwater cultural objects but also pose a threat to its preservation for future generations. As a group, the diving community has great potential for UCH-tourism, a fact which has been recognised within the BSR but not further investigated. So far, only one dive park surrounding a shipwreck has been established in the region. The interest in maritime heritage is illustrated by the fact that some 3.4 million visitors visited maritime museums in the BSR in 2004.

As part of the Rutilus report the 100 most important UCH-sites in the BSR have been assembled, illustrating their unique value in terms of regional identity and potential for diving tourism but also illustrating the differences in respect of the level of protection afforded to them and their relative importance in each country.

Introduction

The project "Rutilus – Strategies and Sustainable Management of the Underwater Cultural Heritage" has been drawn up within the framework of the Baltic Sea Co-operation for Cultural Heritage. The project has been financed by the Nordic Council of Ministers. Under the auspice of the Council of Baltic Sea States (CBSS), an extensive and strong network between different institutions working with cultural heritage has evolved, a work which is led by the Monitoring Group on Cultural Heritage in the Baltic Sea States. One of the groups working under the monitoring group is the Working Group of Underwater Cultural Heritage.

The idea of the Rutilus project was made already in 2002 and after two years of intensive preparations it could commence in the autumn of 2004. Already during the initial phase of the project it became clear that the situation regarding underwater cultural heritage in the participating states varied greatly. During the course of the project these differences have been a presumption for the project, with a reasoning to let all the collective experiences and perspectives interweave into a mutual understanding of challenges and possibilities the institutions dealing with UCH in the region is facing in the future. The exchange of knowledge, on a practical as well as theoretical level, related to for example legislation, management traditions, educational systems and databases has at once been an enriching as well as elucidatory part of the project.

The knowledge and experience derived from the Rutilus project can now be used to continue the work on finding better and more practical methods for preserving underwater cultural heritage in the Baltic Sea, and at the same time serve to increase accessibility as well as interest. The fact that knowledge and understanding of cultural heritage is a corner stone for the continuing work towards its successful preservation, has gradually become evident, but to convert this into practical antiquarian work is a challenge. Within the Working Group of Underwater Cultural Heritage the project has already resulted in discussions regarding mutual "guidelines" for future management of UCH in the Baltic Sea.

As chairman of the Working Group of Underwater Cultural Heritage it is my wish that this report will be a support in the future work with using and preserving cultural heritage, for authorities and other institutions responsible for cultural heritage, for the sport diving sector, educational institutions but also for the growing number of people interested and engaged in the incredibly fascinating part of our cultural heritage that lies hidden under the surface of the Baltic Sea.

Björn Varenius, Swedish Maritime Museum

Chairman for the Working Group of Underwater Cultural Heritage

1. Background and Vision

Underwater archaeology has a relatively short history, having developed mainly since the 1940s and the introduction of the aqualung. Furthermore, in the past 10 or 15 years authorities managing cultural heritage around the world, have begun to appreciate the importance of a “seamless” approach to their land and underwater cultural heritage (UCH). In 2001, the UNESCO 'Convention on the Protection of the Underwater Cultural Heritage' was introduced - the first time the importance of underwater heritage has been recognised on an international level.

One of the highlights in the history of underwater archaeology was the raising of the *Vasa* shipwreck from Stockholm harbour in 1961 which at the time attracted an enormous public interest from around the world. Today, after years of preservation, this almost intact 17th c. warship forms the centre piece in an exhibition which, with almost 900,000 yearly visitors, is one of the most popular museums in Europe. However fully excavating and preserving UCH in order for it to gain public awareness is neither practical nor economically viable. In the majority of cases it is best preserved where it lies – on the bottom of the sea under controlled circumstances. Yet, underwater heritage has an enormous potential – not only as a source of historical information but also for tourism. The main difficulty inherent in the management of underwater heritage is a lack of awareness of its existence - from the general public as well as authorities and politicians. Underwater heritage is certainly less tangible than that found on land; a medieval castle is more immediate, and more readily raises questions about its history than a shipwreck or submerged settlement which cannot be seen from the surface. The rare moments it does come into the public focus are in connection with treasure hunt expeditions or expensive building projects or in association with destructive fishing methods - not as a result of its historical and scientific value.

UCH in the Baltic Sea is extremely rich. For thousands of years the Baltic has provided the region with its main means of communication and its main source for food stuffs. This has resulted in a long and colourful seafaring tradition. Due to the fact that the Baltic Sea is composed of brackish water, an environment in which wood eating worms cannot exist, the preservation conditions for organic material are exceptional. As a result many wooden ships have remained intact from the moment of sinking until the present. Furthermore, fluctuating water levels since the last ice age have submerged large land areas in the south so that many settlements and other structures are now found on the bottom of the sea. The Baltic Sea can therefore be compared to an enormous underwater maritime museum. This ‘museum’ as it were, is located in relatively shallow waters, the Baltic Sea having an average depth of merely 45m. Thus, large areas of this underwater heritage are easily accessible to divers.

Figure 1: Map over the Baltic Sea and the Baltic Sea States.

The exceptional diving conditions in the Baltic Sea, coupled with its rich heritage, have given rise to an ever increasing diving community, a whole new group of tourists that have considerable potential in terms of sustainable tourism. This may well lead to increased welfare and cross-cultural networks as well as improvements in communication within the region. In order to take full advantage of this group of tourists, it is important to ensure the preservation of the UCH – in particular from threats of pollution, degradation, plunder and sheer ignorance.

There are nine nations bordering the Baltic Sea (figure 1), all with very different historical approaches to UCH. Of these, all but the Russian Federation are member states of the European Union. Of the remaining eight, Estonia, Latvia, Lithuania, Poland and the German federal state of Mecklenburg–Western Pomerania did not have access to their UCH until gaining their independence in the 1990s, after which work began on developing its scope and management. Thus it is scarcely surprising that work with UCH varies greatly

across the BSS. In general terms such work is carried out on a national basis, by small groups of people that are attached to public institutions and who work on very specific subjects using very limited resources. Therefore most research today is undertaken on country or state level. In consequence, knowledge about legislation, practice and ambitions in the BSS with regard to UCH is very limited and there is an apparent lack of a joint strategy for its management.

1.1 Main Objectives

The Rutilus project is intended to provide an overview of the status of the field of underwater archaeology in the BSR, with three main objectives:

1 To establish trans-national and cross-sectional networks for the management of UCH in the Nordic countries and the BSR. This serves to make people working within the field aware of institutions, professional underwater archaeologists and researchers, governmental officials and educational establishments operating in the BSR and to facilitate co-operation between these entities. Furthermore, it serves to develop networks amongst groups involved with cultural heritage on land and groups involved with cultural heritage legislation.

2 To increase knowledge and improve management practices through the exchange of data standards and to develop common guidelines relating to legislation, the use and value of UCH.

3 To contribute to the basis for sustainable tourism through the development of a joint strategy for marketing UCH, to increase the accessibility of protected monuments and to improve their preservation and protection.

In order to help promote these main objectives and highlight how UCH is protected and managed the 100 most important underwater monuments in the region have been compiled into a list, presented as 'The 100'. Ultimately, it is the intention that 'The 100' function as a way in which to visualise UCH and to illustrate its potential for being used as a form of a regional identity for the Baltic Sea.

1.2 Target Groups for the Report

The primarily target group of the report is the Underwater Group within the Baltic Sea Heritage Co-operation (BSHC). Other target groups include the participating institutions, museums, as well as other interest groups operating within the field of maritime archaeology.

A Summary of the Rutilus report is also produced within the project, intended to provide a general overview of the findings of this report and targeted at a broader public.

1.3 The Road Map

The Rutilus road map towards a joint focus within the field of UCH and its management in the Nordic countries and the BSS, is based upon the co-operation between the national and state authorities responsible for UCH in each country. A questionnaire was sent out in August 2004 subsequently returned to the Swedish National Maritime Museums in December the same year which had the aim of gaining an appreciation of the current status of UCH management within the region. The questionnaire was formulated so as to gain an understanding on general issues concerning maritime heritage such as management, su-

pervision and law, as well as education and information on other interested parties and organisations operating within the field.

The content of the questionnaire is the result of discussions held at three meetings, all under the auspice of the Underwater Group of the BSHC, in the period 2003–2005. The final report has been analysed and discussed at a working seminar in Wismar in April 2006 and was presented in full at a conference in Stockholm in June 2006 in the presence of the project participants.

The following institutions and individuals have participated in the project:

Sweden:	**National Maritime Museums** Boel Bengtsson, Göran Ekberg, Andreas Olsson, Björn Varenius
Denmark:	**Viking Ship Museum** Jan Bill, Morten Gøthche
Estonia:	**National Heritage Board** Ants Kraut, Maili Roio
Finland:	**National Board of Antiquities** Rikka Alvik, Matias Laitinen, Maija Matikka and Sallamaria Tikkanen
Åland:	**The Åland Board of Antiquities** Markus Lindholm, Viveka Löndahl
Latvia:	**Jūrmala Town Museum** Voldemars Rains **State Inspection for Heritage Protection** Juris Urtans
Lithuania:	**Klaipėda University** Perminas Klaidas, Vladas Zulkus
Germany M–WP:	**The State Agency for Mecklenburg–Western Pomerania** Friedrich Lüth
Germany S–H:	**Archäologisches Landesmuseum Schleswig–Holstein** Ralf Bleile, Sönke Hartz
Poland:	**Polish Maritime Museum** Iwona Pomian
Russia:	**Private Law Research Centre under the President of the Russian Federation, Moscow** Darya Borminskaya **Institute of State and Law under the Russian Academy of Science, Moscow** Dmitry Mazeine **Institute of History for Material Culture, Academy of Science, St. Petersburg** Petr Sorokin **World Ocean Museum, Kaleningrad** Olga Maximova, Elena Ryabkova

1.4 Limitations

The funding for the project has been provided by the Nordic Council of Ministers, covering the participation of all the BSS except for Poland and the two German Baltic Sea States, Mecklenburg–Western Pomerania and Schleswig–Holstein. These latter states have funded their own participation.

The term 'Nordic countries' used in the report refers to Denmark, Finland including the Åland Islands, and Sweden. The BSS refers to all nations and states that have a sea front towards the Baltic Sea as defined by HELCOM, and is limited by the parallel of the Skaw between the northernmost tip of Denmark and the island of Hälsö, just north of Gothenburg on the Swedish west coast. In addition to this, the report mainly relates to underwater cultural remains found or located in the sea, thus excluding finds from bogs and inland waterways/lakes.

1.5 The Report

This report is based on the compilation and analysis of the questionnaires from each of the participating states. Individual answers are compiled in appendixes I–VII, and are sometimes referred to in the text. The report has been prepared and written by Boel Bengtsson, with Andreas Olsson acting as project leader, and with contributions made by Göran Ekberg and Björn Varenius.

In total there are six chapters in the report;

1. Legislation
2. Management and Supervision
3. Education and Organisations
4. Cultural Tourism and Recreation
5. Visualisation of the UCH - "The 100"
6. Conclusions – Towards a Sustainable Future

The chapters on Legislation and Management, chapters two and three, have been the most complicated to write and to understand. In order to be able to fully appreciate and compare particulars on legal aspects and the functions of various authorities, national and federal state legislations on the cultural heritage have been consulted as a supplement to the answers provided in the questionnaires. The only heritage legislations not consulted, and in respect of which the information is solely gathered from the answers provided in questionnaire and from questions asked to state representatives within the project, are those of Latvia, Russia and the German federal state of Schleswig–Holstein.

In appendix II, the simplified outlines, or "flowcharts", of national and federal authorities, in charge of the management and supervision of UCH, for each of the BSS, have been assembled. These "flowcharts" have also been inserted into the text in chapter 2, and should mainly be regarded as an aid for the reader in understanding the text.

CULTURAL HERITAGE LEGISLATIONS

2. Cultural Heritage Legislations

The legislation concerning cultural heritage is of paramount importance as to how archaeologists and the public should conduct themselves when handling and visiting underwater cultural remains. The fact that the legalisation varies, between the Baltic Sea States, is important to bear in mind when trying to establish a common framework for how to manage underwater heritage and facilitate cross-border co-operation within that field. As a consequence, the legal nature of what is protected and to what extent has to be fully considered.

This chapter, which has been compiled on the basis of answers provided in the questionnaires and copies of national and federal heritage legislations (where such have been obtainable) seeks to provide an overview of the UCH–legislations within the region. Matters such as definition, ownership, examples of protected cultural objects and issues regarding when and where objects are protected will be examined and hopefully serve to illustrate strengths and weaknesses in the current legislations.

2.1 Laws on Underwater Cultural Remains

Whereas the majority of the Baltic Sea States have national legislation in place to ensure the protection of their cultural heritage, there are exceptions. Fore example, the German federal states have retained their legislative powers regarding cultural heritage from the German government, which means that the two federal states of Mecklenburg–Western Pomerania (M–WP) and Schleswig–Holstein (S–H) have separate cultural heritage legislations. Another exception are the Åland Islands, an autonomous state under Finnish sovereignty, which has its own heritage legislation. In both cases, however, criminal and private law are in the jurisdiction of the German and Finnish governments and therefore any infringements of the cultural heritage law of individual states become a 'national' matter. It should be added that Schleswig–Holstein is currently reviewing its heritage legislation as to make it more in line with other CH-legislations within the Federation.

2.1.1 Terms and Definitions

When considering the legal terms and definitions in the heritage laws across the Baltic sea region minor differences can be noticed. Most importantly, all legislations include the underwater aspect of cultural heritage and treat it in the same way as that found on land.

As to the specific definition of what cultural objects or monuments are, these can be summarised as being objects that hold special cultural value, either from an historical, archaeological and sometimes also technical or scientific perspective and are man-made or the result of natural formations. Finnish law, for example, describes cultural objects as 'antiquities pertaining to the past settlement and history of Finland', whereas according to Danish heritage legislation, cultural objects or monuments are simply defined as "..traces of human activities.., ..including context in which they are embedded..". Specific examples of what cultural objects might be are included in the majority of the cultural heritage legislations within the region, apart from those of Denmark, Lithuania and the two German federal states, which are more general in their formulations.

In general terms the cultural objects and monuments can be divided into two groups: "movable objects", i.e. single finds or parts thereof that can be moved, and "immoveable objects" which generally describes more complex or permanent structures that cannot be moved.

Appendix I, table 1–2, provides a brief synopsis of the legislation for the 11 nations and states within the Baltic sea region, participating in the Rutilus–project.

2.2 Protection and Ownership

Legal protection and ownership are two interdependent factors. Where the state claims ownership of a cultural object the cultural heritage law will apply, whereas in other cases civil law or even military laws might complicate matters or take precedence. Some national and state legislations distinguish between ownership of cultural objects or monuments found in the sea and, of those found in inland waterway systems. This project, however, will focus entirely on monuments found in the sea, and the ownership of those.

2.2.1 Examples of Protected Cultural Objects

In order for us to be able to better visualise more closely the types of cultural remains or monuments that are protected under the various cultural heritage legislations, the participating states have been asked to answer a set of specific questions, intended to cover the entire range of finds that might be located under water, from single finds on the sea bottom, to submerged or sunken structures from the stone age and to today (table 1).

From the questions posed, it is fairly evident that most cultural heritage legislations in the Baltic sea region are very comprehensive and clearly defined. In general, an age limit of 100 years applies for most cultural objects, including shipwrecks, in order for them to become protected. However, there are some important differences in the answers provided;

Category of cultural objects	Denmark	Estonia	Finland	Åland	Ger M-W P	Ger S-H	Latvia	Lithuania	Poland	Russia	Sweden
Shipwrecks >100 years old	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Shipwrecks 50–100 years	YES	YES	NO	NO	YES	YES	YES	YES	YES	YES	NO
Cultural layers from ≥16th c. – in harbours, submerged stone age sites, crannogs, pile dwellings etc.?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Cultural layers from 17–19th c. – in harbours, crannogs, pile dwellings etc.?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Submerged remains of fortifications and/or harbour structures ≥ 16th c. ?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Submerged remains of fortifications and/or harbour structures from the 17–19th c.?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
An iron cast, 17–19th c. cannon, lying on the seabed as a single object?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO

Table 1: Types of underwater monuments and cultural objects protected in the Baltic Sea States.

2.2.1.1 Shipwrecks 50 100 Years Old

In respect of shipwrecks that are between 50 and 100 years of age (a category which include the remains of warships from the first and second World Wars) the protection differs greatly across the BSS (appendix I, table 1, column 4). In particular the Nordic countries stand out as not including such wrecks in their cultural heritage legislations, although Danish legislation allows for the protection of wrecks younger than 100 years in special circumstances.

The most comprehensive legislations are found in the Baltic and former Soviet States with Estonian law for example, protecting all shipwrecks regardless of age (i.e. those that can be classified as a cultural object of special interest). Polish law includes shipwrecks ”characteristic of modern economies” which in effect could cover all types of wrecks found within Polish sea borders. Very similar to this approach are the legislations of M–WP and S–H, which allow for the protection of any objects of “scientific importance”, including 20th c. objects, in S–H, currently limited to objects more than 30 years of age. Russian and Latvian legislations cover shipwrecks older than 40 and 50 years of age respectively; under Lithuanian law shipwrecks, over the age of 50 can become protected as a movable object of special technical importance. It should be added that in neither of these former Soviet states, nor in S–H, does the protection apply automatically. Instead, Lithuania has taken steps to simply outlaw any form of moving or salvaging of cultural objects within its sea borders.

2.2.1.2 Movable Cultural Objects

When it comes to single finds found on the sea bottom, Sweden is the only country not to provide such finds with protection. If however, the object is older than 100 years of age, and contains precious metals such as gold, silver, copper or bronze, or is part of more than one object, such an object is automatically protected. Likewise, if such an object obviously belongs to a protected monument, it is protected. However, all other types of single cultural finds become the property of the finder. In order to provide some perspective on this issue, Finland and Åland can be used as an example. Here single finds are protected, but unless they are found embedded in a context or can be suspected to form part of more than one object (in which case they must be left undisturbed) they must be handed in to the relevant authorities. Other nations, do not allow the object to be disturbed unless it is endangered, whereas some again state only that such remains shall be left untouched and be reported to the relevant authorities.

2.3 Other Legal Aspects

2.3.1.1 National Maritime Boundaries

Generally, cultural objects found underwater in the Baltic Sea are protected within the national maritime boundary, or 12 mile zone, regardless of whether they are movable or not, the exceptions already having been discussed above. Denmark has extended its protected zone to the 24 nautical mile limit which in practice includes the shipping lanes on the Baltic Sea side (figure 2). Denmark however, is an exception and consequently, cultural heritage objects and monuments in most areas outside the national maritime boundaries remain outside state jurisdiction. Sweden has tried to solve this particular problem by claiming legal right to any cultural remains that have been salvaged by a Swedish owned ship, or have been taken to Swedish territory.

2.3.1.2 International Conventions

For objects of cultural or scientific value located in areas outside national maritime boundaries, beyond jurisdictional powers of individual states, protection is more limited. Currently, there are three international conventions that affect the UCH in the Baltic Sea;

1. the United Nations Convention on the Law of the Sea 1982, 10 December 1982
2. the European Convention on the Protection of the Archaeological Heritage, Valetta 16.I.1992, and
3. the ICOMOS 1996 Charter on the Protection and Management of the UCH

Relating firstly with the Law of the Sea (1982), article 149 of this convention states that “all archaeological and historical objects” in the sea (inside and outside maritime boundaries) “shall be preserved or disposed of for the benefit of mankind as a whole”. Under article 303(1) of the same convention, it is the duty of every state “to protect objects of an archaeological and historical nature found at sea”, and every state “shall cooperate for this purpose”.

Under the Valetta Convention (1992) the EU states agree to protect the archaeological heritage as “a source of the European collective memory”.. “situated on land and under water” (Article 1, §1,3), and to “prevent any illicit excavation or removal of elements of the archaeological heritage” (Article 3, §i, a).

Finally, the ICOMOS charter (1996), characterises underwater cultural heritage as an international resource “contributing to the formation of identity” which can “be important to people's sense of community”. Article 1, of this charter, states as a fundamental principle that *in-situ* conservation should be considered as a first option regarding the preservation of UCH, followed by Articles 2-15 which provide clear guide lines as to how archaeological investigations should be managed.

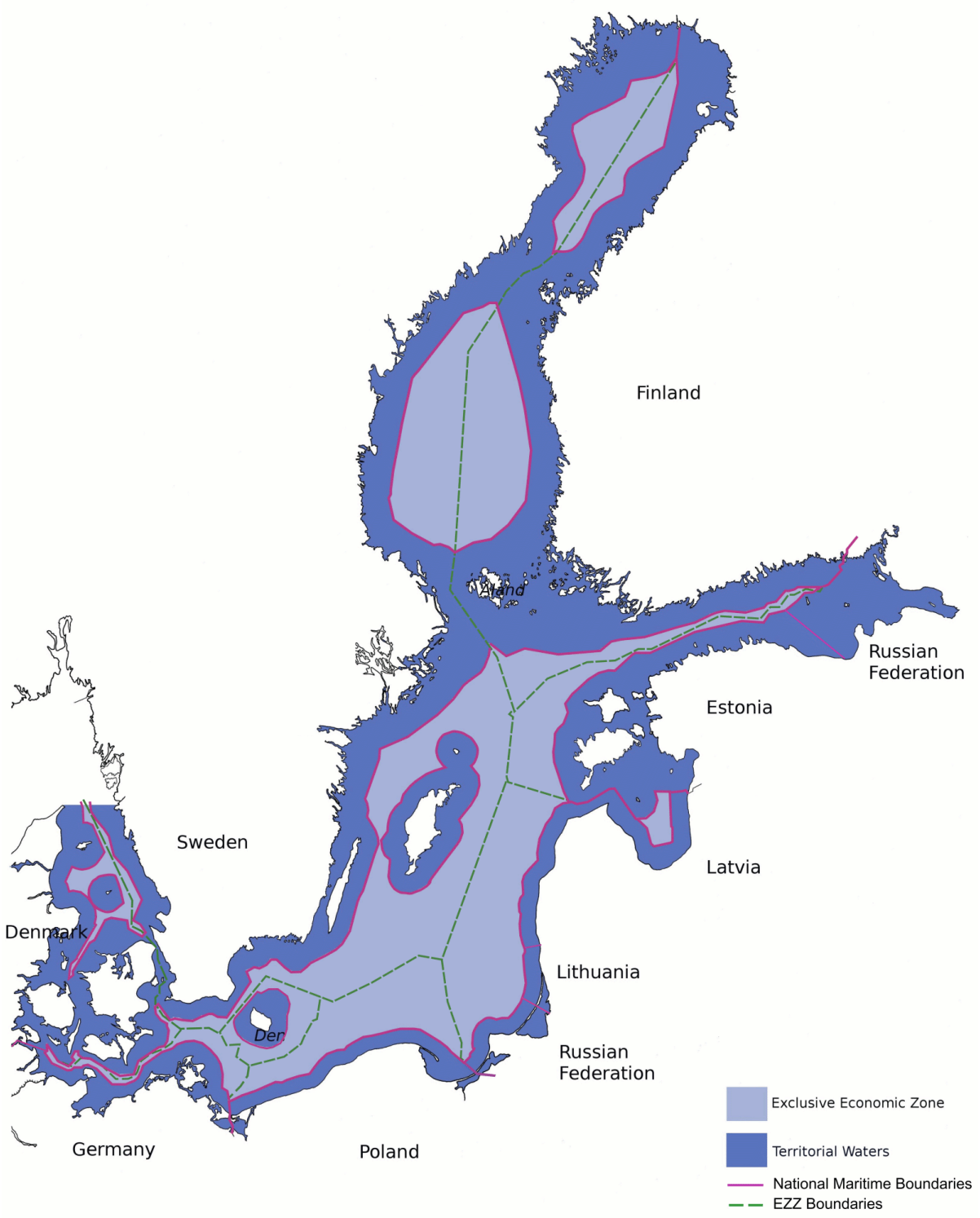

Figure 2: Overview of the approximate maritime boundaries (12 nautical mile zone) and the exclusive economic zones in the Baltic Sea. The total surface area is approximately 420,000 km². Of this, 252 000 km² consist of territorial waters and 168 000 km², or approximately 40%, fall outside national jurisdiction, where protection of UCH is more limited, relying upon international treaties.

In addition to the above conventions, a fourth convention, directly aimed at UCH exists; the UNESCO "Convention on the Protection of the Underwater Cultural Heritage", adopted in Paris in 2001. Its articles 8, 9 and 10 offer a more comprehensive protection of UCH in the continuous and extended economic zones, and on the continental shelf, and is an effort to bridge the gap in the current level of protection. So far this convention is ratified by six states, including the three European states of Lithuania, Spain, Croatia and Bulgaria.

2.3.1.3 Privately Owned Monuments

Cultural objects that belong solely to the state are protected under cultural heritage laws. This is the case in Denmark, Latvia, Lithuania, Poland and Russia where the state alone can own the underwater cultural heritage. However, in those cases where private or multiple ownership can be claimed of an underwater cultural monument, most typically shipwrecks, there are differences in how such monuments are treated. Swedish law clearly states that such monuments remain protected under cultural heritage law (where they are subjected to dual ownership) and that any disturbance requires special permissions from relevant authorities (see column 3, table 3, appendix I). Also, under Lithuanian law, privately owned monuments that are protected cannot be disturbed without relevant permits. In Estonia, there is no dual ownership, but in those cases where private ownership of an underwater monument can be claimed, the ownership is restricted and the owner, by law, liable for its protection. M–WP law recognises the rights of the legal owner foremost, although this ownership come with responsibilities of maintenance and care and permission is still needed for alterations of any kind. In Estonia, Lithuania and M–WP the legal owners can apply for subsidies to pay for upkeep and protection.

2.3.1.4 When is a Cultural Object Protected?

The definitions of when a cultural object becomes protected varies greatly across the Baltic Sea region (appendix I, table 3, column 2). Under the legislations of the Nordic countries, the Russian Federation and those of M–WP and S–H, a cultural object is either protected before it has been discovered or at the moment of discovery. Estonian law provides temporary protection for movable cultural objects from the moment it has been found whereas the remaining nations, Latvia, Lithuania and Poland, require that the object has been reported and/or registered before it can obtain protection under the law, despite the fact that such objects automatically belong to the state. Such procedures may take some time, and in the case of Latvia, is described as being an especially arduous affair.

2.3.1.5 Reporting Newly Discovered Finds

From the perspective of preservation it is important that newly discovered finds are reported to the relevant authorities as soon as possible. Therefore the finder of a cultural object is often duty-bound to report such a find, and omission to do so is punishable by law (see appendix I, table 3, column 5). In several countries redemptions are paid to the finder as an incentive to report, and if the find is not considered to be of special importance, the object becomes the property of the finder. Such is the case in the Nordic countries as well as in Estonia and Poland, whereas the German federal sea states, and the remaining BSS do not generally pay out redemptions.

2.3.1.6 Planning Permissions and Commercial Activities

Prior to any form of construction work, or other commercial activities that will alter the physical appearance of the sea front or the sea bottom - be it harbour construction work,

dredging, gravel extraction or similar - most national legislations regulate that certain procedures be followed with regard to the cultural heritage. This is to ensure that cultural heritage is not damaged where such damage can be avoided. In most cases the party interested in carrying out construction work needs to apply for a planning permission from the relevant authorities and in most cases these authorities must consult the National Heritage Boards or similar body, before permission can be granted (appendix I, table 3, column 6).

In those instances when, despite efforts to the contrary, it is unavoidable that a cultural monument is affected, full excavation under acceptable archaeological standards might be the only solution. According to most national legislations such work is paid for by whoever needs the monument to be moved and as a rule, the same regulations apply under water as on land.

Whereas the above can be said to apply to the majority of the BSS, there are considerable differences between them in their approach. The legislations of the Nordic countries, Latvia, Lithuania, Estonia and the German federal states state that any work that might endanger the heritage must be conducted with the permission of higher authorities, in the case of Latvia, the requirement for planning permissions is a particular requirement for construction work within 500m of a protected monument in rural areas, and within 100m of monuments located in urban areas. In most cases the main responsibility for assessing this lies with the planning authorities. In this respect Swedish legislation put more responsibilities on the applicants themselves compared to many other countries, in that "applicants wishing to undertake construction work must, well in advance of an application for a permit, carry out research on how such work might affect the cultural heritage"– a fact that probably has to do with the Swedish "freedom of information" policy, which makes it possible for anyone to access archives and registers concerning cultural heritage.

Polish law simply states that work that might endanger a cultural monument must be authorised by the Regional Inspector of Monuments and that for work underwater a joint permission is needed from the Maritime Office Director in agreement with the Regional Inspector. Thus Polish law differs slightly in that it has two authorities responsible for issuing permits for work underwater, but only one for work on land.

Other differences in the laws concern the amount of time available for the cultural heritage authorities to determine the extent or significance of a newly discovered cultural heritage site or find. In this respect some national legislations are very liberal whereas others allow for a bare minimum of time. The most liberal, where no time limits are specified at all, are the legislations of Sweden, Russia, Finland and Åland. Here work shall cease, in the case of Finland/Åland within the particular area of the find, and the authorities be contacted, and work may not continue until further notice. In Denmark, the authorities have four weeks from having been notified until a statement should be handed over, and up to one year in which to carry out archaeological investigations. The four weeks time limit also apply in S–H, whereas the authorities in M–WP must come with a statement, specifying whether an archaeological investigation needs to be carried out or not, within five working days, but protection might be extended to up to a year. Lithuanian law allows 15 days for an initial assessment, whereas Polish law only allows five days, but in both cases protection can be extended for up to six months, before construction work may resume.

2.4 Conclusions

The intention with this chapter has been to highlight some of the main aspects concerning the legal status and various degrees of protection afforded to underwater heritage in the Baltic sea region. It is clear that there are notable differences as to when, where and for what objects, protection applies. Beginning with the most important issues, the following need to be stressed:

- The UCH is only protected within the national maritime boundaries, or the 12 nautical mile zone, although one nations has extended this zone to its 24 nautical mile boundary. This means that of the total surface area of 420,000 km², 168 000 km², i.e. approximately 40%, fall outside national jurisdiction where protection is more limited, relying upon international treaties.
- There are differences in the age a cultural object has to have in order to become protected under the national heritage legislations. The common age limit of 100 years for example, excludes important wrecks from the WWI and WWII periods from becoming protected.
- Two things become apparent when considering the protection of UCH in connection to commercial activities (chap. 2.2.2.5.).
    - ➔ Firstly, that the protection of monuments to a large extent depends on them having been registered and included in spatial planning charts, as otherwise, the authorities in charge of issuing planning permissions, wont have sufficient information on which to base such permissions.
    - ➔ Secondly, that the time available to the cultural management authorities in order to assess the significance of a newly discovered site often is very limited, and requires very efficient management structures.

Other differences that can be noticed are that:

- In some states protection of UW cultural objects arises automatically from the moment of discovery whereas in other states the objects first have to be reported and/or entered into the sites and monuments register.
- Some nations provide very specific examples of different types of cultural remains that might be considered to be a cultural monument or object whereas others keep the wording more open to interpretation.
- Most UW cultural monuments are generally owned by the state however, there are some exceptions where the private sector is responsible for their upkeep and protection.
- There are weaknesses in the protection of single cultural objects found on the sea flor, and finally,
- Financial incentives to finders of cultural objects are payable in some states but not in all.

MANAGEMENT AND SUPERVISION

3. Management and Supervision

The law provides a framework for how cultural heritage should be protected in each state, but the functioning of this framework is largely dependent upon the structures in place for managing underwater heritage and for implementing and supervising the law surrounding it.

The intention in this chapter is to explore how UCH is managed in the Baltic Sea States. As an aid to the reader, "flowcharts" have been added providing information about the general line of responsibilities as well as identifying which authorities to turn to when reporting new finds or applying for planning permissions. Crucial to management and supervision are of course the national registers of monuments under water, and their updating – in particular within the past five years.

Other important aspects examined here are the efficiency of cultural heritage legislation and issues related to the accessibility of UCH, as well as ethical and environmental aspects.

3.1 General Structures of Responsibilities

Generally, the overall responsibility for the protection of UCH lies with the Ministry of Culture, but in some states this Ministry is either combined with other Ministries or, as is the case in Finland, fall under a different Ministry.

The level of responsibility at Ministry level generally extends to law making and putting in place long term structures for culture and its role in society, whereas the active responsibility is delegated to museums, institutions or sub-departments. However, in some nations such as in Latvia, Lithuania and Poland, the Minister of Culture is actively responsible for, by way of example, signing letters of designation for individual monuments. To make it easier to comprehend how the management process for underwater heritage works on a national level Sweden will be used as an example (followed by a comparison between the BSS) as to which authorities to turn to for reporting newly discovered cultural objects and sites, and as to which authorities to turn to in respect of administering planning permissions for exploitation work.

3.1.1 An Example of a National Structure

In Sweden it is the National Heritage Board (figure 3) that has the overall and centralised responsibility for cultural heritage management. This includes ensuring the law is observed on a national level. Other important responsibilities comprise the upkeep of the national sites and monuments register, answering for information, consultation and education concerning cultural heritage and responsible for ensuring that the results from commercial and research driven projects are fully made use of within the management sector. Furthermore, the National Heritage Board undertakes archaeological investigations, ensuring the same level of expertise and standard on archaeological investigations is made available nationwide.

On a regional level, 21 County Administration Boards[1], are responsible for supervising the laws within the cultural heritage sector. They administer and decide on matters involving the disturbance of cultural monuments, related planning permissions and, in the event that archaeological investigations are required they will decide about scope and the level of quality of such investigations as well as who should perform them.

1 Nine administration boards border the sea.

The regional and district museums co-operate with the County Administration Boards in supervising the management of cultural heritage. In addition they act as the bodies to which proposed measures from municipalities and cultural administration boards are submitted for consideration.

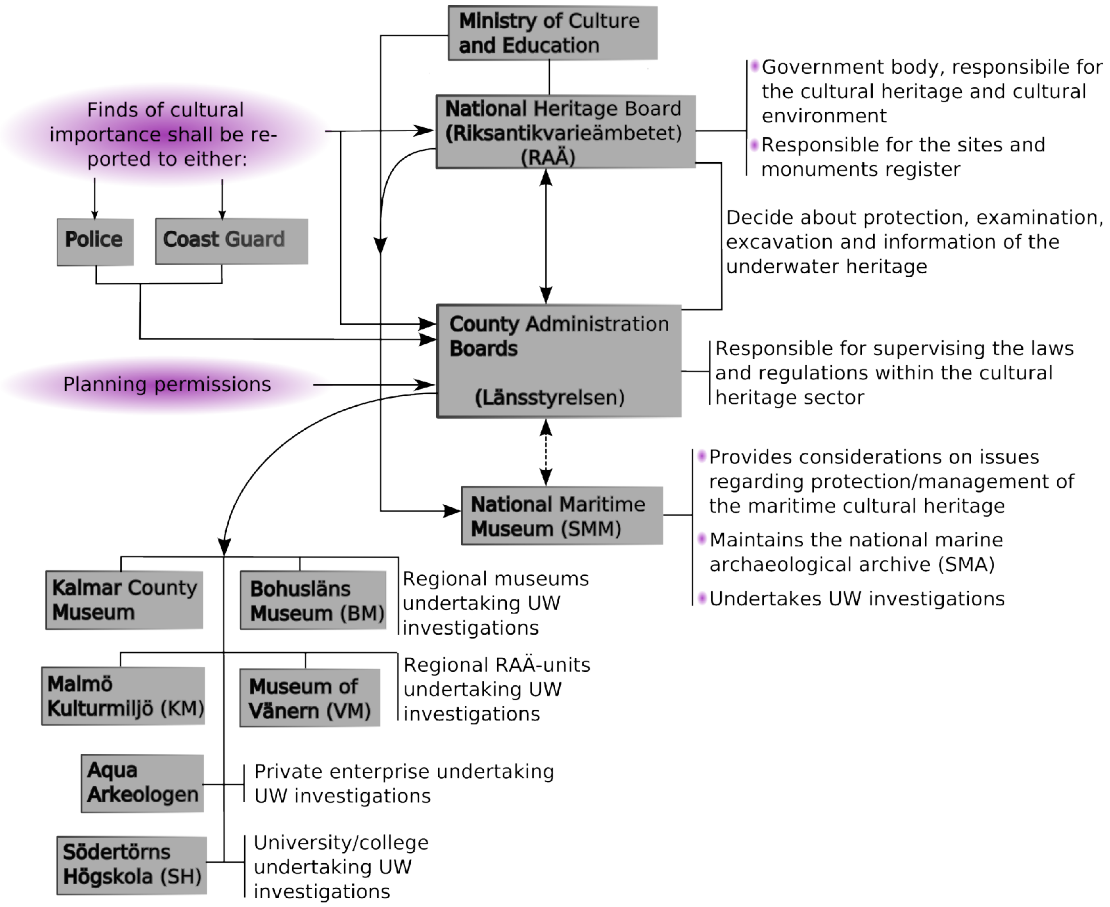

Figure 3: General management structures for Sweden.

3.1.2 Registering New Finds

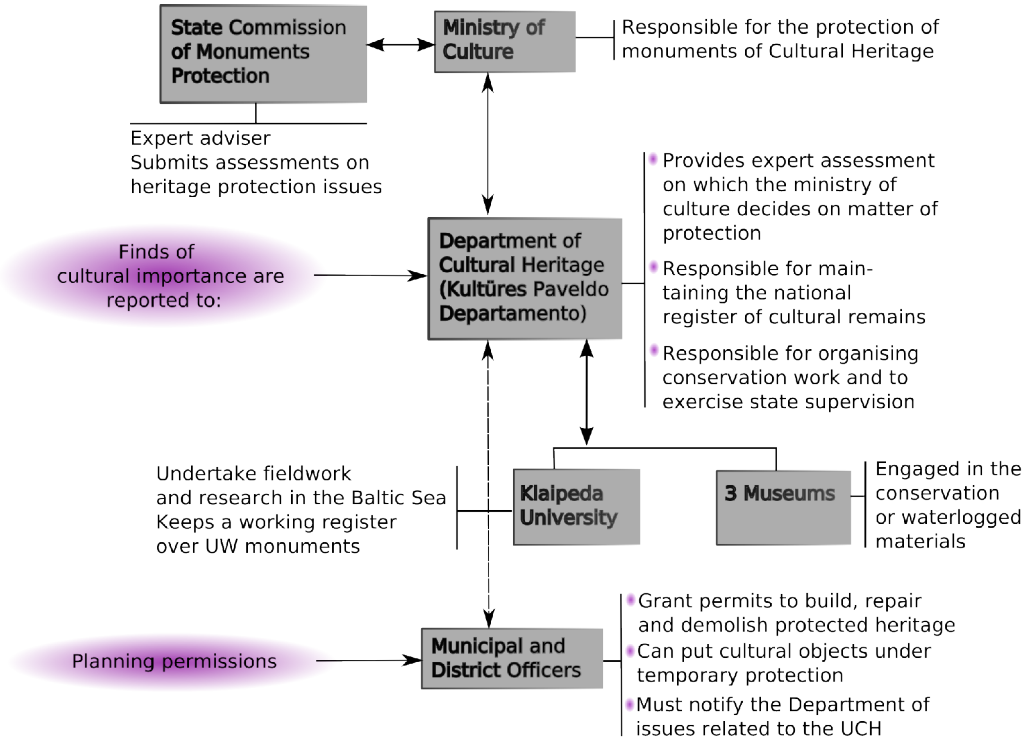

Figure 4: General management structures for Lithuania.

Most state legislations define one authority to turn to when reporting a newly discovered cultural object, which in the case of Lithuania would be the Department of Cultural Heritage (figure 4). Similar arrangements are found in Latvia, Poland, Russia, Åland, and Mecklenburg–Western Pomerania (M–WP).In the remaining States within the region, it is possible to report to up to five different authorities. For example in Estonia, cultural finds can be reported to the Ministry of Culture, or to the Local Municipalities/City Governments whereas in Denmark, newly discovered objects can also be reported to the Ministry of Culture, or, to a museum. In Sweden cultural objects can be reported to either the Police, Coast guard, the National Heritage or the County Administration Board, whereas in Finland and Schleswig–Holstein (S–H), such objects would be reported to the Police, the National Board Antiquities or the Archaeological State Department respectively. Finally, under Russian heritage legislation, cultural objects should be reported to either the Regional Authorities of the Preservation of Cultural Heritage or to a local branch of the Federal Agency on Culture and Cinema Art (appendix II).

3.1.3 Planning Permissions

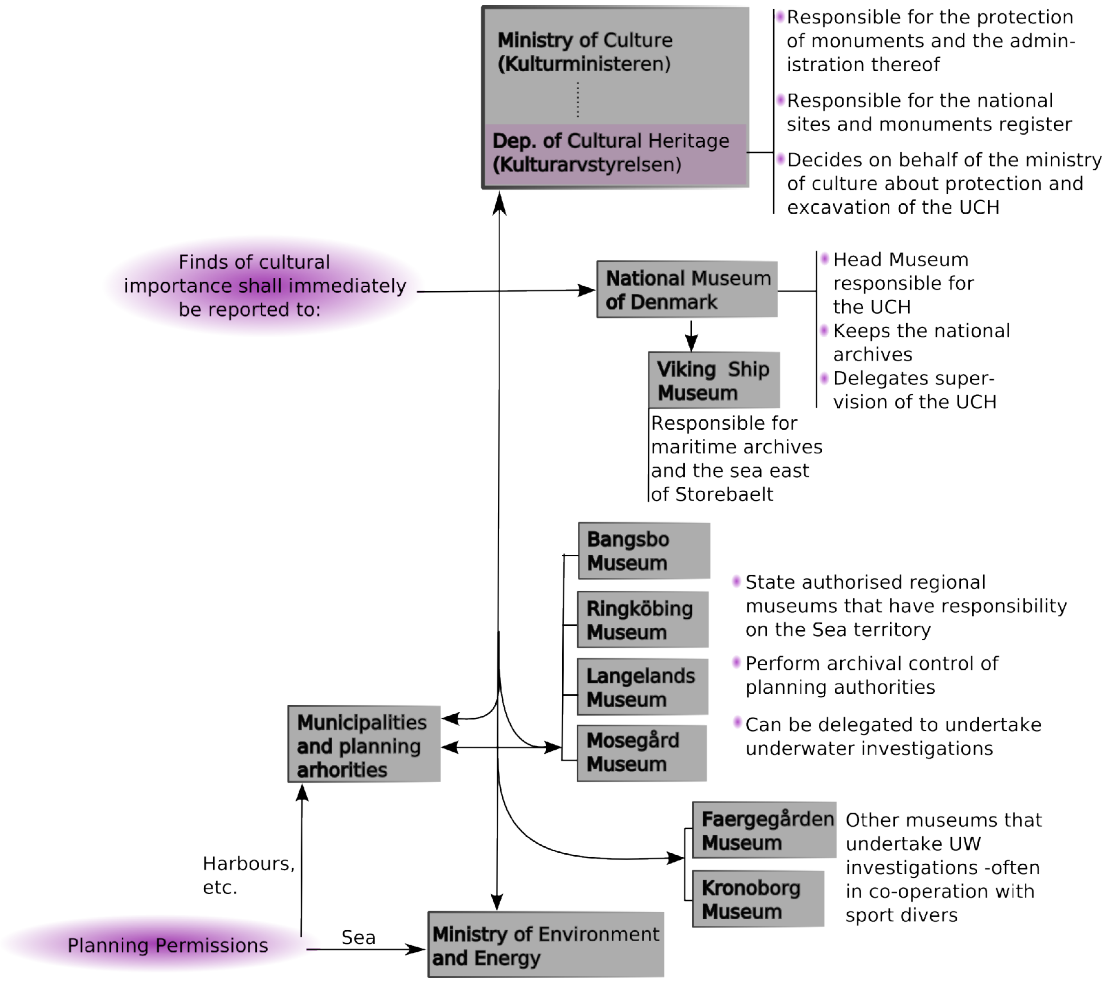

Figure 5: General management structure for Denmark. Authorities in charge of issuing planning permissions depend on whether the work is to be carried out in for example harbours and close to land, or in the open sea.

When it comes to planning permissions it is important to distinguish between permissions for work in open sea which are often required for the building of wind farms or large-scale gravel extraction and permissions for work close to land, such as land reclamation or harbour work on the foreshore, as these are often issued by different authorities. This is the case in, for example, Denmark (figure 5), where applicants for planning permissions close to the shore, whether it be state authorities, municipalities, private companies or private individuals, must turn to the local municipalities and their planning authorities. For work at sea, mainly required by the state or private companies, the applicant must turn to a relevant ministry, such as for example the Ministry of Environment and Energy.

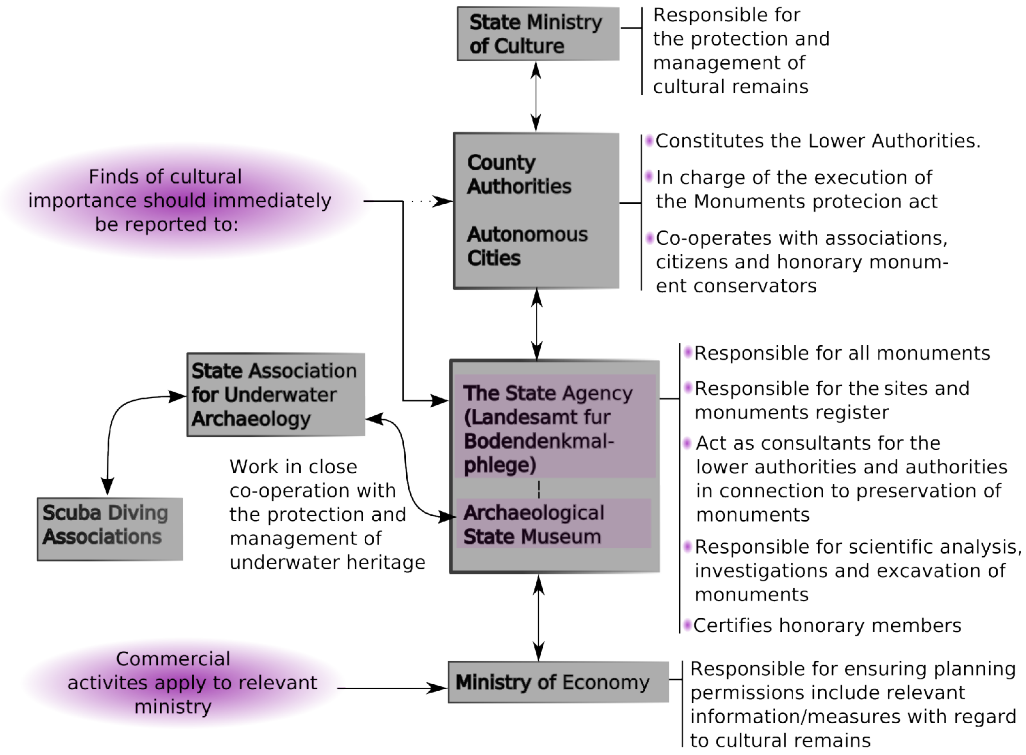

Figure 6: Structures for managing and supervising the UCH in M–WP. The Lower Authorities have no authority over the heritage in the sea. Therefore, all planning permissions for work in the sea or close to the shore are issued at ministry level.

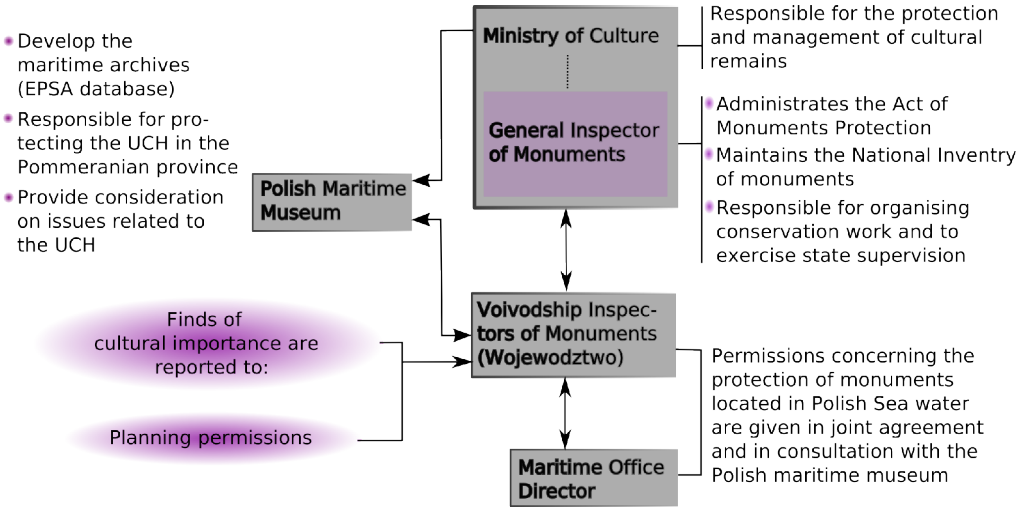

Figure 7: General management structures for Poland. Poland has three Volvodships/regions bordering the sea of which the Polish Maritime Museum is responsible for the protection of the UCH in the Pomeranian province.

In M–WP (figure 6), the line of authority authorising planning permissions jumps directly to Ministry level when dealing with underwater cultural objects found in the sea, regardless of whether in harbours or in open sea. Also in Estonia (figure 18) the authority of Municipalities is marginalised when dealing with UCH in the sea.

As there may be many different types of authorities involved in providing planning permissions for various work on the foreshore or under water, many cultural heritage laws place one particular authority as being responsible for issuing permits that can affect UW cultural monuments. For Sweden, as has already been mentioned, this authority lies with the County Administration Boards. In Poland (figure 7) the authority lies with the Regional Inspectors of Monuments[2], i.e. the same authority that collects information about newly discovered finds and similar arrangements are found in S–H, Russia, Finland, Åland and Latvia.

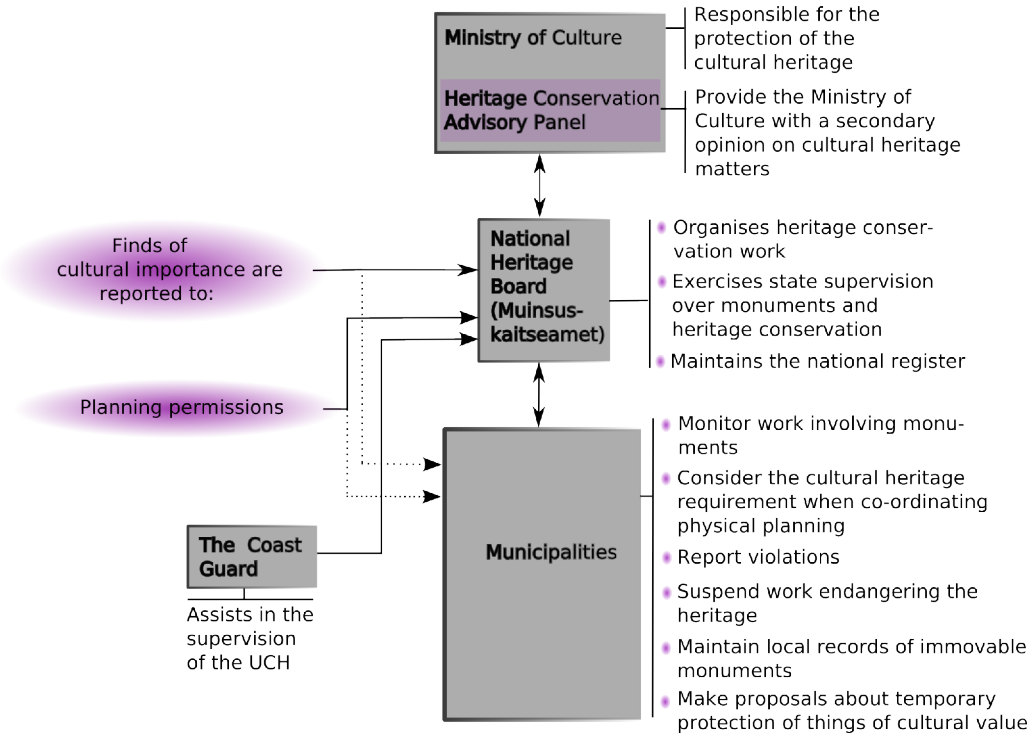

Figure 8: Management structures Estonia. As is the case in M–WP, municipalities and city governments have no authority over the cultural heritage located in the sea, as opposed to that on land.

2 The Regional Inspector of Monuments works in co-operation with the Marine Office. Poland has three maritime offices, each in charge of its own maritime sector.

3.1.4 Supervision of the Underwater Cultural Heritage Law

When comparing how the supervision of UCH in the BSS work, roughly two types of systems exist;

The centralised system where one agency is in charge of supervision and management and to which all questions regarding the UCH are aimed. Finland, Åland (figures 9 and 10), Latvia and S–H (figures 20 and 12) can be classified in this group, and in the case of the UCH, also Estonia.

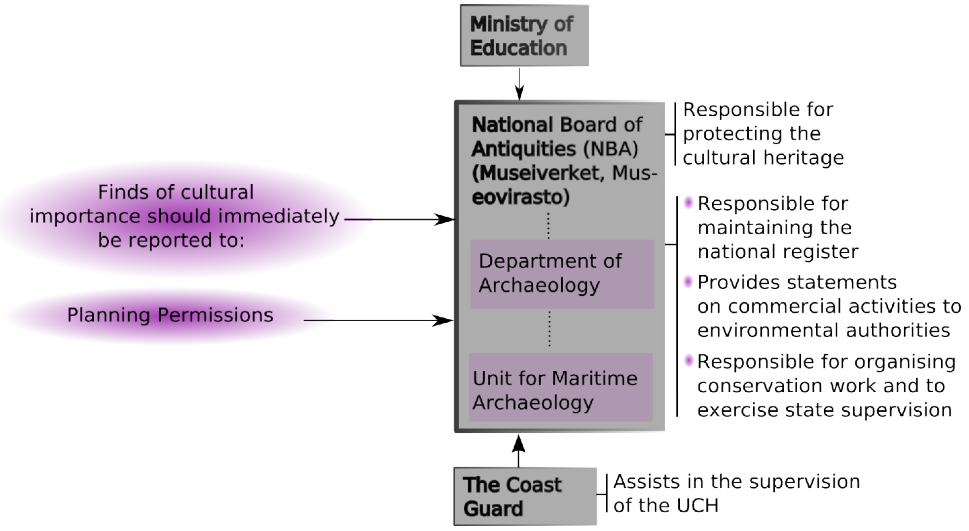

Figure 9: General management structures for Finland.

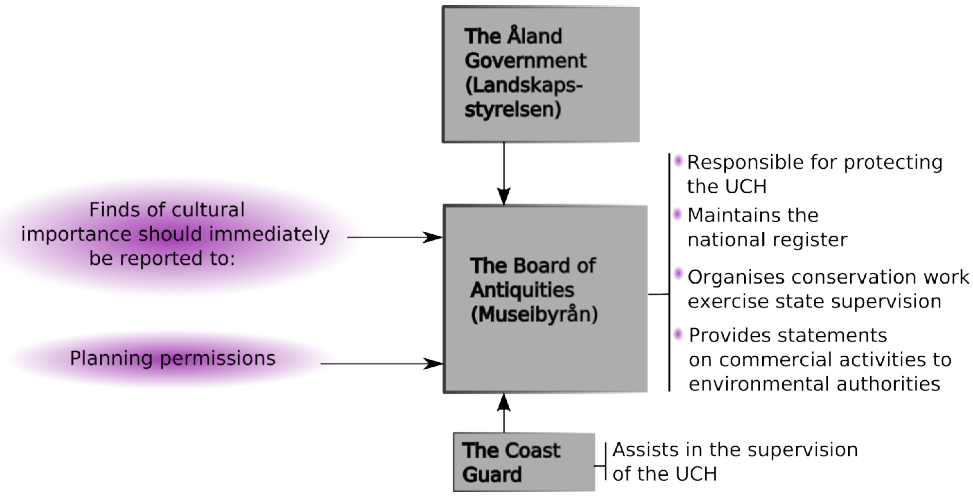

Figure 10: Simplified management structures for the Åland Islands.

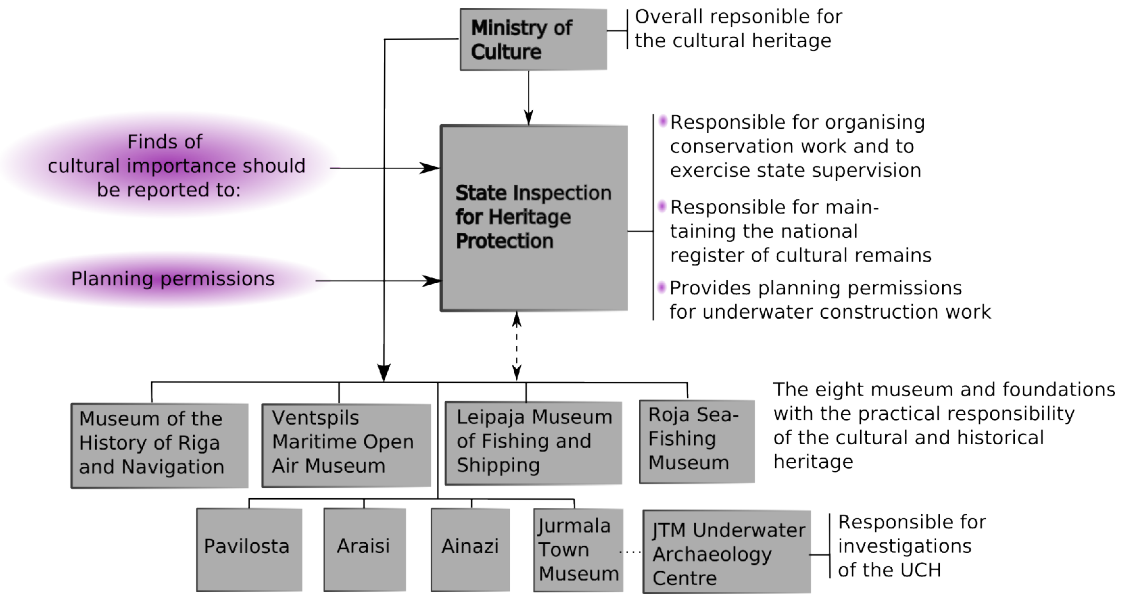

Figure 11: Simplified structures for managing and supervising the UCH in Latvia.

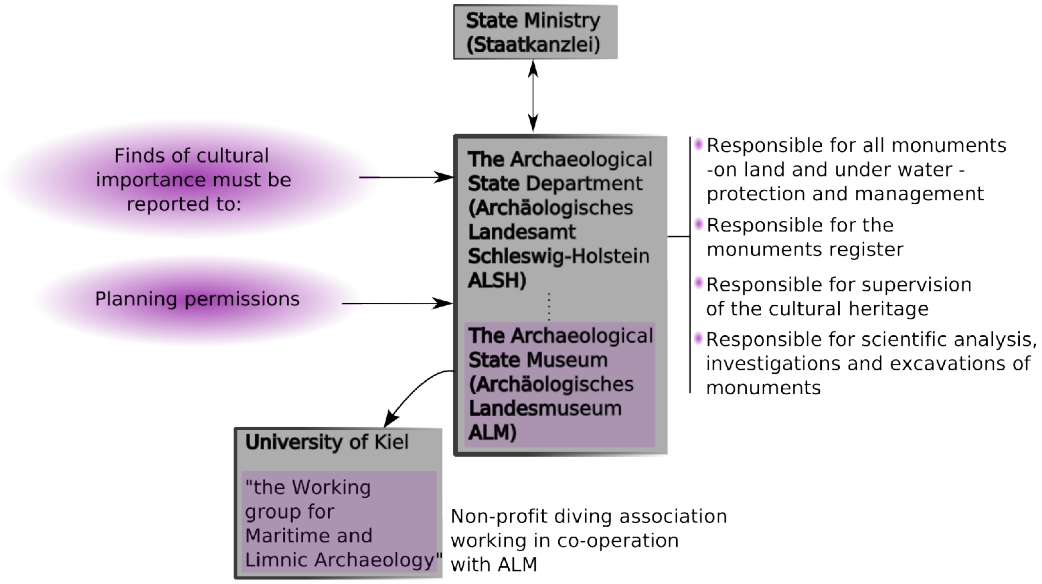

Figure 12: Schematic outline of UCH management structures in the German federal state of Schleswig-Holstein.

The more decentralised system is based on the interaction of several different agencies and authorities. Sweden, as the example in chapter 6.1.1. indicates, belongs to this category with several authorities charged with the supervision, ranging from national down to regional and local level. Denmark has a decentralised system where the National Museum has an overall responsibility for UCH, whereas this responsibility on a regional level is delegated to state authorised museums by the Department of Cultural Heritage.

In Lithuania the Department of Cultural Heritage acts as supervising authority for the rural municipalities and city governments, which in turn are responsible for monitoring any work affecting monuments and for reporting violations of the law. In M–WP, on the other hand, much of the supervising control for the cultural heritage on land is placed on the county authorities and autonomous cities, with the State Office acting as a consultant. However, in respect of UCH the line of authority jumps one level, to be placed with the State Office entirely.

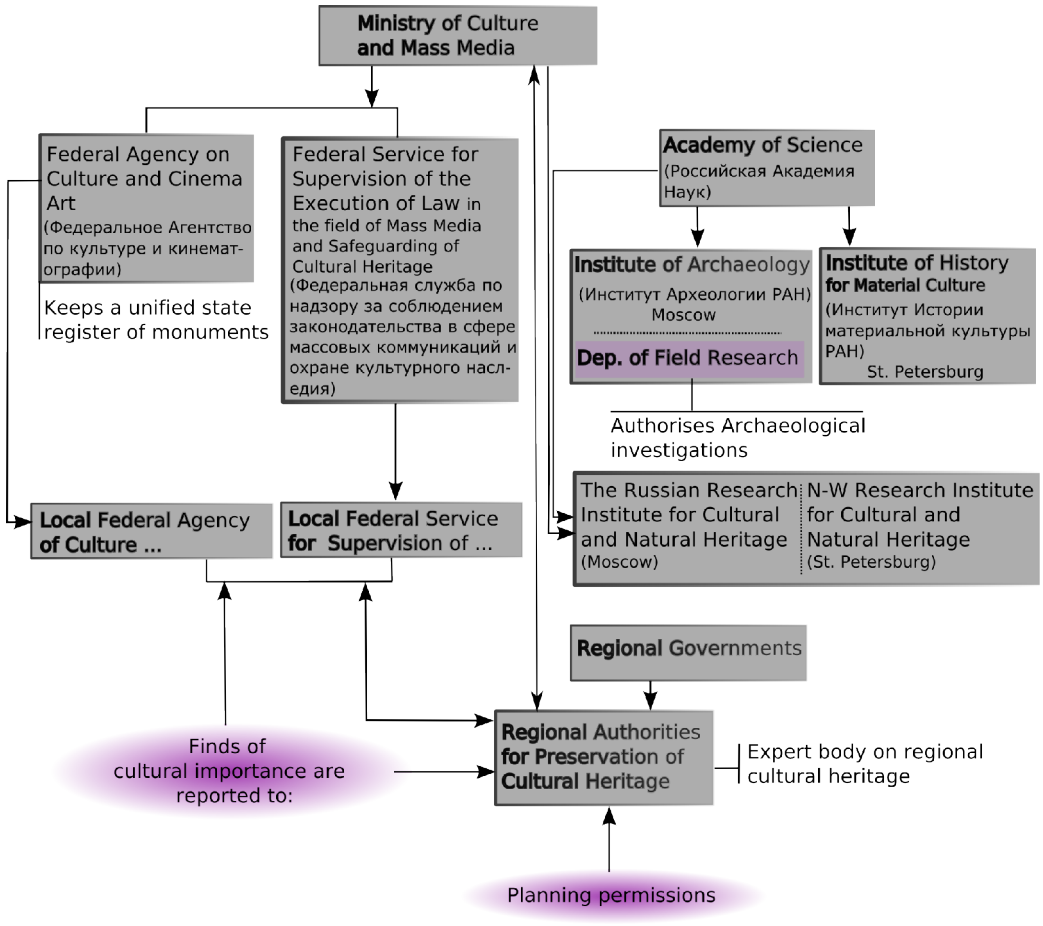

Figure 13: Simplified structure for the management and protection of the UCH in Russia.

Finally, Poland and Russia also belong to the decentralised category. The Russian system for managing and supervising UCH is perhaps the most difficult to overview (figure 13), with two separate systems; one for supervising, verifying the importance of cultural objects and maintaining the national register, and another for carrying out research and fieldwork, supervised by the Russian Academy of Science.

It is obvious, from the answers provided in the questionnaires, that authorities by law responsible for supervising the UW cultural heritage in many of the Baltic Sea States, often delegate this responsibility to maritime museums, research institutes and other institutions specialising in underwater archaeology. This is the case in for example Latvia (figure 20), where the Jūrmala Town Museum (JTM Centre) in practice, but not officially, is answerable for the management and supervision of UCH in the Baltic Sea.

3.2 Sites and Monuments Registers

Sites and monuments registers and archives provide an important tool for managing and protecting cultural heritage. Most national cultural heritage laws regulate that any such registers are to be maintained by a specific authority. These authorities are required to ensure that the information in the registers is transferred and included into local and national spacial development plans as well as hydrographic office charts. The majority of the sites and monuments registers were established long before the importance of underwater cultural heritage was appreciated. Consequently, they are not always "seamless" with regard to the monuments found on land and underwater, but divided into separate registers and sometimes the responsibility for these registers is split between separate authorities.

3.2.1 National Registers

Of all the Baltic nations and states Denmark, the two German federal sea states and Estonia are the only ones that have integrated their underwater archives into their national monuments register. Lithuania and Sweden are actively working towards such integration. These states have also digitalised sites and monuments registers, which, apart from those of the two German federal states, are accessible over the Internet where they are free to the public. One exception here is Sweden, where a special access code is needed.

According to the cultural heritage legislations in the two German federal states, only individuals with "a justified interest in archaeological heritage" are able to access the register, housed at the State Agency and the ALSH respectively. The Swedish register will shortly will be fully accessible on-line. In Finland the national monuments registers are going to be available on-line with the exception that the underwater monuments will continue to be listed in a separate register. The table below (table 2) provides a brief overview of the authorities in charge of the national registers, maritime archives, relevant web-addresses, and the number of registered finds for each of the BSS. More details are found in appendix III, table 2, p. 21–23.

Country	*Authority SMR/integrated*	*Underwater SMR/Maritime Archives*	*On-Line address*	*Number of underwater sites in the Baltic Sea*
Denmark	Department of Cultural Heritage. Fully integrated	Maritime archive at the Viking Ship Museum	www.dkconline.dk	147,181 land sites 3,781 protected UW sites (Baltic sea)/7,247 known UW sites (North/Baltic Sea)
Estonia	National Heritage Board. Underwater monuments fully integrated	The Maritime Museum keeps a working register.	Http://register.muinas.ee	13,000 land sites 5 (soon to be 13)protected underwater sites/ 200 registered UW sites
Finland	National Board of Antiquities Underwater monuments not integrated	Separate underwater digital register.	Not yet posted on-line	18,300 land sites 728 protected UW sites/ 1,074 registered UW sites
Åland	The National Board of Antiquities UW sites not integrated	Separate registers for UW cultural monuments	Partly digitalised – will be posted on-line	2,000 land sites 500 UW sites (600 unconfirmed UW sites)/ 148 protected UW sites
M-WP	The State Agency. Fully integrated	-	Not public	73,000 land sites 1000 protected UW sites (lakes and sea)
S-H	The ALSH, or Archaeological State Department. Fully integrated	There is a separate register for all known sites and monuments, the ”Archäologische Landesaufnahme”	Not public	50,000 land sites 750 UW sites (North Sea/Baltic Sea), of which 150 in the Baltic Sea 0/2 especially protected UW sites (Baltic Sea/North Sea)
Latvia	State Inspection for Heritage Protection Not integrated	The JTM Centre keeps a working register of the underwater heritage	Not posted on-line	2,495 protected land sites 0 protected UW sites (14 protected lake sites) 323 registered UW wreck sites
Lithuania	Department of Cultural Heritage Fully integrated	Working-register is kept by the Underwater research centre at the Klaipėda University	www.heritage.lt	1,800 protected land sites 5 protected UW sites 20 registered UW sites
Poland	The Voivodship or Regional Inspectors of Culture Not integrated	The Polish Maritime Museum keeps a working register -EPSA- containing 65 sites	-	7 475 protected land sites 1 protected UW site 65 registered UW sites
Russia	The Federal Agency of Culture and Cinema Art Fully integrated	The Institute of the History of Material Culture in St. Petersburg keeps a working register including 200 sites	Register not yet posted on-line.	20 protected UW sites 200 registered UW sites
Sweden	National Heritage Board. Planned soon to become fully integrated	Separate UW digital register is compiled in SjoMIS. The Swedish Maritime Archives (SMA) is kept by the National Maritime Museum	www.fmis.raa.se/fmis Access code needed	1 000,000 registered land sites of which 800 000 protected 3,218 protected UW sites 8,300 registered UW sites and 3,482 historical wreck losses

Table 2 . The column showing the numbers of UCH sites, include the number of protected sites, i.e. the number of sites that are specifically protected under cultural heritage legislations, and the number of registered UW sites. The latter include sites that are registered but unprotected as well as unconfirmed sites, i.e. sites that are suspected to be monuments/sites that according to registers of historical losses at sea or salvage companies, might be found at a specific location.

3.2.1.1 Underwater Monuments

At present there are approximately 15,600 registered underwater cultural sites and monuments in the Baltic Sea (figure 14). Some nations, such as Sweden, include not only physical remains found on the sea bottom but also information obtained through registers of historical losses at sea and salvage operations in their register. Roughly, about 8,300 of the 15,000 known UW sites in the Swedish register are confirmed sites, of which approximately 3,218 are protected monuments (over 100 years old). Similarly, the sites and monuments registers of the Åland islands and Finland also include sites that might become protected in the future. However, in the majority of the BSS, the national registers only include monuments that are *de facto* protected, whereas the number of registered sites are kept in working registers by museums and other institutions working with the recording and management of UCH. Thus, it has been very difficult to compare the data across the region.

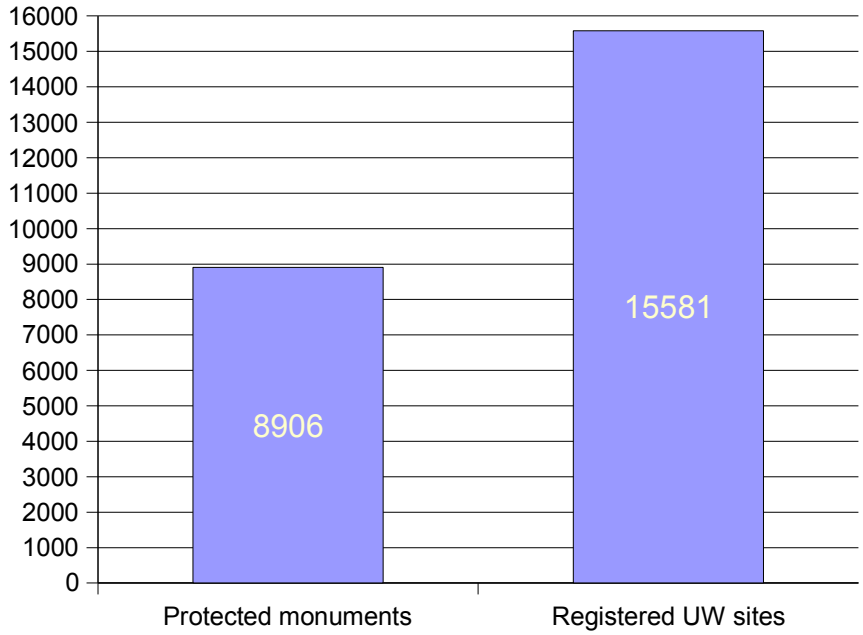

Figure 14. The number of registered and protected UCH sites and monuments in the Baltic Sea Region.

Of the total number of registered sites in the Baltic Sea, some 9,000, or about 57% are designated monuments and protected under national or federal cultural heritage law (figure 14, for more detailed information see table 2). The chart[3] in figure 15 illustrates registered sites in parts of the Baltic sea region.

When comparing these numbers from a regional perspective, it becomes apparent that the difference in the number of registered underwater monuments to a large extent is linked to the historical background of the individual country. To a lesser extent it is linked to the

3 The map is published with permission from Landesamt für Bodendenkmalphlege, M–WP, but is slightly reworked to fit into this report. The sites around the island of Bornholm include UW sites that are registered by fishermen. They could be of cultural importance but are not inspected.

total length of the coast line[4], the only deviation being Mecklenburg-Western Pomerania (figures 16–17). An important difference that might affect the total number of UW sites registered in Danish waters is that their registers incorporate finds within their extended water zones, i.e. within the 24 nautical mile zone and not the generally accepted 12 mile zone.

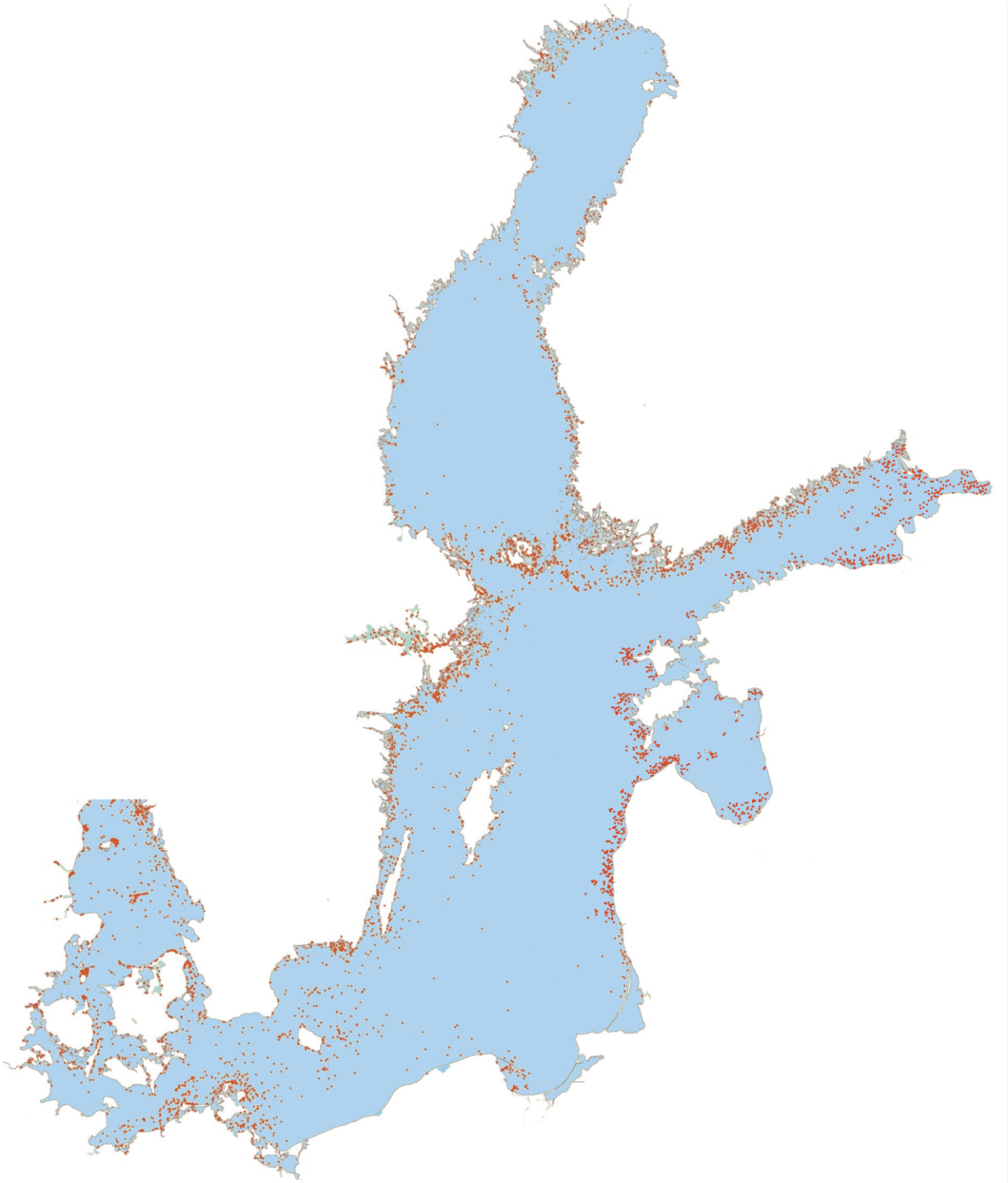

Figure 15: Map over registered underwater cultural sites located in Danish, German, Swedish, Finnish, Polish and Lithuanian waters, and waters surrounding the Åland Islands. Sites in Estonia, Russia and Latvia are inserted very approximately.

4 The individual coast lines have been measured with a pair of compasses from the Times World Atlas 1999, and represent nothing but a comparative estimate.

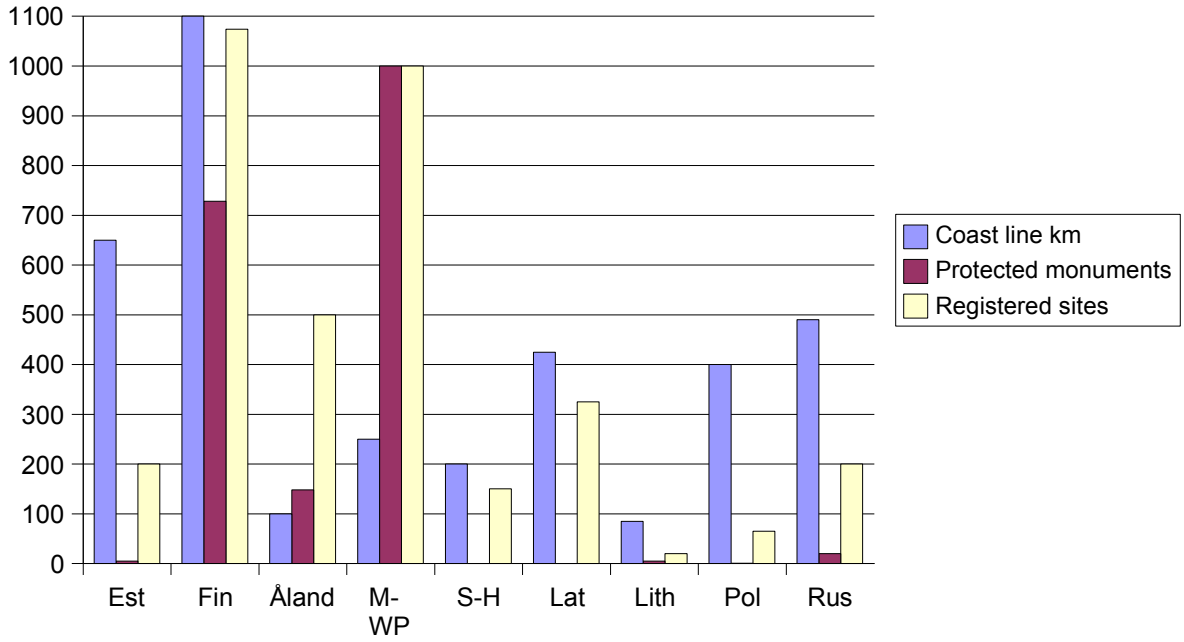

Figure 16. A comparison of the number of protected and registered sites and monuments between the Baltic Sea States with the exception of Sweden and Denmark.

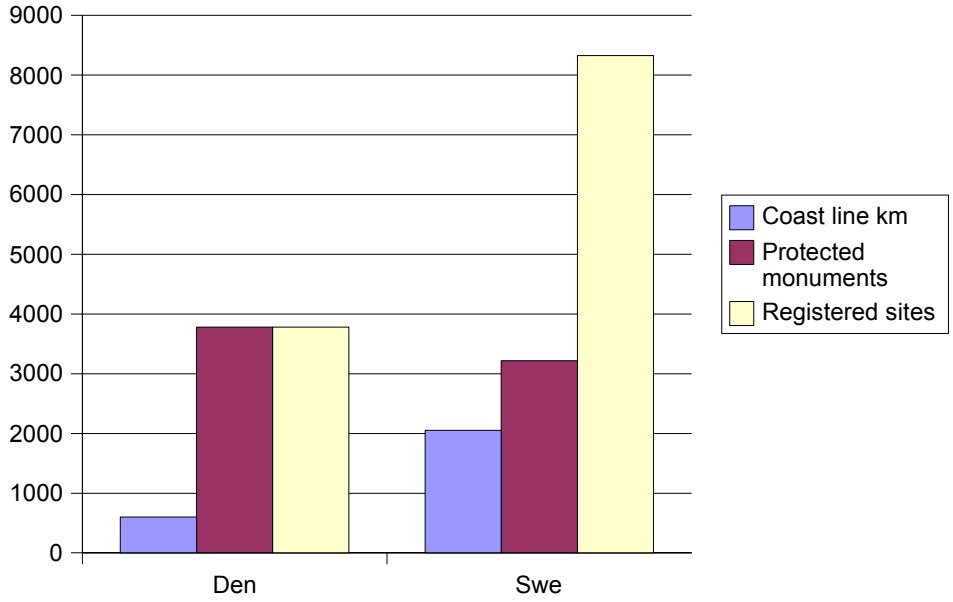

Figure 17: Comparison between registered and protected sites and monuments and the estimated stretch of coast line for Sweden and Denmark

3.2.1.2 Land Versus Underwater Monuments

If one compares the number of protected monuments on land with those under water (table 2), and also compares the total land and sea surface areas (figures 19–21) it becomes evident that the underwater heritage is comparatively neglected. In Denmark and Sweden 2,5% and 0,4% of all protected monuments are located in the sea. Comparing the number of protected land/UW sites in all of the BSS provides an equally low figure, with UW monuments averaging about 0,8% in comparison to the land sites.

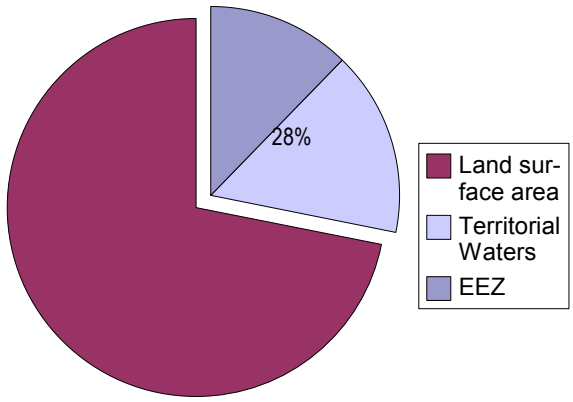

Figure 19: A comparison between the land and sea surface areas of Sweden.

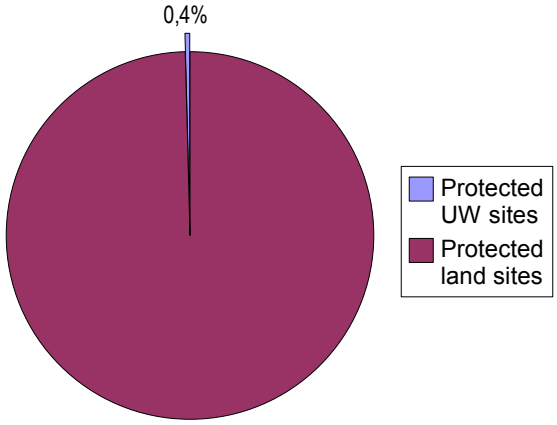

Figure 18: A comparison between the number of protected monuments found on land and under water for Sweden.

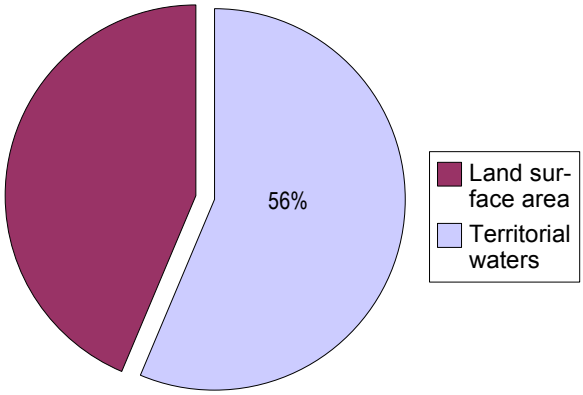

Figure 20: A comparison between the land and sea surface areas of Denmark.

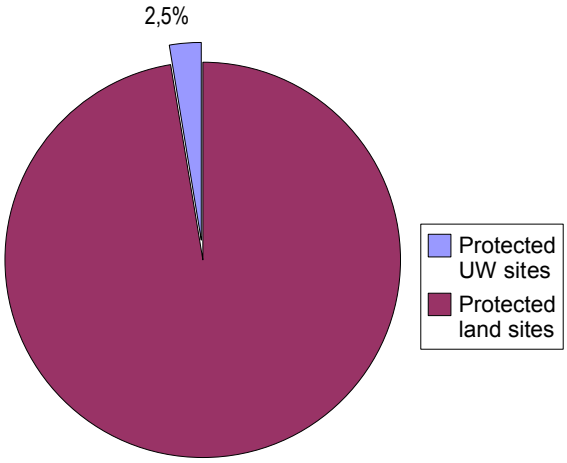

Figure 21: A comparison between the number of protected monuments found on land and under water for Denmark.

3.2.2 Growth in Registered Objects

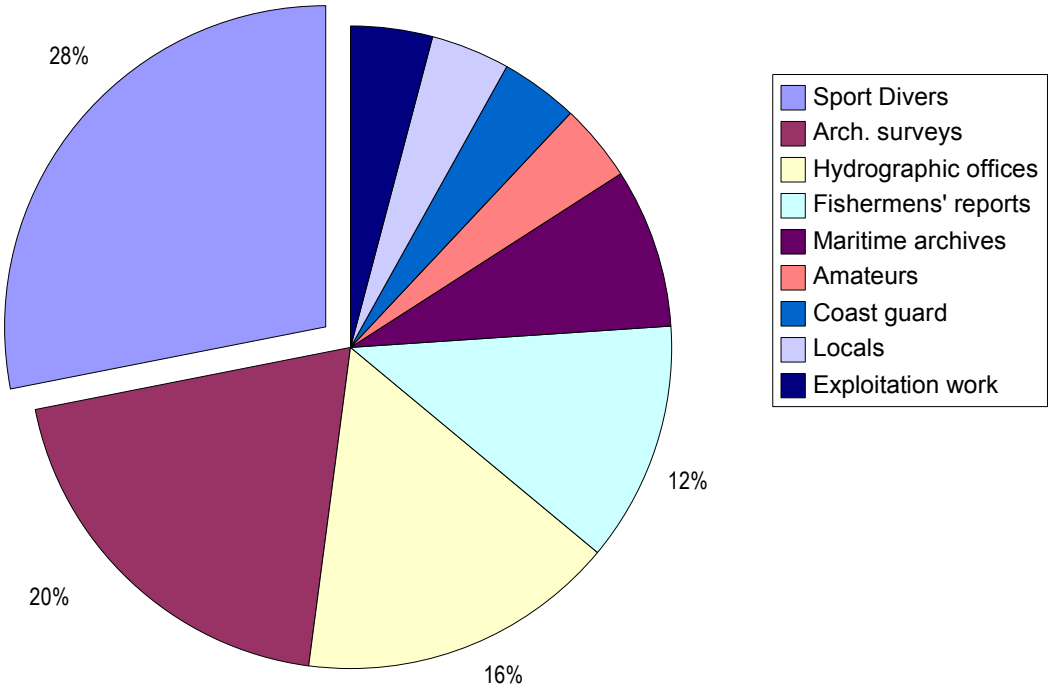

Figure 22: Sources contributing to the growth in the number of registered UW monuments in the Baltic Sea, 2000–2004.

In the questionnaire, each nation and federal state was asked about the main sources of growth in the number of registered and/or protected underwater monuments within their territorial waters (see appendix III, table 2, column 4). In 28% of the answers sport divers were regarded as one of the most important sources, closely followed by archaeological surveys (20%) and records from hydrographic offices and fishermen's reports (figure 22). Other sources mentioned were amateur archaeologists, locals, exploitation work and the coast guard. Of these it is interesting to note that in, for example, Estonia and Åland, sport divers are considered to be the sole contributors for finding new UW sites. Also in Finland and Sweden sport divers are considered to be the main source of growth for new sites, whereas in Poland only commercial activities are mentioned as a source.

If, instead, one compares the main sources for finding new UW sites with the number of registered sites within the last five years (figure 23) it appears that active examination of fishermen's reports on net losses and underwater obstacles, subsequently investigated through archaeological surveys, contributes to the registration of more finds than sport divers do. Among the nations that especially mention this source are Denmark, M–WP and S–H, the former two of which have in total more registrations within this period than any of the other BSS.

There are, however, sources of error in these figures which makes it hard to treat them as anything but rough estimations, mainly because of the differences in how the questionnaires have been answered. For example, Denmark registered over 5,000 UW cultural objects in 2001, mainly due to re-examination and integration of information from their existing archives into the national sites and monuments register. Therefore a rough estimation of their finds is based on the number of annual registrations for the years 2000, 2002–2004. Likewise, often more than one source of growth is mentioned, making it hard to judge which source contributes the most to the finding of new UW cultural sites (table 3).

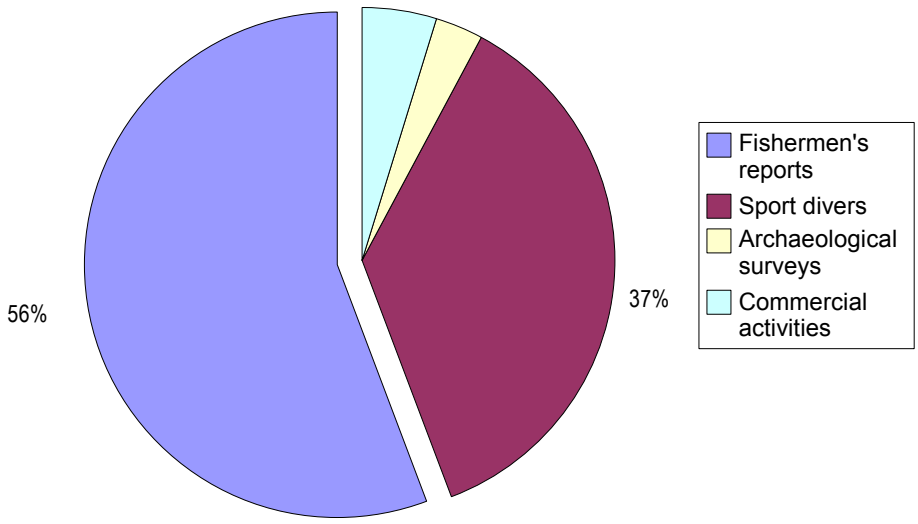

Figure 23 The main sources for finding new UW sites in percentage of an estimation of the numbers of registered sites in the last five years.

	Den	***Est***	***Fin***	***Åland***	***M-WP***	***S-H***	***Lat***	***Lith***	***Pol***	***Rus***	***Swe***	***Total***
Sites registered 2000-2004	Ca 200	5	Ca 100	Ca 150	Ca 400	Ca 40	3	20	Ca 50	Ca 10	Ca 100	Ca 1080

Table 3: Estimations of the numbers of registered and/or protected UCH sites in the Baltic Sea between 2000–2004.

3.2.3 Archaeological Investigations 2000 2004

Poland, as mentioned above is the only nation where construction activities are regarded as the main source of growth in the number of new registrations of UW objects. Regardless of how important such activities might be at present for finding new sites, these activities pose a very potent potential threat to UW monuments.

Unfortunately it is almost impossible to gain an appreciation of the total amount of commercial activities in the maritime zone of the BSR solely from those activities that have lead to archaeological investigations of some sort, which in the years between 2000–2004 amounted to 73 (figure 24). It should be added that the answers provided in the questionnaire vary greatly (table 4) and therefore the figures might not be entirely correct. The most frequent commercial activities that resulted in archaeological UW investigations were dredging in harbours or to extend/maintain shipping lanes and the like, harbour construction work and cable/power line laying. These types of activities were fairly evenly distributed between the Baltic Sea States, with dredging work and/or harbour construction work leading to investigations in all of the states providing information about these types of activities. Next in frequency come various sea front development activities such as land reclamation, a large amount of which has been carried out in the Malmö region in southern Sweden, bridge and/or tunnel construction work – mainly in Sweden and M–WP – and the establishment of wind farms, which exclusively occurred in Sweden.

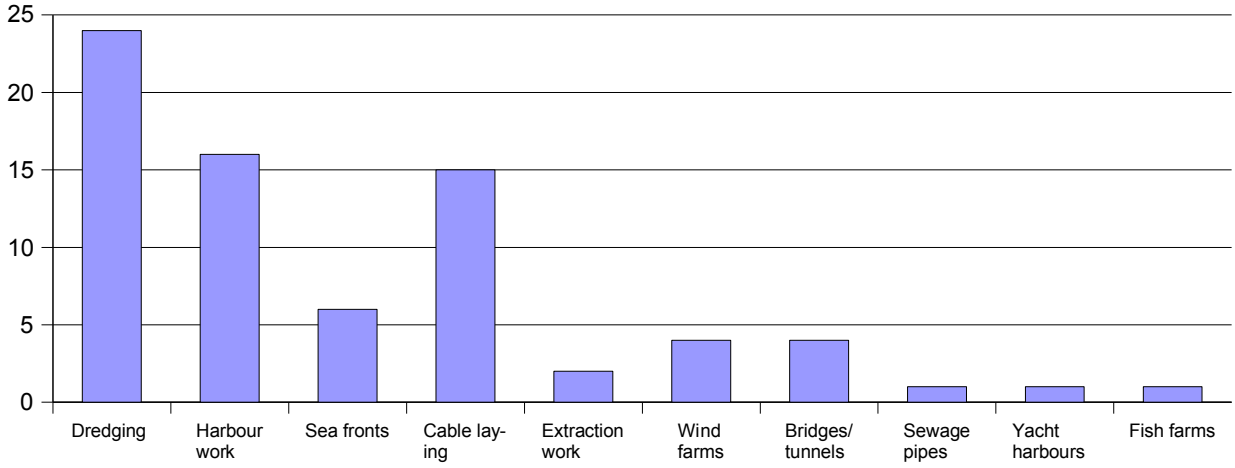

Figure 24: The number and types of commercial activities, resulting in archaeological investigations in the Baltic sea region 2000–2004.

	Den	Est	Fin/ Åland	M–WP	S–H	Lat	Lith	Pol	Rus	Swe	Total
Commercially driven	25	0	17	4	2	0	3	1	3	41	96
Research driven	2	3	3	4	11	1	5	2	4	6	41

Table 4: Number of commercially and research driven archaeological investigations in the Baltic sea region 2000–2004.

In figure 25, an estimate of the different types of archaeological investigations carried out during the period is presented as a percentage of a total number of 122[5] investigations (table 4), including commercially driven and research driven projects. Of the research driven projects (for more information see appendix III, table 4), some have resulted in the establishment of dive parks and dive protection zones, also included in the overview.

The most frequent underwater archaeological investigations in the Baltic Sea, by far, are non-intrusive archaeological surveys (44%), the majority of which are commercially driven projects. The monitoring and recording activities (22%) are mainly research driven and will be discussed in chapter 4.4.2. The remaining archaeological activities are quite evenly proportioned.

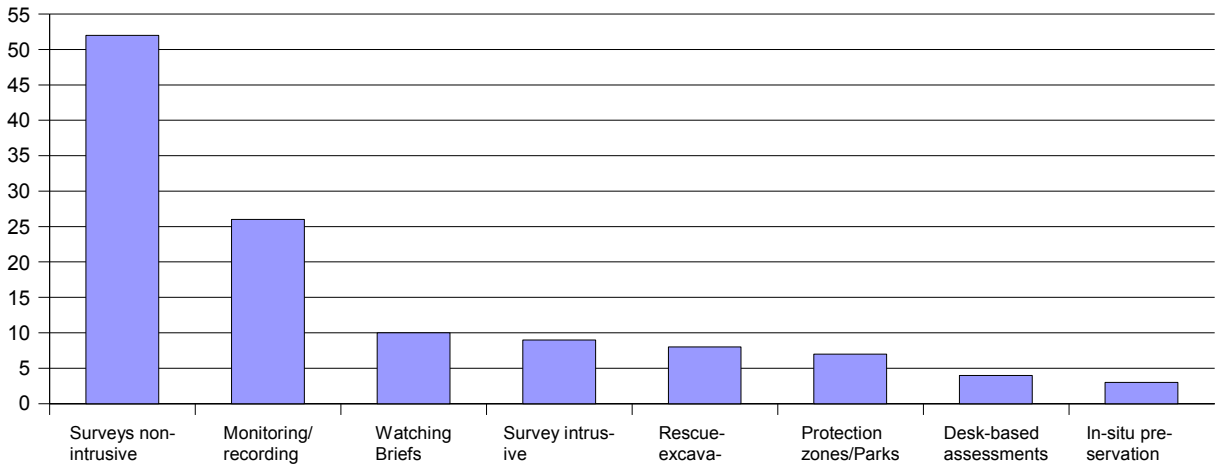

Figure 25: The numbers and types of archaeological investigations, including research driven projects and projects that have lead to the establishment of protected reserves, in the Baltic sea region 2000–2004.

5 For Denmark only the total number of commercially driven projects are known. Therefore, it has not been possible to include their projects in the statistical data of how they originated or what type of archaeological investigations they lead to.

3.2.4 Accessibility of Underwater Heritage

Public accessibility of UCH is a prerequisite if full advantage is to be taken of the interest this heritage generated by the diving community. The attitude towards this in the Baltic Sea States varies from allowing unrestricted diving at all UW sites and monuments, to imposing dive bans on sites that are regarded as particularly important, and finally to only allowing diving under controlled circumstances. The latter either through authorised diving clubs, or simply by only allowing diving at a restricted number of UW sites (appendix III, table 1). Common to all of the Baltic Sea States is that diving is carried out on a strict 'watch only' basis any disturbance, investigations or recording requiring relevant permits from the authorities.

Estonia, S–H, Latvia, Lithuania and Russia allow free diving at all UW sites within their territorial waters, whilst Sweden, Finland and Denmark have some UW sites where diving bans are imposed. In Åland and M–WP all diving must be authorised and is normally conducted through authorised diving clubs, whereas in Poland diving is restricted to 20 UW sites especially chosen for this purpose two of which have recently been designated as war graves and consequently removed from the approved list of dive sites.

3.2.5 Ethics and Environment

There are different types of ethical and environmental aspects that have to be considered in relation to the protection and management of UCH. For example, many of the shipwrecks that lie scattered on the bottom of the sea have sunk with the loss of many lives, sometimes in their thousands. These are sites that from an ethical perspective should be designated as graves and protected from illegal salvage operations and other forms of intrusion that might disrespect the dead. Other wreck sites pose potential environmental threats, having carried large quantities of explosives, hazardous chemicals or engine oil onboard at the time of loss. In an effort to appreciate the scope and nature of these considerations, the Baltic Sea States have been asked to list the 10 UW sites they regard as particularly vulnerable or important. Yet again the answers have varied from very detailed information to merely stating that the issue exists, but hopefully serve the intended purpose.

3.2.5.1 Losses at Sea

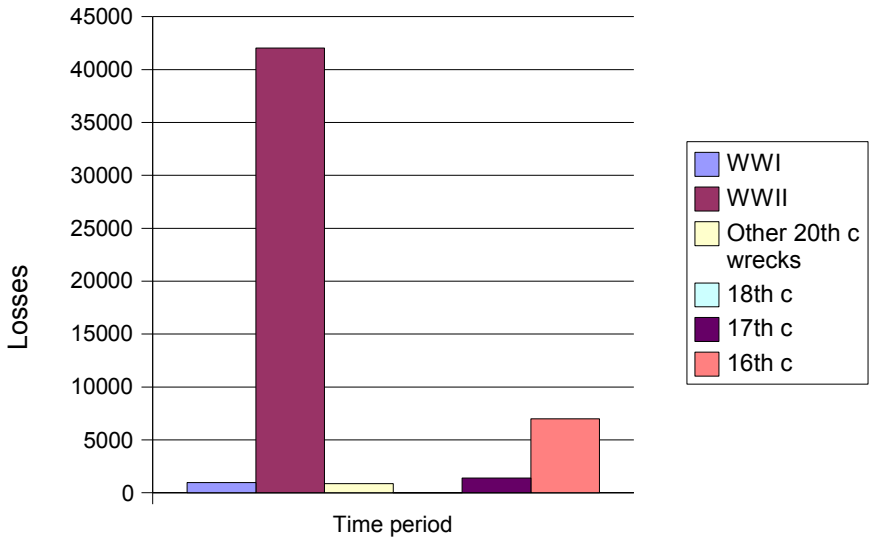

Figure 26: Approximate numbers of human losses at some of the largest single catastrophes in the Baltic Sea.

The largest losses at sea caused by single events have mainly happened at times of war and the majority of these occurred during the second World War (figure 26). Perhaps the largest single event happened in 1941, when the Soviet navy, lying in the port of Tallinn, had to be evacuated due to Estonia falling into German hands, with the result that over 60 ships were lost together with some 14,000 human lives. Another example is the *Goya*, a German freighter which was sunk 24 nautical miles off the Cape of Rozewie in 1945, with the loss of over 8,000 lives. Yet another great naval event that was mentioned, was the loss of more than 30 Swedish transport vessels at the time of the Nordic War between Sweden and Denmark in 1712. Two of these vessels have been found just west of Rügen, but it is not known how many lives were lost. On the other hand, it is known that some 6,000–8,000 people died when the Danish-Lubian fleet was lost in a storm in 1566, at the time of the Nordic-Seven-Year war, and during which 14 warships foundered at Visby, Gotland.

The most recent accident was the *Estonia* catastrophe, mentioned in both the Swedish and the Finnish questionnaires, in which 852 people went down with the ferry in 1994, on its way from Tallinn to Stockholm. It is the largest sea accident in the region to have happened at a time of peace and today the site is protected by the Finnish coast guard and designated as a grave. In total some 46,000 deaths are represented by the losses listed here

These are but glimpses of the many tragic events that have taken place in the Baltic sea region. Of the 20th c. wreck sites, some 80 are mentioned in the questionnaire, the majority lie in waters less than 50 m deep and in only two cases some form of dive ban has been imposed. Other aspects worth noting is that in several cases the wreck sites have been affected by fishing nets or salvage operations (see appendix VI).

3.2.5.2 Wreck Sites as Environmental Hazards

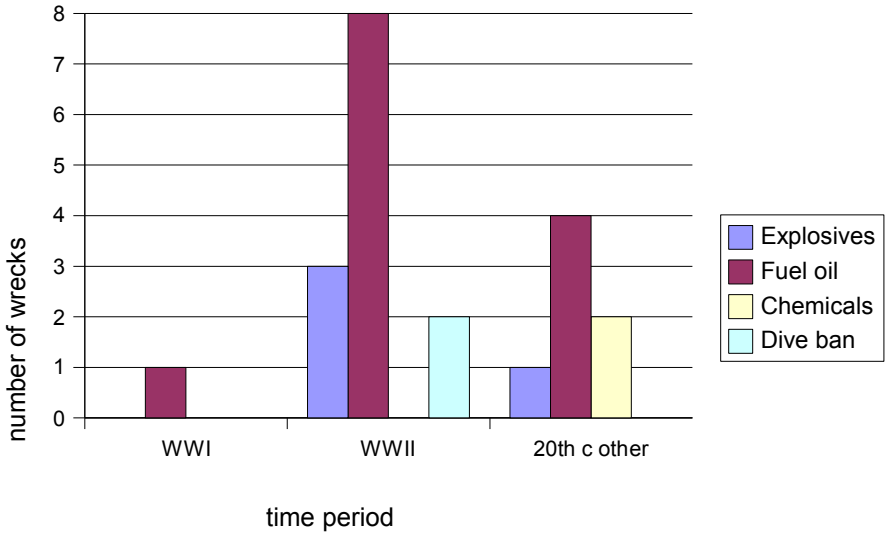

Figure 27: Number of wrecks that by the Baltic Sea States have been listed as posing potential environmental threats in the future, and the periods to which the ships can be connected.

When it comes to wrecks that might pose future environmental problems, these are exclusively from the 20th century (figure 27). The majority, yet again, are Second WW vessels. Sites that are described as being plain dangerous are, for example, the *Jossif Stalin* at 11m depth in Estonian waters, the German battleship *M14* sunk in the region of the Oder-estuary in shallow waters and a naval shooting site near Pape in Latvian waters, where some six wrecks lie in a depth of 4–5m with unexploded bombs and other hazardous material and around which environmental effects have been noticed (dead fish). Of these sites only the *M14* has a diving ban imposed on it.

Poland has been carrying out annual inspections at some of the wreck sites they regard as possible environmental hazards in accordance with the HELCOM CC convention, based on a classification system graded from class A to C, where C is neutral to the environment, B needs continuous monitoring and A is dangerous. The Polish wreck sites are mainly classified as C and in one case as B, the danger cited as being leakage of oil. Indeed, the leakage of oil appears to be the most common environmental problem related to modern wreck sites, a problem that unfortunately is hard to discover in the cold waters of the Baltic Sea, as oil only starts to appear on the surface when the water has warmed up by late August, by which time the oil has become fluid enough to start seeping out through cracks in the hulls.

Two wrecks carrying liquid ammonia and hydrochloric acid are mentioned as environmental hazards in Åland waters and near the Kullen light house in southern Sweden, respectively. The accident in Swedish waters occurred as late as in 2000.

3.2.6 Infringements of the Cultural Heritage Laws

Only six of the 11 Baltic Sea States have registered any infringements of the cultural heritage laws in the years between 2000–2004, among these Finland, Åland, Mecklenburg-Western Pomerania, Latvia and Sweden (table 5). Of a total of 30 cases reported to the au-

thorities within the period, only six led to a sentence, four of which resulted in fines and in two cases the confiscation of equipment. In one case, a whole diving group was banished from ever returning to the country. The remaining cases either remained unsolved or led to a non-guilty verdict. Of the reported infringements, 40% have led to a verdict, or are still running, whereas 21 cases have never been reported to the authorities.

Clearly, two states stand out in the statistics, M–WP and Latvia with eight and 11 cases each. Whereas in M–WP, seven of eight cases have lead to a verdict or are still running, the comparative number for Latvia, is one of 11. Interesting to note is that some states in the questionnaires have added information about unofficial incidents, i.e. cases not reported to the authorities, where for example Latvia estimates this number to be 17 incidents for the period in question. Unfortunately, few states keep statistics on this, making it impossible to compare the figures across the region.

Whether the above provides an objective view of how well UCH is protected in the Baltic sea region is hard to tell as the real number is probably much higher, but the supervision and enforcement of UCH laws seems to work best in M–WP.

	Den	*Est*	*Fin*	*Åland*	*M-WP*	*S-H*	*Lat*	*Lith*	*Pol*	*Rus*	*Swe*	*Total*
Reported Incidents	0	0	3	2	8	0	11	0	2	0	4	30
Actions taken	0	0	3	2	8	0	1	0	1	0	3	18
Legal consequences	0	0	1	0	3	0	1	0	0	0	1	6
Legal cases still running	0	0	0	0	4	0	0	0	0	0	0	4

Table 5: Number of incident of illegal interference with UW cultural sites that have been reported to the authorities, the number of incidents where the authorities have taken action in the case, whether they have led to any legal consequences and finally the number of cases still running.

3.3 Conclusions

This chapter has tried to provide comparative information on national/state structures in place for managing and supervising UCH within the region. Furthermore, it has also been the intent to overview recent underwater archaeological investigations and issues related to accessibility of, and law enforcement surrounding UCH. Finally, ethical and environmental aspects have been reviewed. Based on this, the following has been concluded;

- Whereas most of the Baltic Sea States have one central authority that is responsible for the protection ofUCH, the supervision of the law is sometimes in the hands of other authorities, such as city and country governments. In a few states, the line of authority for dealing with UCH located in the sea is different to the line of authority in charge of UCH in lakes and inland waterways. Furthermore, not all of the BSS have clear lines of authority when it comes to managing and supervising underwater heritage, and in some states local institutions have taken the task into their own hands.

- All the Baltic Sea States have National Monuments Registers, but not all of them include protected underwater monuments. In six of the states, the registers are accessible on-line, and in three of those access codes are required. There are about 20,000 known underwater cultural sites in the Baltic sea region, about 9,000 of which are protected by heritage legislations.
- 28% of the countries and federal states in the region regard sport divers as one of the most important sources for finding new underwater sites. Comparing the number of registered sites between 2000–2004, fishermen's reports come up as the most important source for finding new sites.
- There have been 73 commercially driven underwater archaeological projects in the region in the years 2000–2004. Of these, activities such as dredging, harbour construction work and cable laying, power and gas line work generate the most investigations. In comparison, 38 research driven projects have been ongoing or started up within the period, most of these with the purpose of monitoring and recording. Finally, the most frequent type of archaeological investigation in the period is the non-intrusive survey, making up 45% of the total amount of investigations (119).
- Of the Baltic Sea States, five allow unrestricted diving at all underwater sites, three have imposed dive bans at sites that are regarded as particularly important or particularly vulnerable, and three only permit diving under controlled circumstances.
- The greatest numbers of losses of human life occurring at sea in single events happened at times of war and particularly during WWII with more than 40,000 casualties in water depths of less than 50m. Of the 80 wrecked ships mentioned in the questionnaires in relation to these events, dive bans are only imposed at two sites. WWII wrecks and modern wrecks are cited as the biggest future potential environmental hazards in the region, with possible unexploded bombs, motor oil and other unspecified hazardous material on-board.
- Six of the Baltic Sea States have registered infringements of cultural heritage law in the period 2000–2004. Of a total of 30 incidents reported to the authorities, only five have resulted in fines or expulsion from the country in question.

EDUCATION AND ORGANISATIONS

4. Education and Organisations

Underwater archaeology is a specialization within mainstream archaeology, which incorporates knowledge about boats and navigation, paleogeographic sea level changes, conservation of waterlogged material as well as the relevant survey and excavation techniques that are particular to the field. As a marine, or maritime archaeologist, it is not necessary to be a diving archaeologist but the skill is becoming more important as the field move towards a seamless approach to archaeology on land and under water, and the aspiration within the field that investigations under water should be conducted at the same standard as those on land grows.

Based on the information provided in the questionnaires, this is an attempt to provide an overview of the education available within the field in the region, the focus of recent and current research as well as the competence and resources available for carrying out underwater research.

4.1 Education in Underwater Archaeology

Underwater archaeology is part of the general curriculum of archaeological education at universities in three of the Baltic Sea States – Denmark and the two German federal states of M–WP and S–H. In many of the other states, however, the subject is only available as separate courses at particular universities, with the exception of Sweden where a one-year master's course is run by the Södertörn Högskola (table 6). A similar programme is planned to be offered at the University of Southern Denmark, beginning in 2006. A further six universities run undergraduate courses in ship's archaeology, maritime history, underwater, maritime and/or wetland archaeology. Finally, two universities offer occasional courses, with the Klaipėda university offering a one-year programme every second year, focusing on underwater archaeology.

Education in underwater archaeology in the Baltic sea region		
Postgraduate education in underwater archaeology (level)	***Annual courses (level, focus)***	***Occasional courses (level, focus)***
Södertörn Högskola (university/ college) – Master's course running over 1 year focusing on marine archaeology (archaeology in a "wet" environment), courses at undergraduate level and introductory courses. Focus lies on seafaring, ship building, maritime cultures and underwater investigation techniques. *University of Southern Denmark* in Esbjerg – 2 year Master's course in maritime archaeology planned to start in 2006	*University of Aarhus* (undergraduate, ship's archaeology) *University of Helsinki* (undergraduate, maritime history and underwater archaeology) *University of Turku* (undergraduate, maritime history) *Hanko Summer University* (undergraduate, fieldwork course in maritime archaeology) *Nicolas Copernicus University* in Torun (undergraduate, inland underwater archaeology/shipbuilding history/maritime archaeology) *University of Kiel* (undergraduate, maritime and wetland archaeology with focus on prehistory) *University of St. Petersburg* (undergraduate, maritime archaeology/maritime history)	*University of Tartu* (undergraduate, underwater archaeology) *University of Klaipėda* –1 year courses every other year (undergraduate, theory and practice of diving /underwater archaeology).

Table 6. More detailed information is available in appendix IV, table 1.

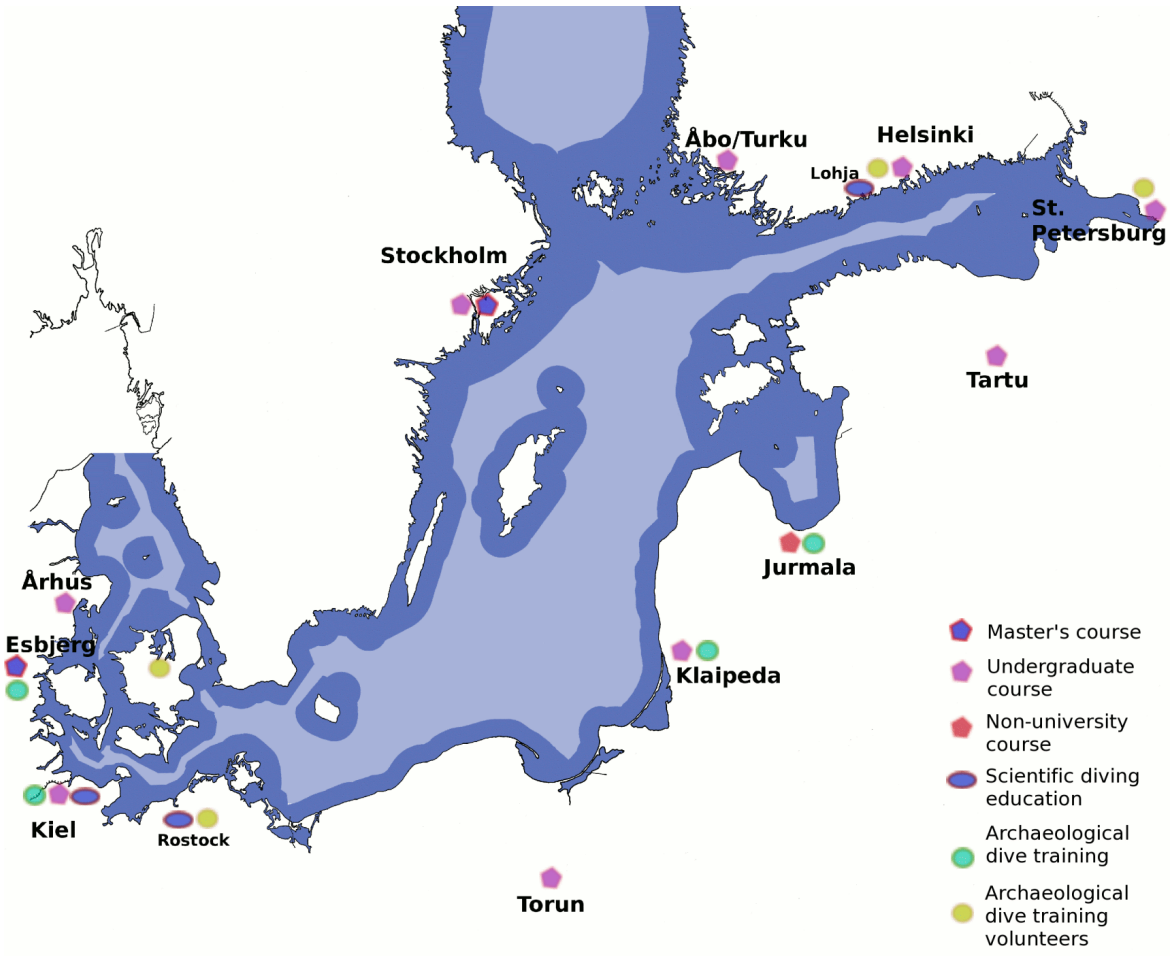

Figure 28: Overview of educations available within the field of marine or underwater archaeology in the BSR.

4.2 Diving Educations

In Germany, courses in scientific diving are being offered at eight universities, including Kiel (in S–H) and Rostock (in M–WP). These courses follow strict guidelines (ZH 1/540) originally set up by the commission for German underwater archaeology in 1997. Also in Finland it is possible to obtain a scientific diver's license at the adult centre in Lohja (figure 28), whereas in Sweden a commercial diver's licence[6], certificate ”A”, is provided solely through the Navy and since 2003 only open to military divers.

In the remaining countries, sport diver's licenses are the only formal type of diving education available at present, run by commercial and non-profit organisations (for a complete list of diving associations and organisations, see table 10).

6 A scientific diver's education is currently unavailable in Sweden as well as in all of the Baltic Sea States with the exception of Finland and the German federal states. Apart from Sweden, commercial divers' licences are available in Poland as well as in Denmark, but are not mentioned in particular as they are available to the public and not specifically aimed at underwater archaeologists.

4.2.1 Archaeological Diving Standards

The educations available for divers in each of the Baltic Sea States, largely reflect the standards required for carrying out underwater archaeological investigations. This is certainly true for Germany where a scientific licence is a prerequisite for all archaeological work under water. This certificate is organised through the universities and run as a one-year course. In Denmark, Poland and Sweden, a commercial licence is needed. In Sweden, due to the limited possibilities for acquiring the certificate, diving, for the purpose of research, is sometimes carried out on professional scuba diving certificates, generally the equivalence to CMAS*** or PADI Master Diver. In Finland and Russia, a scientific diver's certificate is recommended but not essential as underwater work at archaeological sites may also be carried out on a professional sport diver's licence. A professional licence is a requirement on the Åland Islands, whereas any diving certificate suffices in Estonia, Latvia and Lithuania (table 7 below and appendix IV, table 1).

Type if licence	*Den*	*Est*	*Fin*	*Åland*	*M–WP*	*S–H*	*Lat*	*Lit*	*Pol*	*Rus*	*Swe*
Scientific/ Commercial	X	-	X*	-	X	X	-	-	X	X*	X
Professional sport divers	-	-	X	X	-	-	-	-	-	X	X**
Sport divers	-	X	-	-	-	-	X	X	X**	X**	-

*Table 7: The different types of Diver's Licences needed to work on UW archaeological sites in each of the Baltic Sea States. Scientific or Commercial licences refer to licences needed to work, as opposed to instruct, under water. Professional sport divers licences are usually obtained through sport diving associations such as CMAS and PADI. A sport diver licence refers to a licence qualifying a diver to dive to 20m depth. * the licence is recommended only. ** the licence is sometimes used for lighter inspection work.*

4.2.2 Training in Fieldwork

In most of the Baltic sea countries, some form of diver's training in underwater archaeology is needed in order to be allowed to carry out archaeological work at underwater sites, the exception being non-intrusive documentation work that can be carried out by amateurs (provided they obtain permissions from relevant authorities). Despite this, the opportunity of gaining underwater fieldwork experience is at present very limited within the region, with few universities offering this within their regular courses. In Germany, the University of Kiel will be including 4–6 weeks' practical training in underwater fieldwork techniques in their “Maritime and Wetland Archaeology”–programme, beginning August/September 2006. Apart from this, basic experience is organised externally through the universities or the state authorities, provided the student has a scientific diver's licence.

At the Klaipėda University in Lithuania, on the other hand, practical training in UW fieldwork forms part of the course, after which the student will also have gained a diver's licence (see table 6). In Latvia, undergraduate courses in UW excavation techniques have been organised for two consecutive years by the JTM centre, but any attempts to organise such training in co-operation with other universities, in the country and abroad, have foundered due to a lack of funding. Apart from this, the possibility to gain fieldwork experience is available in Poland through the University of Toruń, the only requirement being a basic scuba diver's licence.

In the Nordic countries, the South-Danish University is planning to include archaeological diving in its master's programme, but training is currently only available on a volunteer basis through the co-operation between the Danish Association of Sport Divers and local museums. Also the University of Helsinki, Finland, has plans to offer an undergraduate course in scientific diving in the near future, specializing in underwater archaeology. This being in co-operation with the Hanko Summer University. The only other form of training in the country is available trough the Finnish Maritime Archaeology Association, in the form of occasional NAS-courses, aimed at sport divers. In Sweden, Estonia and Åland, there are at present no organised courses in UW fieldwork techniques.

4.2.3 Involvement of Sport Divers

The involvement of sport divers in UW archaeological projects occur on a regular basis in many of the Baltic Sea States, among these Finland, Russia, Denmark and M–WP.

Courses aimed at sport divers in underwater fieldwork are run in some of the Baltic Sea States. As previously mentioned, this is the case in Denmark and Finland. In the M–WP, the State Association for Underwater Archaeology often works in close co-operation with scuba diving associations, thus involving amateurs in fieldwork projects but there is no "education" as such. In Russia, amateur divers may participate in underwater fieldwork, and currently the Maritime Archaeology Society of Russia is planning to offer courses for interested diving clubs.

The Södertörn Högskola offers a five-week introductory course in marine archaeology for sport divers, but training in UW field techniques is currently unavailable.

4.3 Academic Theses since the 1960s

Since the 1960s, 21 doctor's dissertations, drawn from maritime or underwater archaeological source material have been published in the BSR and an even larger number of theses at bachelor or master's level. Due to the lack of consistent information provided in the questionnaires, the latter will not be discussed here but the theses we do know of are presented in appendix V.

In the period between 1960 until 1990, only three dissertations were produced at two universities; Stockholm and Kiel, in Sweden and Germany respectively (figure 29). In the 1990s, nine doctor's theses were accepted at universities in Sweden, Russia, Poland and Denmark, and so far, in the period between 2000–2004 another nine theses have been produced at seven universities in five countries.

The majority of these doctor's dissertations are derived from wrecks and discusses various technical aspects of boat-building, propulsion and navigation – something which is especially noticeable in the early years. Whereas the technological aspects have given room for broader perspectives, also incorporating aspects of society, trade and changes thereof, boats and ships remain the favourite subject and in the last five years as many theses on the subject have been produced as in the whole of the 1990s (figure 30).

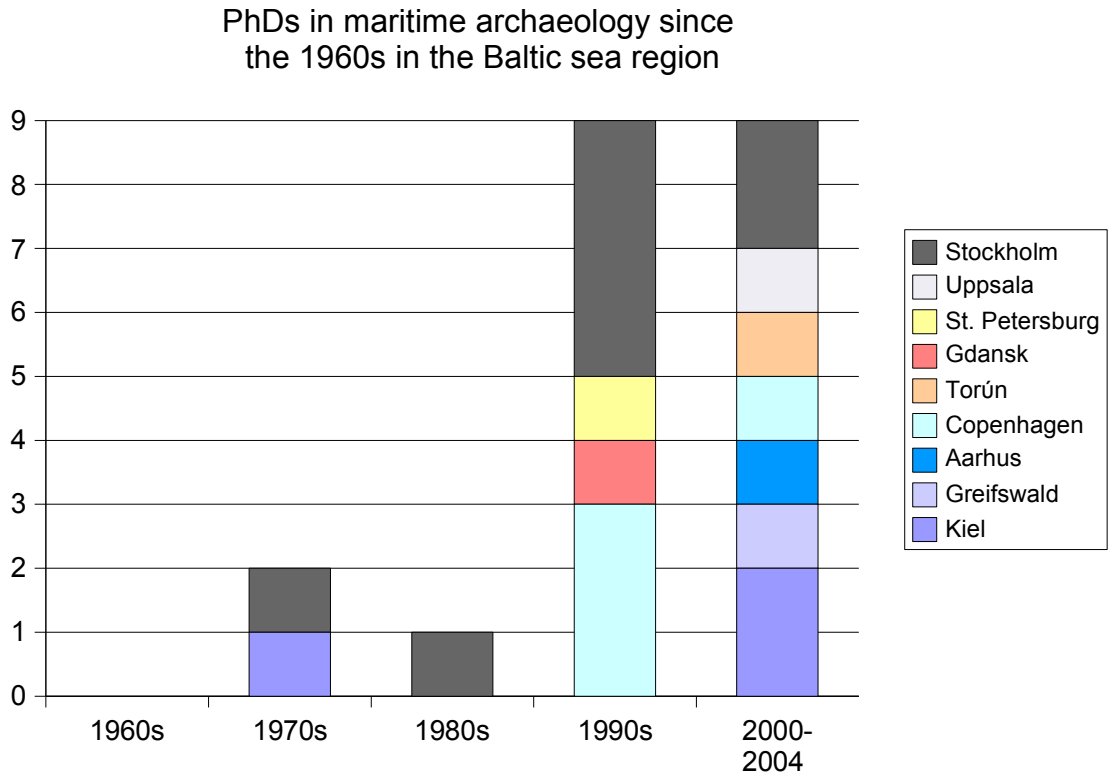

Figure 29: Number of theses, departing from maritime archaeological source material, coming from universities within the Balic sea region from the 1960s.

In 1995, (submerged) settlements first appear as a topic, followed by harbours, ship graves (discussion of burial habits, the role of the ship in society and hypothetical reconstructions of ships), and in the last five years, sea-level changes and past (submerged) landscapes.

Returning to ships, it is interesting to notice that large scale pieces of research, covering shipbuilding aspects in Northern Europe and the Baltic Sea region from medieval time onwards, were presented in 1972, 1983 and in 2003.

The boats and ships within the Schleswig-Holstein and Denmark regions have been thoroughly studied, with a heavy focus on the Viking and early Medieval periods, published in five theses in the years between 1997 and 2004 and a more general view on Viking and early Medieval ships were presented in a thesis in 1992. Other regional theses come from Russia and Poland, focusing on Medieval ships and waterways and working boats up to modern time respectively, published in 1994 and 1995.

Logboats, either in the form of graves, images or as single stray finds, have been in focus in two theses, presented in 2000 and 2003; one covering the south Scandinavian Bronze Age and incorporating the relationship between man and sea, the other, Polish logboats in general and inland waterways.

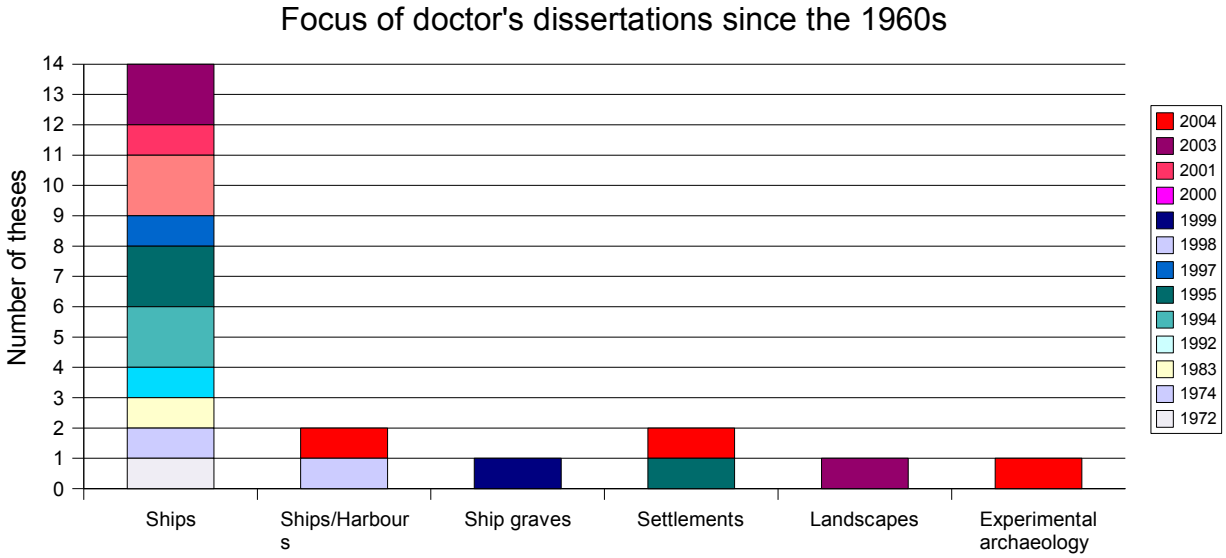

Figure 30: Ships refer to all types of waterborne vessels, including logboats.

4.4 Current and Recent Research

4.4.1 Universities

According to the information provided in the questionnaires, current postgraduate research in maritime archaeology is carried out at eight universities in six of the countries within the Baltic sea region (see appendix V for a complete list). The number does not allow for any deeper analysis, but in addition to boats and ships, also landscape archaeology, harbour studies, maritime food habits and conservation or waterlogged material are current topics.

Furthermore, it is interesting to note that in the past 35 years, the number of universities and institutions with past and current postgraduate students in the field has increased from one to over 12, but only two of these, the universities of Klaipėda and Kiel, carry out post-doctoral research at the moment – and mainly on a regional or local level. The Södertörn Högskola was, in the years 2000–2004, involved in the international MoSS–project, described below.

4.4.2 Museums and State Authorities

Other than on an academic level, research within the field is mainly carried out by the state authorities – either National Heritage Boards and similar, or Museums – with focus on issues concerning the management and supervision of underwater heritage, or conservation.

4.4.3 International Research

Very few of these research projects are, or have been, international, the only past example being the MoSS-project, finalised in 2004. The project was a co-operation between six

north European countries, including Germany, Sweden, Denmark and Finland, with the aim to develop methods for monitoring, safeguarding and visualising shipwrecks, based on four wrecks sites, two of which were located in the Baltic Sea, and one in Lake Vättern. Apart from this a project in underwater vehicle engineering, called "Maritime History in the Baltic Sea" was carried out in co-operation between Klaipėda University, Lithuania and the Swedish Institute of Technology, in 2001–2002.

4.4.4 Monitoring and Recording

Research projects involving the monitoring and recording of wrecks, pole barriers or submerged settlements, have been carried out by a number of museums, including the Mosegård Museum in Denmark, the Bohuslän Museum, Swedish Maritime Museum and the MK Unit in Sweden, the ALSH in Schleswig-Holstein, the JTM Centre in Latvia and by the university of Klaipėda in Lithuania. These have all been local or regional projects, which were either finalised in the 2000–2004 period, or are still running (see appendix III, table 4).

4.4.5 Research Driven Excavations

Research driven excavations or trial excavations have been carried out by the State Museum in Mecklenburg–Western Pomerania. In one case this involved the complete excavation of a shipwreck that was threatened by ship-worm. Excavation has also been undertaken in connection with the continuous SINCOS–project initiated to discover and partly excavate submerged settlements in the Wismar Bay and the coastal area of Rügen.

4.4.6 Conservation

There are several current projects focusing on conservation issues, including *in-situ* conservation of iron artefacts and wooden shipwrecks, degradation and formation processes of wrecks in the Skagerrak, the *Vasa* project, all of which are mainly carried out in Finland and Sweden (appendix V). Research with particular focus on the degradation of waterlogged wood, has in the period between 2000–2004, apart from *Vasa*-related research, been carried out by the University of Agriculture and Science (ALU) in Sweden, and include the "Bacpole" project.

4.4.7 Other Projects

Other projects that are running, or, are about to start up, include "Trawling and the UCH" and "National Cultural Parks", both run by SMM. In addition to these, there are probably several other ongoing projects within the region which, due to lack of information, cannot be presented here.

4.5 Organisations

4.5.1 Underwater Field Competence

A compilation of institutions and other organisations within the Baltic sea region capable of undertaking underwater fieldwork is provided in appendix IV. Table 8, below, shows the number of organisations with UW field competence and the number of archaeologists for each country and federal state within the region.

Units/ Personnel	*Den*	*Est*	*Fin*	*Åland*	*M–WP*	*S–H*	*Lat*	*Lit*	*Pol*	*Rus*	*Swe*	*Total nr*
UW fieldwork	8	2	1	1	2	3	1	2	2	2	7	31
Archaeologists	6	4	3	0	No info	4	1	4	3	1	15	41

Table 8: The number of units with UW fieldwork competence and the number of underwater archaeologists working full-time, in each of the Baltic sea countries.

Worth commenting upon is the number of organisations or units with UW fieldwork competence recorded for Sweden and Denmark. Whereas in Sweden, there are seven units with this competence, all of which have undertaken commercial commissions, most fieldwork is carried out by four units; the Bohusläns Museum (BM), the Swedish National Maritime Museum (SMM), Malmö Kulturmiljö (MK) and Kalmar County Museum (KM). Similarly, of the eight organisations listed for Denmark, UW fieldwork is mainly carried out by two units; the Roskilde Viking Ship Muesum and Langeland Museum. Furthermore, the number of archaeologists with UW fieldwork competence for each country, i.e. a maritime archaeologist with appropriate diver's certificate and with a full-time position, can be misleading for estimating the total number of competent archaeologists in each state, as more staff are usually employed when the need arises.

4.5.2 Fieldwork Equipment

Within the region, most units with UW fieldwork competence, have basic equipment for carrying out UW research, such as diving gear (tanks, BDCs, regulators, masks) and some form of diving platform (inflatable or barge) and rudimentary recording equipment (i.e. no sonar equipment etc.) (for more information provided in the questionnaires, see appendix IV, table 2).

Of the organisations equipped with more than the basics, one organisation in particular stands out; the Polish Maritime Museum has a large survey vessel on a stand-by basis with a boat crew of six people and is equipped for work in up to 40m depth, including side-scanner/sub bottom profiler and echo sonar systems. Other organisations with a good level of equipment, both for diving and for survey/excavation work, include the Viking Ship Museum of Denmark, which in addition to a side-scan system has a chirp and magnetometer, and the Langeland museum. In Finland, the NBA is comprehensively equipped with a side-scan sonar system as well as a ROV. In Russia, the institute of the History of Material Culture and the Institute of Archaeology, both at the Academy of Science, share equipment, which apart from the basic also includes a side-scan sonar system. In Sweden, as earlier mentioned, there are seven organisations capable of undertaking UW fieldwork and with a recorded high level of working standard. The majority of these units hire in equipment for particular jobs but four have full in-house resources; the SMM, the BM, Kalmar County Museum and MK.

Just as organisations take on temporary staff, or use volunteers for particular jobs, they often hire equipment for particular types of work to keep costs down. Alternatively, equipment is borrowed through agreements with Universities as is the case in Schleswig–Holstein. Therefore, the above can only be seen as an indication of the present standards for undertaking UW fieldwork within the region.

4.5.3 Conservation

The availability of competence and equipment for the handling of waterlogged archaeological material, is generally a prerequisite for being able to carry out UW excavations or for salvaging any archaeological material found underwater. All the Baltic Sea States have institutes providing this service, the only exception being Åland (table 9). In most countries the service is provided through museums, universities or private institutions. Only a few of the organisations competent to carry out UW fieldwork have in-house conservation facilities. These include; the Polish Maritime Museum, the Institute of the History of Material Culture of the Russian Academy of Science, Langeland Museum in Denmark, the NBA of Finland and the Kalmar County Museum in Sweden (appendix IV, table 2, column 3).

When it comes to the availability of freeze driers, used for the conservation of waterlogged organic material, the numbers vary considerably (table 9) from none (Estonia and Åland), to six(!) in Denmark. When it comes to the size of material that can be handled, Finland and Russia are limited to small artefacts, less than 1m long, whereas Poland can handle materials that are up to 1,5m and the two German federal states material up to 3m long. Of the remaining states, Denmark, Latvia, Lithuania and Sweden can accommodate material longer than 3m.

	Den	*Est*	*Fin/ Åland*	*M–WP*	*S–H*	*Lat*	*Lit*	*Pol*	*Rus*	*Swe*	*Total*
Conservation units	6	1	2	1	1	2	3	4	3	5	28
Freeze Driers	6	0	2	1/(1)	3	2	4	2	1	5	26
Length (m)	>3	-	<1	≤3	≤3	>3	>3	<3	<1	>3	-

Table 9: The number of organisations providing conservation services of waterlogged material, the number of functional freeze driers (the number in brackets refers to a freeze drier not yet functional), and the approximate length of material they can handle. The length intervals used here are based on the options available in the questionnaire.

4.6 Conclusions

The above provides a general overview of the level of education, research, underwater fieldwork competence and conservation facilities presently available in the region, which can be summarized as follows;

- Maritime archaeology is offered at universities in all but one country in the region, where instead the subject is available through a non-university course. Whereas the subject forms part of the general curriculum in some countries, it is generally only available as a separate undergraduate course. One university in the region offers a one-year master course with focus on underwater archaeology.
- The level of diving skills required for undertaking underwater fieldwork varies between having to have a commercial diver's license, to having a basic sport diver's license. Scientific/commercial divers' licences can be obtained in three countries. One country requires a diver's licence for working on underwater archaeological sites, which is presently unavailable to the public.
- Fieldwork training in underwater excavation/survey techniques, is currently available in all but three of the BSS. In three countries and one federal state sport divers

can be involved in underwater archaeological projects. Underwater fieldwork courses for sport divers are offered in two countries.

- 21 doctor's dissertations have been submitted on topics derive from maritime or underwater archaeological source material, within the region since the 1970s. In the same period the number of universities where theses have been submitted has risen from two in the 1970s, to nine in the 1990s and nine in the period between 2000–2004. The focus of these theses has mainly been on boats and ships. Current research studies are carried out at eight universities in six countries within the region, with topics ranging from boats to harbours, food habits and landscape archaeology to conservation of waterlogged material.
- Non-academic research is mainly carried out by state authorities or museums and focuses on issues regarding management, supervision and conservation. Of research carried out from 2000–2004, only one project was international, the remaining had a local or regional focus. In one federal state, research driven excavations have been carried out, whereas other states and nations focus solely on *in-situ* conservation, monitoring and documentation.
- There are currently organisations capable of underwater archaeological fieldwork in all the Baltic Sea States. There are 31 units, and a minimum of 41 diving archaeologists within the region. The standard of in-house equipment for each of these organisations varies from basic diving gear and documentation equipment to diving platforms on a stand-by basis, ROVs, side-scan sonar systems, chips etc.
- Conservation services of waterlogged archaeological material are available in all but one of the Baltic Sea States. The total number of institutions is 28. Freeze driers are available in all but two of the BSS. In two of the states which have freeze driers, only objects under 1m length can be handled. In three states, the limit is 1-3m and in four states above 3m.

TOURISM AND RECREATION

5. Cultural Tourism and Recreation

This chapter is intended to provide an overview of how the Baltic Sea States regard the diving community and its potential as a consumer of the underwater cultural heritage. For example, how many potential diving tourists are there in the region? How quickly is the diving community growing? Which parts of the Baltic Sea are within "reach" for this community and where is UCH in relation to this? Furthermore, the intention here is to assess how the states seek to inform visitors about the underwater milieu, underwater archaeology and seafaring in general.

5.1 Diving and the Heritage

Divers are the foremost visitors and users of UCH, and many countries regard them as the most important, or even the only, source for finding and registering new UW finds (see chapter 3.2.2.). When asked about the "*main contribution of scuba divers within heritage management and cultural tourism"*, whether it be as informants, as a group with an interest in history, or as a work-force when investigating and surveying UW archaeological sites, a clear majority appreciate their contribution mainly as that of a broad group of visitors with an interest in history. Only two nations regard them primarily as informants – Denmark and Estonia – whereas Poland regards the value of the diving community as mainly that of a work-force (appendix VII, table 1, column 3).

5.1.1 Divers and Dive Clubs

It is very hard to gauge how large the diving community is within the Baltic sea region as a whole, but based on the figures presented here (table 10), their numbers can be estimated as more than 235,000. The larger diving associations educating divers world wide, such as CMAS, PADI and NAUI, are present in a majority of the countries within the region, and while these organisations often keep records of their membership numbers these records do sometimes include the number of divers advancing to a "higher level". Therefore, the same diver might be recorded twice. For the smaller organisations the problem is mainly related to the high turnover rates within the business, making it close to impossible to estimate the numbers of certified divers. Another problem hiding in the figures, is that many divers are educated outside the Baltic sea region, and mainly dive while on holiday abroad. For example, PADI Finland estimates that of the 2 000 Finish divers going through their education system every year, only half do the course in Finland.

	Den	*Est*	*Fin*	*Åland*	*M–WP*	*S–H*	*Lat*	*Lit*	*Pol*	*Rus*	*Swe*	*Total nr*
Number of divers	>8 500	>3 500	25	160	17000	> 10 000	1000	10000	> 25 000	Not known	135000	> 235 000
Increase of nr of divers in the past 5 years	De-crease from >9 000	>3 000	> 10 000	Not known	Not known	Not known	>900	8000	Not known	Not known in-creas-ing	60000	>90 900
Number of dive clubs	152	3	208	3	>20 (1000)	>31 (1000)	10	8	Not known	Not known	>200	>641
Diving or-gani-sations	CMAS PADI NAUI NASE	PADI IANTD	CMAS PADI NAUI	CMAS NAUI IANTD	CMAS PADI NAUI DIWA	CMAS PADI NAUI DIWA	CMAS PADI IANTD SSI TDI	CMAS PADI	CMAS PADI LOK	CMAS PADI	CMAS PADI NAUI IANTD	9

Table 10: Overview of the status of the diving community for each of the BSS. The number of dive clubs mainly refer to the number of dive clubs that are members of National Sport Diver Associations. Germany as a whole has 1000 such clubs. The number of divers in Åland refer to the number of authorised divers. For Russia it has not been possible to appreciate the total number of divers, but their numbers are increasing within the federation.

The number of sport divers recorded for the German federal states of Mecklenburg – Western Pomerania and Schleswig-Holstein (table 10) is estimated as 1% of the population, based on the comparative percentage of sport divers that are members of the German Sport Diver Association in relation to the German population as a whole. According to an official web site (www.vdst.de/), there are 75,000 registered sport divers in Germany, but interestingly, the same site states that there are between 300,000–600,000 active sport divers in the country. Given the uncertainties in the figures presented here, these can mainly be regarded as an estimate of the number of potential diving tourists within the region. This in turn provides a low estimate of the number of divers capable of diving to a depth of approximately 20m.

In the last five years, a majority of the BSS have seen a steady growth in the number of sport divers being educated. Only in Sweden and Denmark has a slight decrease has been noted. The growth is most noticeable in Estonia, Latvia and Lithuania, with growth rates of over 80% for the period. In Sweden the growth rate for the same period might have decreased, but remains close to 45%, based on statistics from CMAS and PADI.

5.1.2 Technical Diving

Advancement and innovation within the diving gear industry has been stagnant in the past few years. Instead, the biggest advancements have come with the development of technical diving, where different mixes of breathing gases are used (Nitrox[7], Heliox[8] and Trimix[9]), making it possible to reach depths down to approximately 100–120m. This type of diving has seen an explosive increase in the past couple of years, and there are regular courses for such diving at many of the larger dive centres within the region– at least for depths in the

7 Nitrox – combines oxygen and nitrogen, and enables the diver to safely stay at depths of down to 35m for longer periods of time than would be possible using standard air mixes.

8 Heliox – combines oxygen and helium and is used at depths beyond 50m.

9 Trimix – combines oxygen, nitrogen and helium, and is optimised for diving within a range of 60–100m.

intervals of 35–80m. Normally, higher levels of diving skills (and dive certificates) are a prerequisite for participating in such courses (the cost of which are usually around 800€).

The number of technical divers within the region is even harder to assess – Lithuania estimates that there are about 50 Nitrox divers in the country and Sweden has about 300 Trimix divers – but given the fact that these types of courses are offered in most of the countries within the region, the unknown numbers would be significant. It is certain that the increase in the depth to which a diver can safely reach, has consequences for the underwater cultural heritage lying on the bottom of the Baltic Sea. Objects previously "protected" by their depth are now increasingly within reach for both tourists and visitors intending to salvage historical objects, in areas far beyond the national maritime boundaries (figure 31).

5.2 National Tourist Policies

None of the Baltic Sea States, have any clearly defined national policies in place for taking advantage of the growing interest in UCH within the region. To be fair, this growing interest is not something that has previously been either noticed or specifically investigated, which, given the difficulties in over-viewing the industry as a whole, is perhaps not surprising. This growing interest is rather something that has been "felt" – by reason of a) more UW cultural objects being found and reported by amateur divers (chapter 3.2.2.), b) an increase in the interest from amateur divers to get involved in underwater archaeological investigations, and c) through reports of violations and disturbance (chapter 3.2.3.) which occur at wreck sites located in increasingly deeper waters[10].

Visits at random dive club websites within the region reinforce the feeling that UCH is something that more and more divers choose to visit, with a majority offering at least a few interesting wreck sites to visit, lying at different depths, thus ensuring that the diver can get the most out of his or her diving ability.

In fact, a majority of the Baltic Sea States claim that underwater cultural tourism is either important or very important for their economies, describing the diving tourist as a high earner and generally well educated. In particular, the German federal states of S–H and M–WP, Estonia, Finland and Poland recognise the economical and cultural potentials this industry has for local and regional economies. Despite this, few investigations on the effects of diving tourists on local economies, or the UCH, have been made within the region.

10 Einarsson, L. 2005. Deep Water Wrecks – a survey of damages and suggestions for the protection of wrecks in deep waters. Report March 2005. Marin archaeological unit. Kalmar Läns Museum. Sweden.

Figure 31: Map showing depths below 100m in the Baltic Sea. The Baltic Sea is a shallow sea with an average depth of 45m, but with most sill areas between 11–25m, and relatively few areas are deeper than 100m. Therefore, the UCH can be reached by diving visitors in most areas of the sea. The deep areas are very approximately indicated on the map as darker blue areas.

5.3 Maritime Tourist Attractions

A few Maritime Museums have begun to look at ways in which to raise awareness of underwater archaeology as well as UCH. One example of this is a pilot project started up by the Viking Ship Museum in Denmark, called “Sunkne Verdener” or “Worlds Beneath” which aims at improving accessibility, raising awareness and increase the protection of UCH. In short, the visiting tourist is provided with a mobile phone connected to a GPS through which multimedia-information on nearby heritage – both on land and under water – can be obtained (figure 32). The visitor may also add her own information in case of, for example, a new discovery. The initial two-year trial period for the project runs out in June this year. Another one-year-project is currently run by the Polish Maritime Museum, which aims at setting up “a basis for a durable and sustainable development of the underwater tourism in the country”, taking into account management, education and promotion/information. The outcome of these two projects are yet to be assessed but but will hopefully add vital information on ways in which it is possible to inform the public about the hidden underwater cultural heritage of the Baltic Sea.

Another project worth mentioning here is the MoSS-project, a truly international project, which ended in 2004. The aim of the project was to monitor, safeguard and visualise North European shipwreck sites in Finland, Sweden, Germany and Holland. Wreck sites monitored in the Baltic Sea included the *Wrouw Maria* (Finland) and the *Darsser Cog* (Germany). The project has resulted in a series of newsletters and a final report as well as a website.

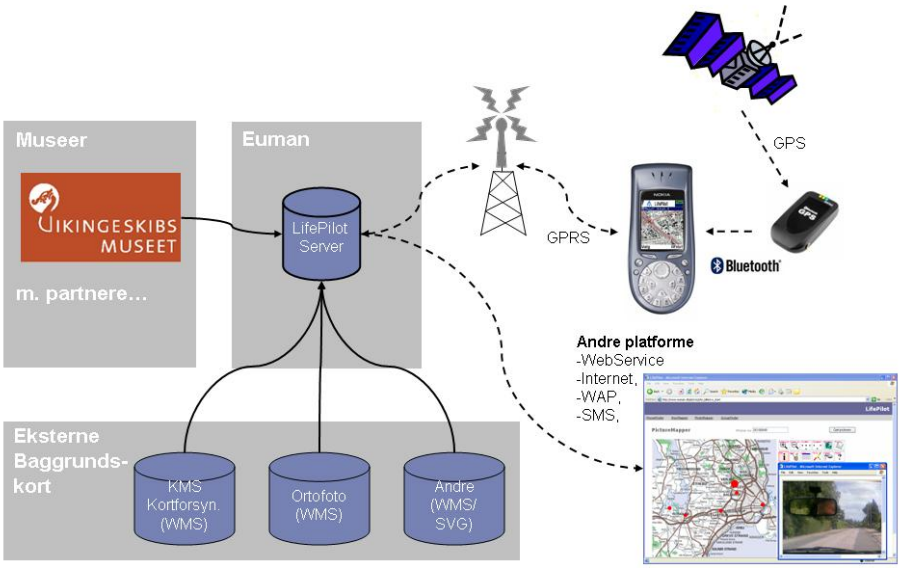

Figure 32: Schematic outline of the technology behind the Danish project ”Worlds Beneath”.

5.3.1 Museums

Apart from the two projects described above, the main way in which museums try to reach out to the public with information about UCH, is through exhibitions on the history of seafaring in general, shipbuilding, historic seafaring towns and museum ships. Most of the

Baltic Sea States have at least a couple of maritime museums – on national, regional or local levels – the only exception being Latvia. Table 11 provides an overview of the main maritime museums within the region and their number of visitors in 2005, which amounted to 3,4 million. Many of these museums do not focus on underwater archaeology *per se* but quite a few display the raised remains of shipwrecks or replicas of excavated shipwrecks. Here the focus lies on the ship itself, the period it represents and/or, the actual excavation (table 12).

Of the raised and preserved shipwrecks, the *Vasa* ship, mentioned in the beginning of this report, provides an excellent example of the preservation conditions in the Baltic Sea and few visitors leave the exhibition unimpressed. Other examples of preserved shipwrecks on display are the Danish *Skuldelev* viking ships. There are many more examples but far from all are on display. The costs involved in raising and preserving waterlogged material can not be underestimated and few projects today can afford or justify such activities. However, it is clear that these types of pioneering projects have been important in raising the profile of underwater archaeology.

Of displays with focus on underwater archaeology and associated excavation methods, the *Kronan* exhibition in Kalmar (Sweden), can be noted along with the Poel Cog exhibition at the "Museum für Underwasserarchälogie" in Saβnitz (M–WP), and a display at the JTM Centre in Jūrmala (Latvia), called "marks in water" and "reports from the depth".

5.3.2 Dive Trails

The National Board of Antiquities (the "NBA") in Finland, has taken the view that in order to ensure the protection of UCH, it is important "to distribute information of shipwrecks and make divers aware of their historical importance". As such, the NBA, is the only organisation, directly responsible for the preservation of UCH within the region, to take this official stand point. A direct result of which has been the establishment of a dive park in the year of 2000, surrounding the *Kronprins Gustav Adolf*, a Swedish man-of-war which sank in 1788 outside Helsinki. The wreck site covers an area of 100x100m in 18–20m of water, and offers visiting divers a marked trail, and the possibility to purchase information leaflets and a diving map over the site. The public interest generated by the opening of this trail has so far been described as being promising, but there are not yet any published reports on its effect on tourism in the area.

Similar to the Finnish initiative is the "free water" museum in Mecklenburg–Western Pomerania, where the authorities of UCH in co-operation with individual diving companies allow supervised "tours" to a selected number of dive sites. The co-operation is a direct response to an increase in cultural tourism in the area in recent years. In addition to the above examples, the JTM Centre in Latvia and the Maritime Museum at Klaipėda, Lithuania, offer visiting divers the possibility to explore underwater sites – ranging from WWII wreck sites to submerged landscapes lying in waters at a depth of 4–13m. Furthermore, the JTM Centre is currently investigating

Country	*Main Maritime Museums*	*Number of visitors in 2005*
Denmark	• Viking Ship Museum	• 150,000
Estonia	• Käsmu Maritime Museum, • Estonian Maritime Museum	• 10,000 • 60,000
Finland	• National Maritime Museum, • Forum Marinum, Åbo • Forum Marinum, "open air" activities • Raumo Seafaring Museum	• Closed at present • 36,305 • 19,950 • 30,000
Åland	• Åland Maritime Museum • The "Sjökvarteret" Musem • Pommern	• 16,100 • 20,000 • 20,000
Germany M–WP	• Museum für Unterwasserarhchäologie • Open Air Museum, Gross Raden • Wismar *Poel Wreck*	• 35,000 • 64,000 • 30,000
Germany S–H	• Archaeological State Museum • Hedeby (Haithabu) Viking Museum • Schiffartsmuseum Husum/ Kiel • Landesmuseum Meldoft (Hedwigenkoog-wreck)	• 130,000 • 117,000 • 30,000 / 33,000 • 14,000
Latvia	• Jūrmala Town Musuem • Museum of the History of Riga and Navigation • Museum of Ainazi Naval School	• 30,000 • 14,350 • 6,200
Lithuania	• Lithuania Maritime Museum • The History Museum of Lithuania Minor • Clock and Watch Museum • The History Museum of Neringa	• 400,000 • 25,000 • 12,000 • 20,000
Poland	• Polish Maritime Museum (CMM – Centralne Muzeum Morskie)	• 231,613
Russia	• Naval Museum, St. Petersburg • World Ocean Museum, Kaliningrad	• 396,000 • 129,192
Sweden	• Vasa Museum (SMM) • Karlkrona Naval Museum (SMM) • National Maritime Museum (SMM) • Gothenburg Maritime Museum • County Museum of Kalmar	• 892,892 • 127,000 • 149,000 • 85,102 • 42,079
Total numbers	•Some 30 maritime museums	•Approximately 3 415,783

Table 11: The main maritime museums within the Baltic sea region focusing on the UCH and the number of visitors for each of them in the year of 2005.

the possibility of establishing two dive parks, one in the sea at Jaunķemeri and another one inland at the site of an inundated valley.

The only other example of projects specifically aimed at underwater cultural tourism has been initiated by the Institute of the History of Material Culture of the Russian Academy of

Science, in co-operation with a Russian tourist company. Once again, the affects of these projects on local tourism have not been investigated.

Finally, in Sweden some research has been made into the establishment of natural reserves – combining natural and cultural aspects for protecting a given area – but it is yet unclear how well this would work in reality within the BSR.

5.4 Conclusions

- A majority of the Baltic Sea States regard the diving community as a broad group of visitors of the UCH, with an interest in history.
- A minimum of potential diving tourists in the area, capable of diving to a depth of 20m, would be approximately 235 000, but the uncertainties in the figures are large. In some of the BSS, the diving population has been growing by nearly 80% in the past five years. In a country like Sweden, where the growth rates have been decreasing, the comparable figure for the same period is still 45%.
- Whereas innovation rate within the diving gear industry has been relatively stagnant over the last couple of years, the advancement in different types of breathing gases has not, enabling safe deep dives down to approximately 100m. The number of dive clubs offering these types of courses are on the increase. Thus, cultural monuments previously ”protected” by the depth at which they are located are increasingly within reach for diving tourists as well as for other types of visitors.
- None of the Baltic Sea States have a national policy for diving tourists with an interest in UCH, yet a majority of the BSS claim that underwater cultural tourism is important for their economies, describing the average tourist as well educated and a high earner. Furthermore, no official reports of their impact on local/national economies have been published.
- There are currently two projects running within the region which seek to raise the awareness of UCH – both with a dead-line this year.
- All of the states within the region have maritime museums of some kind, of which a few have exhibitions on underwater archaeology or raised and preserved shipwrecks on display. In 2005, the total number of visitors to these museums amounted to approximately 3,4 million.
- Finland has the only dive trail, or park, in the region, and apart from this, cultural dive tours are arranged, by a museum or other regional authorities, in three other countries.

Country	*Projects aimed at Visualizing the UCH*	*Displays focusing on UW archaeology*	*Dive trails/dive parks*
Den	"Access to Sunken Worlds"	• The *Skuldelev* viking ships/full-scale replicas • The wreck of *St. George*, an English "man-of-war" from 1811 • The excavation of a 12th c. cargo ship	-
Est	-	•Antique diving equipment/artefacts salvaged from wrecks	-
Fin	•1 Dive park •The MoSS-project	•18th c. shipwreck •(www.nba.fi/INTERNAT/MoSS/eng/index.html)	*Kronprins Gustav Adolf*
Åland	-	•Sjökvarteret, jehu.	-
GER M–WP	"Museum für Unterwasser-arhchäologie"	•18th c. shipwreck •(www.nba.fi/INTERNAT/MoSS/eng/index.html)	"Free Water Museum" Dive tours organised in co-operation between the authorities and three diving companies to six wreck sites in the sea.
GER S–H	-	• Replica of medieval cargo vessel • Replica of a viking ship • The Viking town of Haithabu / "*Haithabu-wreck 1*" • Excavation of a 16th c. shipwreck • The 17th c. *Hedwigenkoog* wreck	-
Lat	Two projects seeking to establish dive parks in the territory of Jūrmala	• Dive tours to WWII shipwrecks • Dive tours to the Staburags rock • Displays including "marks in water"/"reports from the depth" etc.	• Unofficial but regular dive tours to nine ships in the sea • Unofficial dive tours to inundated landscapes
Lit	-	•Lake Plateliai - landscapes, small wreck, 16th c. bridge – in depth of 4–12m • *Füsilier*, German WWII wreck in 12m of water • Lakes of Trakai – UW landscapes	• Guided UW tours in lake Plateliai • Guided UW tours at the *Füsilier* • Guided UW tours/ hunting in the three lakes of Trakai
Pol	"Maritime Underwater Tourism"		• Dive tours.
Rus	Some co-operation with tourist companies to establish dive tours at interesting wreck sites	•Novgorod – Slavian wrecks on display.	-
Swe	-	•Lake Plateliai - landscapes, small wreck, 16th c. bridge – in depth of 4–12m • *Füsilier*, German WWII wreck in 12m of water • Lakes of Trakai – UW landscapes	-

Table 12: Examples of projects, displays and dive trails with focus on underwater cultural heritage in the Baltic Sea.

THE ’100’
VISUALISING THE UCH

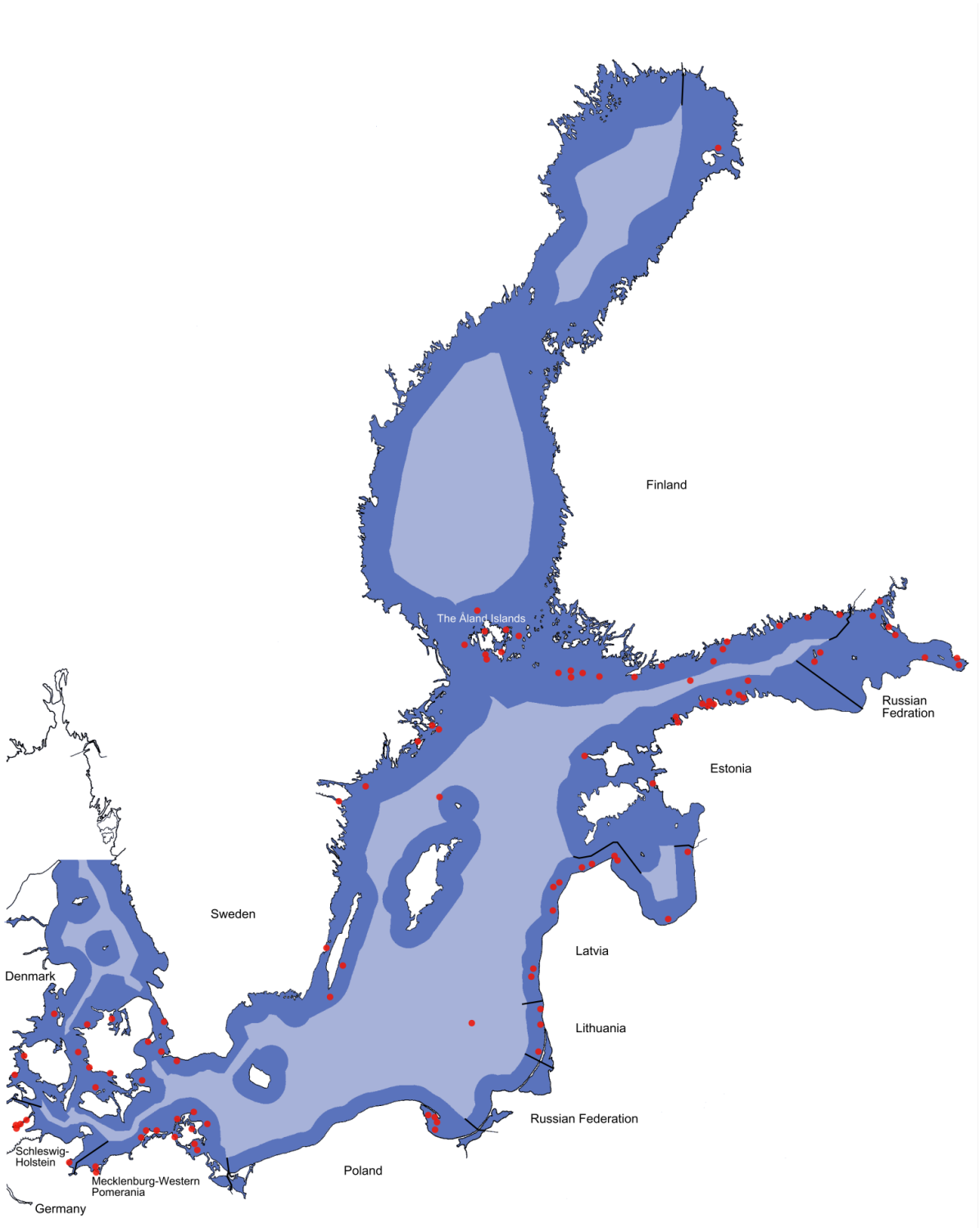

Figure 33: An overview of the approximate locations for the '100' most valuable underwater cultural heritage sites in the Baltic sea region.'

6. Visualising the Underwater Heritage The ’100’

Visualising the underwater cultural heritage is no easy task. As mentioned earlier in this report, things that cannot be seen on the surface remain elusive to the minds of the general public. If not brought to the surface, the only way in which to see UCH is through diving on site or through the use of photographs, or remote sensing such as side-scan sonar or swath bathymetry, or even through the pen or brush of an artist. Therefore, one of the aims of this project is to find ways in which to improve the awareness of UCH. Another very important aim is to create a foundation for the promotion and marketing of the region, defined by its rich underwater heritage and try to make it not only more visible but also more comprehensible to the general public.

The intention of this chapter is:

1. To present the '100' most important underwater heritage sites in the Baltic Sea, providing general statistics for each state as well as for the region as a whole;
2. To use these sites to highlight strengths and weaknesses in the current legislation and management of UCH; and
3. To provide examples of how these sites have been, or could be, presented to the public and used as a regional identity for the Baltic Sea.

6.1 The ’100’

The '100' (figure 33) have been compiled so as to highlight the diversity and exclusiveness of UCH, reflecting the unique archaeological, historical and technological heritage that lies beneath the surface of the Baltic Sea. Each state has selected their four to 15 most important underwater sites, forming the basis of the '100' (figure 34), presented in tables - and compiled in “the '100' Appendix”.

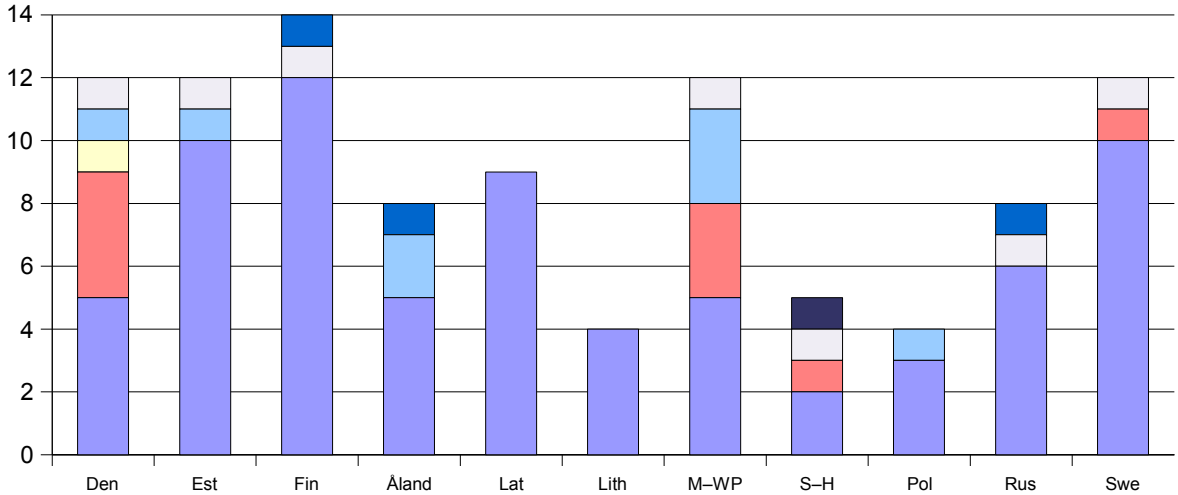

Figure 34: The number and category of the sites included on the '100'-list for each of the BSS. For color code, please consult figure 35.

Within the region, 71 of the selected sites are wrecks (figure 35). Nine constitute submerged settlements and of the remaining categories eight are harbours, one a bridge, three

naval battle areas, one a fishing structure and seven defence structures, including a citadel, a pole barrier and a ship barrier. Age wise (figure 36), a broad spectrum is covered, from the Mesolithic and Neolithic periods (Stone Age) up to the very last century, the most recent deriving from the Second World War. The category "other" in figure 40, refers to sites that fall outside the World Wars of the 20th c., or sites that have not been possible to date.

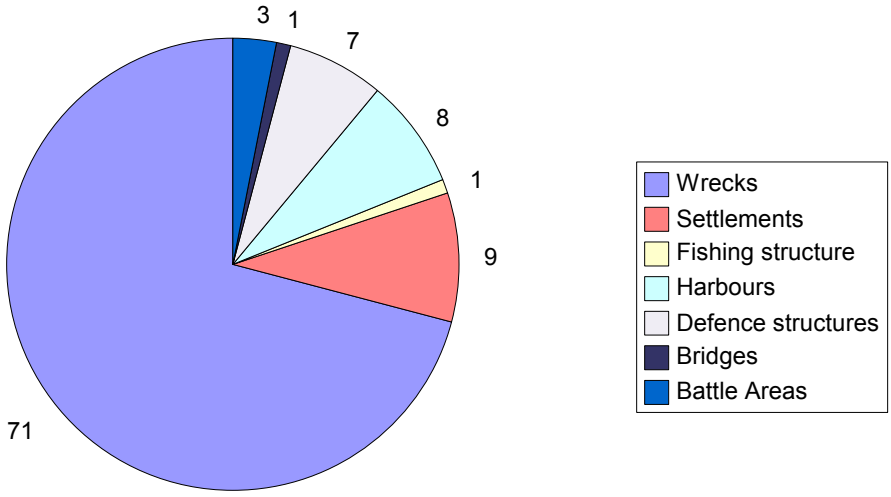

Figure 35: The relative distribution of the different types of underwater cultural sites included in the '100'.

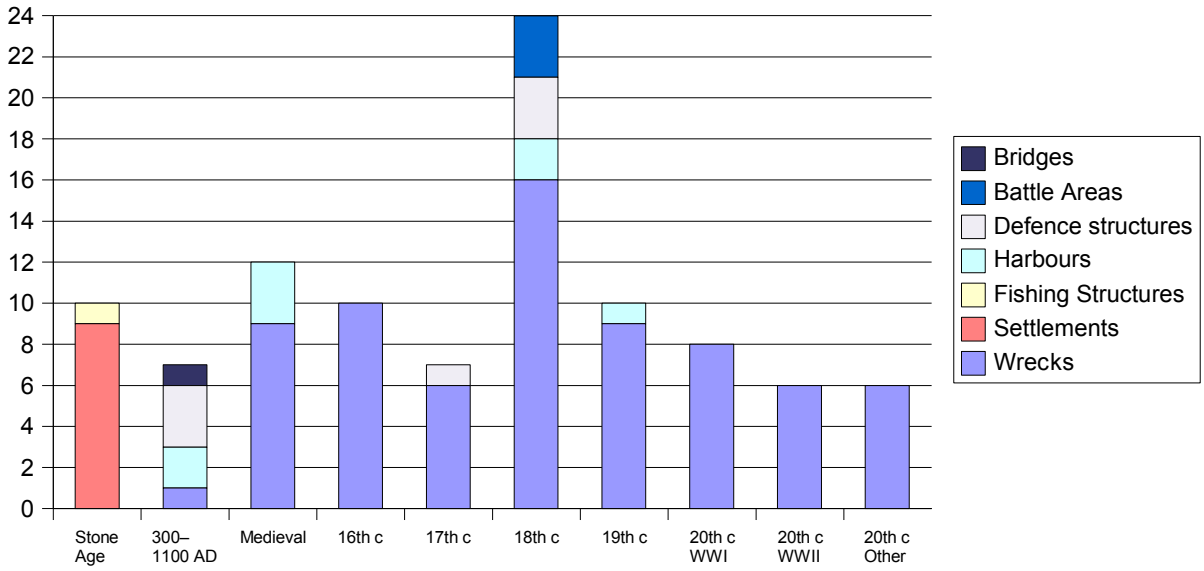

Figure 36: The relative age distribution of the '100'.

6.2 The Wrecks

Wrecks constitute by far the most numerous category of the underwater cultural remains, which is also reflected in the '100'. In this list of 71 wreck sites, several aspects other than purely technological ones can be commented upon. For example, the distribution across the region of wrecks of different origins and ages and how this distribution reflect different periods in the history of the BSR – in trading patterns as well as in periods of warfare.

In figure 40, the earliest wreck site, probably the remains of a cargo ship, dates to the Viking period (Haithabu III) and is located in the German federal state of Schleswig–Holstein (nr 3 in table 20). Also the Medieval wrecks selected within the region are mainly cargo vessels, indicating trade in pottery, limestones, or hazelnuts, and, in one case even to the Rhine land. Three of these wrecks have been associated with the Hanseatic period of the 14th c, today located within the territorial waters of Finland and Mecklenburg–Western Pomerania. The medieval wreck sites are represented by finds in Denmark, Germany, Finland, Latvia and Sweden and are exclusively reckoned to be cargo vessels.

Ten wreck sites dating back to the 16th c. have been included in the '100'. Of these, two sites in Finnish waters provide evidence of trade between the northern parts of the Baltic Sea and Central Europe, whereas another site in German waters points towards regional trade in pre-manufactured building materials. The first naval ships appear during this period, reflected in the '100' at one site associated with the "Seven-Year-War" (1563–1579), and probably of Lubian or Danish origin (nr 5, table 13). Another example of a naval ship is an unknown wreck, located in Swedish waters, which represents the largest collection of wrought iron guns in the world (nr 4, table 23). Apart from the above mentioned states, the 16th c. wreck sites are also represented by finds in Danish, Polish and Lithuanian waters. In total, four merchantmen, four naval/military ships and two unknown wrecks are represented.

Six wreck sites belonging to the 17th c. are on the '100'-list. Of these, at least three are the remains of naval ships; a probable Polish man-of-war located in Lithuanian waters; *Kronan*, the Swedish flag ship, lost in the battle of Öland in 1676; and what was probably a small Danish frigate, built in the 17th c. but lost during the course of the Great Northern War (1700–1721), in waters outside M–WP. Apart from naval ships, one wreck found in

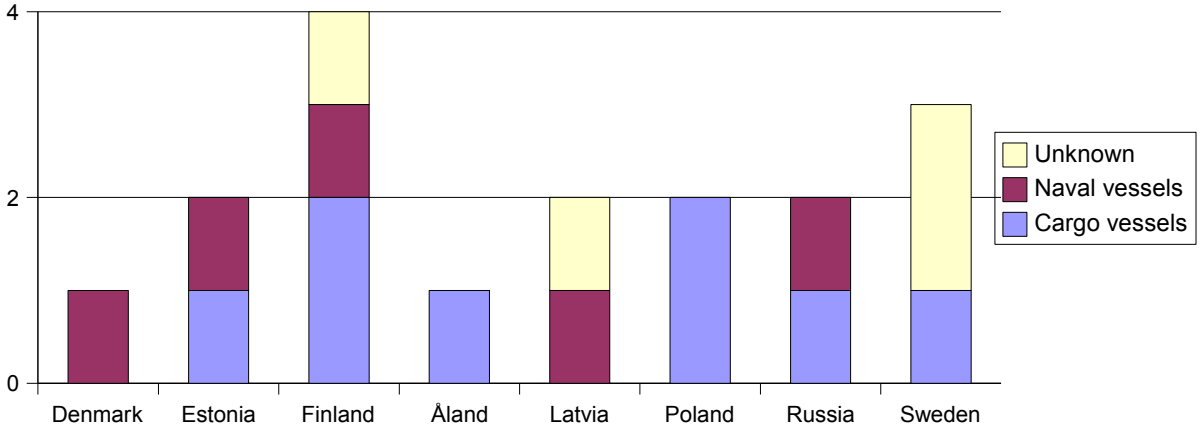

Figure 37: The 18th c. wreck sites according to current location and possible use.

Finnish waters dating back to this period, contained war booty from Russia, whereas a further two wreck sites are yet to be investigated, promising rich scientific source material.

16 wreck sites belonging to the 18th century and located within the territorial waters of nine of the Baltic sea states are included in the '100'(figure 37). In the case of four of these wrecks, only an appreciation of their age is known. Two such wrecks are located in Swedish waters, the so called “Mastvraket” and “Sjöhästen” (figures 38-39), both unique finds seemingly untouched by time. Indeed, many of the 18th c. wreck sites are in a remarkable condition and would probably, following archaeological investigations, greatly further our knowledge of ships and trade in the period. In fact, the most common type of wreck included on the list for the period are the merchantmen two of which are located within Finnish territorial waters. Underwater archaeological excavations of these ships have unearthed evidence of what must have been a fairly intensive trade in art between Amsterdam and Catherine the Great of Russia (nr 1-2, table 15)!

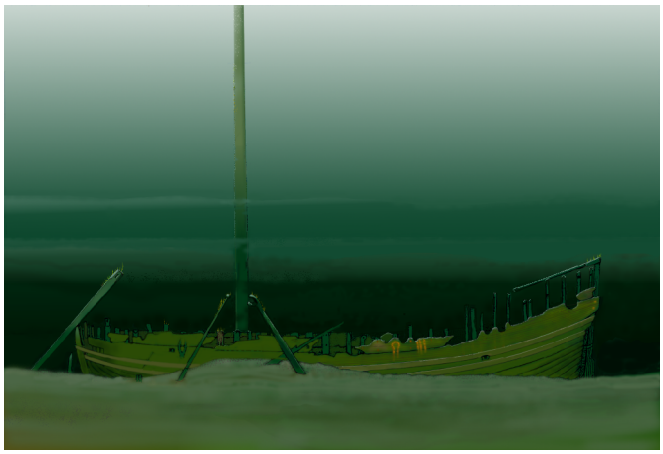

Figure 38: An artist's rendering of the "Mastvraket", dated to the 18th c.

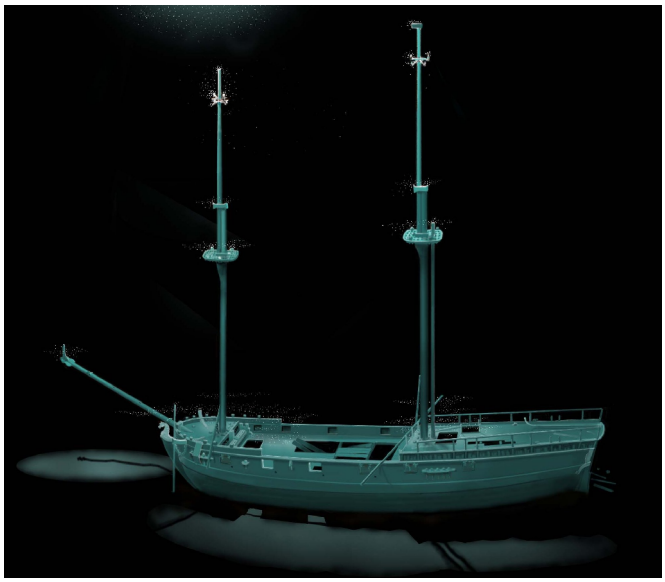

Figure 39: An artists rendering of "Sjöhästen", an 18th c. wreck. When found in 2002, the masts were standing to a height of 20m.

As for the naval vessels, these represent a string of battles, fought mainly in the Russo–Swedish War in 1788–1790, in what is today Russian, Finnish and Estonian waters. In two instances, wreck sites have been possible to link to full scale battles and are listed as naval battle areas (see chapter 7.1.4).

Of the 19th c. wrecks, nine have been included in the '100', lying in Danish, Estonian, Finnish, Latvian, and Russian territorial waters. Several of these represent the introduction of steam ships and the first steam battleships, with no less than three such ships included from Russia (nr 1-3, table 22), but also wooden sailing ships are represented in the list by an unknown wreck site situated in Latvian waters (nr 6, table 17). The remaining of the 19th c. wrecks represent the growth in international trade as well as the development of local trade and local merchants specialising in the import of, for example, coal and salt (nr 11, table 14 and nr 10, table 15).

The 20th c. wrecks are the most numerous on the '100'-list, representing not only the modern development of boatbuilding technology but also two World Wars as well as other historical mile stones in the history of the Baltic sea states. The latter becomes especially noticeable since states that gained their independence in the 20th century have nominated proportionally more 20th c. wrecks than states that have a long history of independence, or, in the case of, for example, Sweden, have stayed neutral in the two World Wars. So, for example, Estonia has included two wrecks that played a part in the Estonian war of independence following WWI. It is further noticeable that Lithuania and Latvia have included no less than two out of four wreck sites, and five out of nine, on the '100'-list, relating to both of the World Wars.

6.3 The Stone Age Settlements/Fishing Structure

Underwater remains of settlements dated to the Mesolithic and Neolithic periods are mainly found in the south-westerly parts of the BSR, in Sweden, Denmark and Germany. In total, nine such sites have been included in the '100', together spanning over more than 4000 years (figure 40), the oldest of which has been dated to between 8000-6500 BC and located at Gåbense, Denmark (nr 8 in table 13). Due to the exceptional preservation conditions in the Baltic Sea some spectacular and unique finds have been made at these sites, enabling not only important information on social change and cultural development of coastal societies to be made available but also information on the fishing, hunting and gathering lifestyle of the period, as well as important aspects of coastal change and environmental changes throughout the period.

The Tybrind Vig site (nr 5, table 13) is perhaps one of the most famous of these sites, where finds include the earliest Northern European textiles ever found and some dug outs, including beautifully carved paddles.

In addition to the submerged settlements, a submerged fishing structure, dating to approximately 3,500 BC, and found in Denmark, is also included in the '100'.

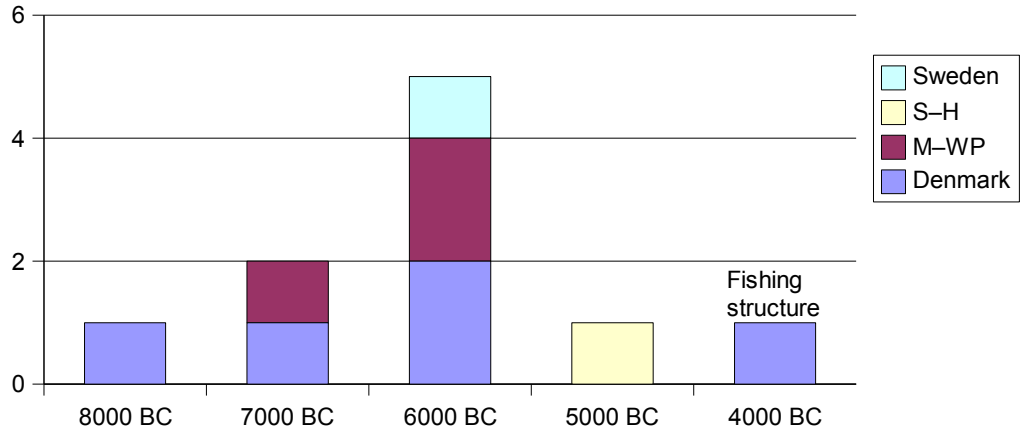

Figure 40: The age/state distribution of the submerged settlements and the fishing structure.

6.4 The Harbours

The harbours selected for the '100', are located in Poland, M–WP, Estonia, Denmark and on the Åland Islands. The oldest, Puck harbour in Poland and Gross Strömkendorf in M–WP, date back to the Slavonic and/or Viking periods. Common to most of the harbour sites is that they are fairly complex structures incorporating not only the harbour structures but also wrecks, and in some cases defensive structures such as sea barriers.

The medieval harbours, Rödhamn on the Åland Islands (nr 5, table 16) and Stralsund and Wismar in M–WP (nr 7 and 9, table 19), represent very important historical/ archaeological records of early shipping routes between Sweden and Finland, and the trading system of the Hanseatic league respectively, but also offer an insight into the interaction between land and sea as well as urban development. A further four harbours represent the 17th, 18th and the 19th centuries. Of these, the Käsmu harbour in Estonia (nr 4, table 14), for example, is said to have been built by the Swedes during the time of the Great Nordic War as an ammunition harbour. One harbour which has been included in figure 41, is the Flisö road stead (nr 6, table 16) on the Åland Islands. Although, it remains an important harbour it has been categorised as a naval battle area (see chapter 6.1.6).

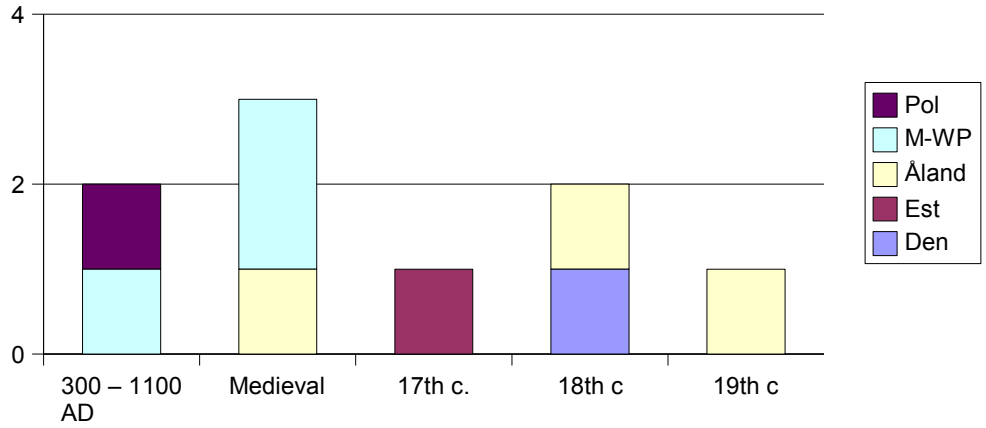

Figure 41: The distribution of age and country/state for the harbours on the 100-list.

6.5 The Defence Structures and Bridges

In total, seven underwater defence structures and one bridge have been included in the '100'. The Haithabu bridge in S–H, dates back to the 9th century AD, i.e the Viking period, and remains a unique structure for the entire region. As for the defence structures, these are represented by sites in seven states and range in date between the 4th and the 18th c. AD, and also represent very different building techniques. The oldest of these structures are found in Denmark, Margarethes Bro and Æi, two impressive pole structures measuring up to 400m and designed to cut off the entrance to the Haderslev fjord (nr 11, table 13). These two structures date between 370–1000 AD. Even more impressive is the Schlei sea barrier in S–H (nr 1, table 20), which runs across to a former island to a length of some 1200m. The site is dated to 740 AD, coinciding with the building of the Daneverket situated not far away. Slightly later in date, but equally unique, is the Medieval pole barrier at Stegesund, Sweden. As for the remaining sea defence structures, these date to the 17th and 18th centuries, and are made up of stone filled wooden frames and sunken wrecks. An example of the latter is the Greifswalder Bodden site in M–WP (nr 6, table 19), which consists of 21 wrecks, deliberately sunk during the course of the Great Nordic War, dating to the 17th and 18th centuries.

6.6 The Naval Battle Areas

Three naval battle areas are represented in the '100', all of which are related to the wars between Russia and Sweden in the 18th century. The Flisö road stead on the Åland islands is the scene of a great naval disaster during the course of the Russo-Swedish war of 1714-1720 when a Swedish fleet stumbled across an anchored Russian invasion fleet. The Swedish side lost four ships whereas the Russians had to flee, leaving behind 43 ships and over a 1000 men dead.

The battle of Svensksund (Russo-Swedish war 1788-1790) in Finland, also included on the list, is the site one of the largest naval battles ever fought in the history of the Baltic Sea, involving no less than 500 ships. The most famous wreck that can be associated with this

battle is *St. Nikolai*, a Russian ship-of-the-line. Finally, included on the list are the wrecks of some five Swedish naval vessels, which can all be associated with important battles in Russian waters during the height of the Russo-Swedish war in 1790 (nr 5, table 22).

6.7 Accessibility and Protection

The majority of the sites included in the '100' are located in shallow waters, i.e. in water depths not exceeding 25m, and easily within reach for the average diver. However, almost 44% of the sites are located in waters deeper than 25m (figure 42), with as many as 20 in depths beyond 40m, two of which around 100m depth. The latter exclusively consist of wreck sites, the majority of which are very well preserved, with some described as extremely well preserved. Thus, only 27 of the wreck sites on the '100' are located above the 25m depth curve. In relation to this it is interesting to note that the maximum depth at which scientific archaeological surveys or excavations have been undertaken in the BSR, has never exceeded depths of 40m – from a management perspective, not an ideal situation.

Apart from the generally restricted accessibility to underwater sites that prevail in M–WP, Poland and on the Åland Islands, allowing diving at specific sites only or through authorised dive clubs or similar, a further seven of the sites included in the '100' are subject to diving and/or anchoring prohibition, mainly in Swedish, Finnish and Danish waters. In addition to this, some four sites are currently covered with sandbags, geo-textile or sediments in an effort to improve preservation conditions, making them less accessible for the average visitor.

However, the remainder of the '100' are fully accessible on a 'watch only' basis, and in addition to this the 18th wreck of *Kronprins Gustav Adolf* is open to the public in the form a dive park, enabling informative visits under controlled and safe conditions.

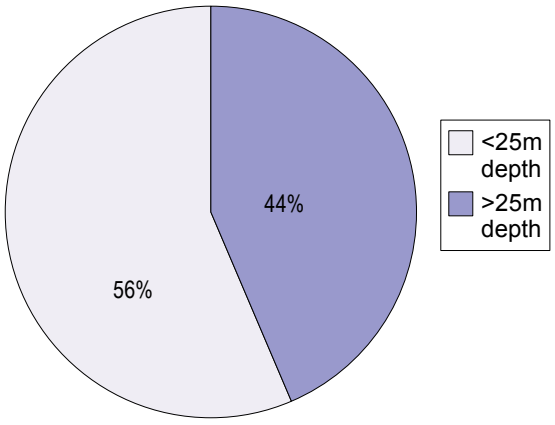

Figure 42: The relative water depth of the '100'.

64% of the sites included in the '100' are protected under national or state cultural heritage legislations (figure), and in only two states, Denmark and M–WP, all of the sites included, are protected. In comparison, 57% of the total number of monuments within the BSR are currently protected (see chapter 4.2.1.1), i.e. 7% less than the sites included in the '100'. Of the unprotected sites on the '100'-list, two are located outside national maritime borders, one within the extended economical zone of Lithuania (number 4, table 18), regarded as being their most important WWI ship. The second of these sites, the 19th c wreck of *Russalka*, Estonian site nr 12 (table 14), is actually located within the EEZ of Finland, but included on the '100' as it is deemed so important for their history.

The proportion of protected/unprotected sites for each of the Baltic Sea States as well as for each age category, are presented in figures and . Figure , is of especial interest as it highlights the fact that although 20 of the '100'-sites date to the 20th century, merely 15% of these are currently protected under national or state cultural heritage legislation, despite their obvious archaeological, scientific or historical importance for the BSR. In comparison, 74% of the 18th c. sites are protected.

6.7.1 The Danish Sites

Nr	*Type of site*	*Date*	*Name*	*Significance*	*Protected*	*Depth (m[11])*
1	Wreck	18th c. (1710)	*Danne-broge*	Naval ship built in 1692 to protect the shipping route through the Sound. Its sinking, during battle, caused changes in the enrolment system for the Danish navy. The only Danish UW site where diving is prohibited.	Yes	?
2	Wreck	17th c. (Ca 1640)	Stines-minde	Cargo ship. First known small caravel built Danish vessel ever found, and remains in remarkable condition.	Yes	?
3	Wreck	16th c. (1537)	*Knuts Grund*	Cargo ship – probably used to transport provisions or for fishing. The best preserved wreck found in Danish waters. Clinker built with sawn planks. Covered with sand bags.	Yes	2.7
4	Wreck	19th c. (1803)	*Birger Jarl*	Swedish archipelago frigate, build to manoeuvre in shallow waters. Hull preserved to gun deck. Sank on its way from Karlskrona to Landskrona.	Yes	25
5	Settlement	5,400-3,900 BC	Tybrind Vig	The most extensively investigated submerged settlement in Denmark, with extremely well preserved materials including textiles and ornamented paddles. So far, only 10% of the total area has been investigated.	Yes	
6	Settlement	6,800 – 3,900	Tudeshage	Submerged settlement, rich in finds which include bones, tools and pointed weapons as well as a fish trap.	Yes	
7	Settlement	6,000 – 5,700 BC	Italiensvej	Submerged settlement where the rich finds include unique bones of big game fish, including tuna, sword fish and stud-der.	Yes	
8	Settlement	8,000 – 6,500 BC	Gåbense I	The oldest and deepest located submerged settlement in Denmark with rich finds of worked flint. The site is covered with sand.	Yes	
9	Wreck	1205 AD	Kyholmen	Clinker built cargo ship providing important information on the early transition from Viking to Medieval shipbuilding technique. Also providing information on long term *in situ* preservation. Covered with sand bags.	Yes	
10	Fishing structure	3,900 – 3,300 BC	Nekselø	Thought to be the best preserved fish weir site of its kind. Its size (200 x 10m) suggest the export of fish, and its under-standing might shed light on economy and trade patterns.	Yes	
11	Barrier	370 – 1,000 AD	Marga-rethes Bro/ Æi	Earliest structures safely identified as sea-defences. Meas-ures 40 x 25m and 500 x 15m, and are located in the mouth of the Haderslev Fjord. Consists of poles and “floating bars”.	Yes	1-3
12	Harbour	18th c.	Karre-bæks-minde	Unique outer harbour/breakwater structure representing the struggle to fight nature and keep commerce going. Cover an area of 250 x 160m and built in a technique usually used for much smaller structures.	Yes	

Table 13: The selected sites for Denmark.

11 Shaded light grey area indicate a depth not exceeding 25m.

6.7.2 The Estonian Sites

Nr	*Type of site*	*Date*	*Name*	*Significance*	*Protected*	*Depth (m)*
1	Wreck	18th c.	*Riksens Ständer*	Swedish ship-of-the-line. Lost in the battle of the Bay of Tallinn in 1790, one of the greatest sea battles in the area between Sweden and Russia. Surviving dimensions in two parts; 28.5 x 7.5m and 8.5 x 1.9m	Yes	5
2	Wreck	WWI (1915)	*Jenissei*	Mine layer, built in St. Petersburg and belonging to the Baltic Navy. Torpedoed and sunk by German submarine. Very well preserved.	Yes	47
3	Wreck	1919 (Other)	*Myrtle*	British mine trawler working on clearing Russian mine fields during the war of independence. Trawled a mine by accident. 6 of the crew perished with the ship.	Yes	35
4	Harbour	17/18th c.	Käsmu	According to oral tradition built by the Swedes, which were known to transport ammunition to a port in northern Estonia at the beginning of the Great Nordic War. Surviving elements:18 x 75m.	No	Un-known
5	Defence structure/ Citadel	18th	The Citadel	Fortifications covering an area of 3.500m²,, including a ”protec-tion-line” of log frames filled with lime stones to protect against enemy ships.	Yes	8-11
6	Wreck	WWII (1945)	*Jaen Teär*	Story of bravery when political prisoners held on-board were abandoned by their Russian prison guards, fleeing the ap-proaching Germans.	No	32
7	Wreck	Medieval(15th c)	Unknown	Wooden ship 12.5x6m, covered with gravel and stones. Was at the time of loss loaded with lime stones, an important export article from the 13th - 16th centuries	No	4
8	Wreck	17th	*Sanct Mar-cus*	Wreck marked on chart from 1705. Surviving elements measure 19 x 9m, with a height of 1.2m.	No	4
9	Wreck	18th c	*Glückliche Ankunft*	A Lubian cargo ship that run aground while sailing to Germany from St Petersburg. The initial offer by the locals to provide help turned into looting. 2000 pages of court proceedings still exist in the archives making it the best documented case of robbery in Estonian waters.	No	25
10	Wreck	1924 (Other)	*Meeme*	Built as a passenger ship in Sweden but used as an Estonian mine sweeper in the aftermath of WWI. Caught a mine in the trawl that killed two men. Participated in the Estonian war of in-dependence	No	42
11	Wreck	19th c	*Aid*	English cargo ship loaded with coal lost while sailing from Sun-derland to Kronstadt. Lies upright on the bottom with broken masts and rigging details.	No	35
12	Wreck/ Monument	19th c.	*Russalka*	Russian coast guard ship which perished with the loss of the en-tire crew in 1893. In memory, the first memorial in Tallinn was erected, designed by Amandus Adamson. Well preserved wreck with the bow buried in mud and the stern raising to a height of 33m. Important to Estonia but lying within EEZ of Finland.	No	74

Table 14: The selected sites for Estonia.

6.7.3 The Finnish Sites

Nr	Type of site	Date	Name	Significance	Protected	Depth (m)
1	Wreck	18th c	*St. Michael*	One of the first wrecks to be documented with an archaeological aim in the history of Finland. Dutch galliot representing the trade between Amsterdam and St. Petersburg. Diving prohibited.	Yes	40
2	Wreck	18th c.	*Wrouw Maria*	Wreck that more than any other wreck has contributed to make the public aware of the underwater heritage. Dutch merchant vessel loaded with works of art, bought by Catherine the Great. Diving prohibited.	Yes	40
3	Wreck	16th-17th c.	Unknown "Gråhaun"	16m long vessel with a cargo including pottery. Represents trade between the Northern Baltic sea and central Europe in the 16th and 17th centuries. Diving prohibited.	Yes	30
4	Naval Battle Area/ Wreck	18h c.	Svensksund/ *St. Nicolai*	One of the largest battles in the history of the Baltic Sea, involving some 500 ships. Fought during the Russo-Swedish war of 1788-1790. *St. Nikolai* , a Russian battle ship sank in the battle. Diving prohibited.	Yes	35
5	Wreck	Medieval (14th c.)	Unknown	Interesting example of a Hanseatic cargo vessel lost at sea, with a full cargo of pottery and other goods. One of the oldest wrecks in Finnish waters .	Yes	10-15
6	Wreck	18th c.	*Kronprins Gustav Adolf*	Swedish battle ships which sank during the Russo-Swedish war of 1788-1790. Very well preserved, around which the only official dive park in the Baltic Sea has been established.	Yes	18-20
7	Wreck	17th c.	"Mulan"	Example of a wreck carrying a cargo of booty from Russia. Important for the development of underwater archaeology in Finland.	Yes	32
8	Wreck	Medieval (13h c)	Unknown "Lapuri"	Wreck carrying pottery found in a natural harbour, possibly used as a trading place. The pottery indicate trade between the north of the Baltic sea and the Rhine land. Covered with geotextile and sediments.	Yes	6
9	Barrier	18th	Hamnsund	Well preserved construction built to protect the town of Helsinki. Consists of two wrecks and wooden frames filled with stones.	Yes	-
10	Wreck	19th	*Fortuna*	Of local historic interest. Finnish built cargo vessel built for the import of salt from Spain. Reflects the growth in international trading by Finnish merchantmen.	Yes	13-20
11	Wreck	19th c	*Sofia Maria*	Dutch merchantmen carrying a cargo from the Netherlands, Britain and Germany. Reflects the growing seafaring activity of the towns around the Gulf of Bothnia in the latter part of the 19th c.	Yes	15-18
12	Wreck	16th c.	Unknown	Wreck located at the old sea route of Uusiima. A fairly large merchant vessel connected with the trade between the northern part of the Baltic Sea and Central Europe.	Yes	6-16
13	Wreck	WWI	*Ladoga*	One of the most famous WWI dive sites in Finland. --Russian mine layer, carrying sail and equipped with a steam engine, sunk by a German u-boat. Managed by the defence forces and diving is restricted.	No	45
14	Wreck	18th c.	Unknown	Possibly connected with naval actions at the end of the 18th /beginning of 19th c. Very well preserved with ship bell and guns still on deck.	Yes	60

Table 15: The selected sites for Finland.

6.7.4 The Sites of the ¯ land Islands

Nr	Type of site	Date	Name	Significance	Protected	Depth (m)
1	Wreck	WWII	*Plus*	Lost in poor weather conditions while entering a harbour without a pilot in time for Christmas. Wrecked only 100m from land with the loss of 14 men. Wreck well preserved	No	17-35
2	Wreck	WWI	*Hindenburg*	German ice breaker used as a protection vessel. Sank after hitting a mine with the loss of three men. Unique vessel that is extremely well preserved with fascinating details. Diving restricted to 12 times/year.	No	37-47
3	Wreck	18th c.	Unknown	25x8.4m wooden vessel built in rustic style in clinker and carvel technique.	Yes	-
4	Harbour	19th c.	Lumparsund	Secluded bay with the remains of several wrecks visible. Popular wintering harbour for local rural people in the 19th c . mentioned as a harbour by King Waldermar of Denmark on his way to Estonia.	Yes	-
5	Harbour	Medieval	Rödhamn	One of the most important harbours for the shipping between Sweden and Finland since the middle age.	Yes	10-15
6	Naval Battle Area/ Harbour	18th c.	Flisö road stead	Naval battle ground in the Russo-Swedish war 1714-1720. A Russian fleet plundering the Åland Islands when intercepted by a Swedish fleet. Sweden won, loosing 4 ships, whereas the Russians withdrew leaving 43 sunken ships and over 1000 dead men.	Yes	-
7	Wreck	WWI	*Fråck*	Steamer with a local owner, sunk after 2 months in service by a German u-boat, with no human losses, because of its cargo of war supplies. Very well preserved.	No	45-50
8	Wreck	1928 (Other)	*Balder*	3-masted schooner lost in a storm. Dramatic story of survival. Ship stands on the bottom and is possibly one of the best preserved wooden wrecks in the Baltic Sea. The first composite built vessel in the region.	No	65

Table 16: The selected sites of the Åland Islands.

6.7.5 The Latvian Sites

Nr	Type of site	Date	Name	Significance	Protected	Depth (m)
1	Wreck	1923 (Other)	*Saratovs*	Russian steam ship with a significant role in the history of the Republic of Latvia.	No	7
2	Wreck	18th c.	*Moskva*	The wreck of a Russian sailing ship. The first to be investigated underwater in Latvia, in the years 1913-14.	No	3-5
3	Wreck	WWII	*Moero*	Hospital ship carrying refugees from the Baltic states, antiquities. Attacked by Russian planes and sank within Latvian territorial waters. Approximately 2.300 died.	No	35
4	Wreck	WWI	*Prinz Adalbert*	German cruiser, torpedoed by a British submarine. The torpedo hit the ammunition store, only a few of the crew survived.	No	100
5	Wreck	WWII	M-78	Russian submarine of Malyuta class, sunk by German u-boat.	No	60
6	Wreck	19th c.	Unknown	Wooden wreck of a sailing ship. Accessible and well preserved. Subject for research.	No	7
7	Wreck	WWII	*Karl Cortz*	German transport ship, sunk by Russian submarine. Stands on its keel. Popular dive site.	No	36
8	Wreck	Medieval	Unknown	Construction in good conditions. Subject for research.	No	42
9	Wreck	WWI	*Dagmara*	Carrying cultural objects to Riga at the time of loss.	No	12-14

Table 17: The selected sites of Latvia.

6.7.6 The Lithuanian Sites

Nr	Type of site	Date	Name	Significance	Protected	Depth (m)
1	Wreck	17th c (1699)	Unknown	Two-masted ship, possibly a Polish man-of-war. Site extends 23 x 7m and is over 2m high. Well preserved surrounded by cultural layers. Subject for investigations	Yes	7?
2	Wreck	16th c. (1572)	Unknown	Extend 15 x 6m, rising up to 1m above the sea floor. Poor preservation conditions.	Yes	2
3	Wreck	WWII (1944)	*Füsilier*	120m long German artillery ship. Sunk by the Soviet Army killing 287 people. Middle part destroyed. Important for tourism.	No	17-19
4	Wreck	WWI (1914)	*Friedrich Carl*	German battleship from the Prinz Aldabert series. Sunk by hitting Russian mines outside the maritime boundary, while on her way to bombard Libau. Regarded as the most valuable WWI monument in Lithuania.	No	60

Table 18: The selected sites of Lithuania.

6.7.7 The Sites of Mecklenburg Western Pomerania

Nr	*Type of site*	*Date*	*Name*	*Significance*	*Protected*	*Depth (m)*
1	Wreck	Medieval (1313)	”Darss cog”	A very well preserved hull, invaluable archive for research on trading routes, seamanship and life at sea during the height of the Hanse period.	Yes	6
2	Settlement	5,400-4,000 BC	”Timmendorf-Nordmole I+II”	The best preserved Ertebølle settlement sites in the Wismar bay. Exceptionally well preserved evidence of the hunter, fishing and gathering subsidence of the culture, including many unique artefacts.	Yes	2
3	Settlement	6,500-6000 BC	”Jäckelberg-Huk	The only known late Mesolithic site with well preserved settlement structures and organic material in northern Germany. Covered by a layer of peat.	Yes	9
4	Wreck	17th-18th c (built in 1679)	*Mynden*	Part of the Danish fleet in the great Nordic War (1700-1721). Important example of 17th c. shipbuilding technology of early small frigates. Preserved in several parts, and offer insights into life on-board and seamanship.	Yes	?
5	Wreck	16th c. (1565)	”Mukran”	Part of the Danish-Lubian fleet during the Seven Years Nordic War (1563-1570). Represents early carvel building technology.	Yes	?
6	Ship barrier/ Wrecks	17th - 18th c.	Greifswalder Bodden	The remains of a several hundred meters long defensive barrier, consisting of some 21 wrecks of different shapes and origin. Built at a time when Sweden strived for supremacy in the region during the Great Nordic War. The diversity of wrecks can further knowledge on military focus and early 18th c. shipping routes.	Yes	?
7	Harbour	Medieval onwards	Stralsund	Part of the Hanseatic League. Wrecks as well as garbage, reflect the complex interaction between land and sea activities in the period.	Yes	?
8	Wreck	16th c.	”Stone wreck”	One of the earlies carvel built ships in the Baltic sea region. Cargo includes pre-manufactured limestones. Provide information on the trade of building material.	Yes	?
9	Harbour	Medieval onwards	Wismar	Part of the Hanseatic League and trading system. Wrecks as well as garbage, reflect the complex interaction between land and sea activities in the period.	Yes	?
10	Harbour	Slavonic/ Viking (8th-9th c)	Gross Strömkendorf	Important for the research of early urban development and long distance trade in Northern Europe.	Yes	-
11	Wreck	Medieval (1324)	Unknown	Hanseatic merchant vessel, showing elements of clinker as well as Frisian or cog building traditions. Important for the research of early shipbuilding techniques.	Yes	?
12	Settlement	Stone Age	Breetzer Ort	Late Kongemose/early Ertebølle. The best preserved of several sites dated to the period within the region. Enables studies on cultural development and coastal changes during the period.	Yes	3

Table 19: The selected sites of the German federal state of M-WP. Sites selected based on the quality of research.

6.7.8 The Sites of Schleswig Holstein

Nr	Type of site	Date	Name	Significance	Protected	Depth (m)
1	Sea barrier	Viking (740 AD)	Schlei	Covers an area of 1200x5m giving evidence of an impressive construction ability, similar to the Danewreken both in time and in effort. Blocked a ford, the name of which has survived in oral tradition.	No	2.7
2	Bridge	Viking (9th c.)	Haithabu	Pile construction, identified as a bridge. The only surviving bridge dated to the period in the region.	No	-
3	Wreck	Viking (1030 AD)	Haithabu III	The largest known freighter of the Viking Era yet found – possibly a *Knorr*. The hull lies on level keel and is preserved to 60 %.	No	2.1
4	Settlement	Stone Age (4,500-4,100 BC)	Neustadt	Ertebølle period. Significance for gaining information on material culture and the transition from a hunter-gatherer society to a farming society in northern Europe.	No	3.5
5	Wreck	1184 AD	Haithabu IV	Rare type of barge of ferry, with its only parallel in the Danish Egernsund find. Remarkable find for furthering our understanding of medieval trade and shipbuilding.	No	3–4

Table 20: The selected sites of the German federal state of S-H.

6.7.9 The Polish Sites

Nr	Type of site	Date	Name	Significance	Protected	Depth (m)
1	Harbour/ Wrecks	900 – 1200 AD	Puck	Used as a fishing port and for trade. Mentioned in 13th c. documents. Consists of timber constructions, wrecks, and even a canoe.	Yes	1–3
2	Wreck	16th c. (1521)	Unknown	Extends over an area of 23 x 11 x 1.5m. Built of wood felled in the Stockholm area in Sweden.	No?	5
3	Wreck	18th c. (1785)	*General Carleton*	Surviving elements 29 x 8x 1.5m. Unique preservation conditions. British collier from Withby which sank in a storm with the loss of the entire crew.	No	30
4	Wreck	18th c.	Unknown	Of Dutch origin of kuff or galiot type with flat bottom. Probably a trading vessel. Scattered across an area of 2000m².	No	25

Table 21: The selected sites of Poland.

6.7.10 The Russian Sites

Nr	*Type of site*	*Date*	*Name*	*Significance*	*Protected*	*Depth (m)*
1	Wreck	19th c (1897)	*Gangut*	Battleship built for the Imperial Russian navy. Hit uncharted rock and sank. Hull very well preserved.	Yes	31
2	Wreck	19th c.	*Oleg*	Russian sail and steam frigate. Sank as a result of a collision with another ship during manoeuvring. Hull very well preserved standing upright on its keel.	Yes	56
3	Wreck	19th c. (1857)	*Lefort*	Russian battleship. Launched in the presence of the Emperor. Sank in a storm while en route from Reval to Kronstadt which led to state inquiries about its seaworthiness. 825 people died. The hull is well preserved.	Yes	60
4	Wreck	18th (1724)	*Der Engel Raphael*	German merchant vessel which sank while sailing from St. Petersburg to Lübeck.	Yes	18
5	Naval Battle Area/ Wrecks	18th c. (1790)	*Hedvig Elisabeth Charlotta/ Zemire/ Aurora/ Enigheten*	Swedish wrecks associated with the battles between Russia and Sweden in 1790. Most of the sites are not well preserved due to ”battle wounds”,	No	30
6	Wrecks	18th c. (1719)	*London/ Portsmut*	Two British built Russian ships-of-the-line, which sank in a storm during a voyage from England to Kronstadt. Not well preserved.	Yes	10
7	Defence structure	18th - 19th c.	Kronstadt	Built around Kronstadt to protect St. Petersburg. Consists of stone filled log frame structures.	?	?
8	Wrecks	WWII	Unknown	Russian supply ships connected to the Tallinn convoy which sank en route from Tallinn to Kronstadt in 1941, with the loss of hundreds of lives.	Yes	5-50

Table 22: The selected sites of Russia.

6.7.11 The Swedish Sites

Nr	*Type of site*	*Date*	*Name*	*Significance*	*Protected*	*Depth (m)*
1	Wreck	18th c	Unknown ”Mastvraket”	Unique wreck site. Ship standing upright seemingly untouched by time. Main mast standing to full length. Interior covered in mud. Offers possibility to get detailed insight into life on-board a small merchant vessel.	Yes	33
2	Wreck	18th c.	Unknown ”Sjöhästen”	Exceptional find of a 26m long snow brig standing upright on the bottom with two masts standing in full length and with preserved bow sprit. Located on the Swedish Maritime Boundary.	Yes?	100
3	Wreck	17th c. (1676)	*Kronan*	At the time the largest ship in the Swedish navy, carrying 126 guns. Built in English style. Sank following an explosion on-board due to poor seamanship with the loss of 800 men, before the ”battle off southern Öland”, against a Danish-Dutch fleet.	Yes	26
4	Wreck	16th c. (1525)	Unknown	Swedish carvel built naval ship, with oak felled in Poland. Scattered remains of disintegrated hull. Contains the largest collection of wrought iron guns found in the world. Diving prohibited.	Yes	28-52
5	Wreck	17th c.	Unknown	Recently discovered, 26m long with two standing masts.	Yes	30
6	Wreck	1913	*Nepolina*	Sank following a collision with *Linea*, while carrying a cargo of sand, en route to Stockholm from Blidö. Extremely well preserved.	No	40
7	Wreck	18h c. (1709)	*Anna-Maria*	Cargo ship trapped by ice in the harbour of Dalarö. Lost when fire broke out on-board. Built in Holland and owned by merchantmen in Stockholm. Diving prohibited.	Yes	20
8	Wreck	16h c (1564)	*Elefanten*	Swedish naval ship, 50m long. Sank in battle. Hull very well preserved, the excavation of which was pioneer work in Swedish underwater archaeology.	Yes	6-10
9	Wrecks	WWI (1915)	U-boat massacre	Four German steam cargo ships, sunk on the same day by a British submarine without the use of torpedoes. The ships are linked with the Swedish neutrality stance offering trade with both sides in the war. The remains are very well preserved and are popular dive sites.	No	25-40
10	Wreck	12th (1153)	Knösenvraket	Clinker built. Originally 17-20 m long but only 14m remain. Hazelnuts and a unique shield were found on-board.	Yes	2
11	Settlement	Stone Age 6,000 BC	Pilhaken	Strategically located along a river on what was once a land bridge between Sweden and Denmark. There are possibly several settlements in the area, which given the preservation conditions could provide important information on society and climate.	Yes	5
12	Barrier	Viking/Middle Ages	Stegesund	A complex and concentrated barrier construction consisting of poles and stone caissons, restraining access to an island with a fortress. The pole barrier is the oldest in Sweden.	Yes	3

Table 23: The selected sites of Sweden.

6.8 Conclusions

- The selection of the '100' is based upon their scientific and archaeological significance, the relative importance of each site on a regional or national level, and aims at representing the whole spectra of underwater finds in the BSR, according to type, age, and geographic location.
- The '100' reflects a regional identity going back 10.000 years(!), incorporating not only geographical changes with fluctuating sea levels and flooded land areas in the south, but also societal changes including the development of seafaring, communication and trade.
- 71 of the sites on the '100' are wrecks, representing cargo vessels, naval vessels and vessels with unknown function, dating between 700AD and the 20th century. Of these, the 18th and the 20th century sites are in majority, with 16 and 20 wrecks included respectively. Two states have submitted solely wreck sites for the '100'-list, with an emphasis on the 20th century. For Sweden, Denmark and Finland, wrecks constitute over 80% of the submitted sites.
- The remaining sites on the '100'-list constitute of nine submerged settlements and one fishing structure, eight harbours, seven sea defence systems, one bridge, and finally three naval battle areas.
- 66 of the '100'-sites are located in shallow waters, i.e. above the 25m depth curve, thus easily within reach of divers. Of these sites, 27 are wrecks. Thus, the majority of the wreck sites are located in waters deeper than 25m.
- The majority of the '100'-sites are accessible to the public. However, access to UW sites in Poland, M–WP and the Åland Islands, is subject to restrictions, affecting 24 of the sites. At seven sites in the Nordic countries, diving is prohibited and four sites are currently covered to improve preservation, thus making them less accessible. , one 18th c. wreck site enjoy full accessibility, having been established as a dive park.
- 64% of the '100' are protected under national or state cultural heritage legislations. Only Denmark and M–WP provide protecting for all of their submitted sites whereas for Latvia and S–H, none of the sites submitted for the '100', are currently protected.
- For the different age categories, 57–90% of the submitted sites are currently protected, whereas only 15% of the 20th century sites enjoy protection. The latter category solely concern wreck sites.
- Two sites on the '100'-list are located outside national maritime boundaries, one 20th century wreck and The *Russalka*, a 19th c. wreck site important to the history of Estonia and located within the EEZ of Finland.

A SUSTAINABLE DEVELOPMENT OF UCH IN THE BSR

7. Conclusions

7.1 Legislation

The 11 cultural heritage legislations in the Baltic Sea Region show similarities as well as differences in the level of protection they offer underwater cultural heritage. Most importantly, objects of cultural importance found in the sea can become protected (as movable or immovable objects) in all the Baltic Sea States apart from Sweden where single movable objects are typically unprotected.

The Nordic countries are alone in not protecting shipwrecks younger than 100 years

Shipwrecks constitute the largest group of cultural finds under water. The discrepancies in how old such wrecks must be in order to become protected mainly affect early 20th c. wrecks but are also reflected in the differences in attitude regarding the importance of such sites across the region. In current legislations the range for how old a cultural object has to be in order for it to become protected varies between no age limit at all (such as in for example Estonia), to 30–50 years (as is the case in Russia, the German federal state of Schleswig–Holstein, Latvia and Lithuania), up to a general time limit of 100 years (currently applied in the Nordic countries with the exception of Denmark which offers protection to younger wrecks by special decrees).

In 40% of the Baltic Sea, protection of UCH relies solely upon international conventions

National jurisdiction, providing potential protection of UCH, generally applies within the maritime 12-mile zone affecting 60% of the Baltic Sea. Thus, in 40% of the Baltic, UCH relies solely upon international conventions for its protection, which in effect means no protection at all. Denmark is the only state in the region to have extended its national maritime boundary, offering protection for its UCH up to the 24-mile zone.

Within national maritime boundaries the protection of UCH relies upon identification, registration and incorporation into national monuments registers and spatial planning charts. In connection with planning activities, the time available for the authorities to identify the need to protect a newly found cultural object varies from no time limit, as in for example Russia and Sweden, to four weeks in Denmark and S–H, 15 days in Lithuania and down to merely five working days in M–WP and Poland.

7.2 Management and Supervision

The structures for managing UCH varies greatly across the Baltic Sea Region

The structures in place for managing and supervising UCH in the BSR range from being well functioning, with clearly defined areas of responsibility, to very unclear structures. This largely depends on the strength of the individual cultural heritage laws and the number of newly registered and/or protected monuments. Generally, the management of underwater heritage is much less developed than that of heritage on land, with less than 0.8% of all protected monuments located in the Baltic – a seemingly insignificant proportion.

Within the region there are large differences in how the sites and monuments registers are being built up. In some states the national registers include protected sites as well as sites soon to become protected. In others only protected monuments are included, unprotected but registered sites being merely listed in working archives and kept by individual museums or institutions. Similarly, the registers are not always ”seamless” and only six states have fully integrated national sites and monuments registers, including sites on land as well as in the sea. Two states, S–H and Latvia, have no protected UCH sites in the Baltic Sea.

A majority of the Baltic sea states regard the sport diving community as a particularly important reason behind the growth in the number of registered and/or protected monuments but this report show that fishermen's reports could be a vastly neglected source of information. Surprisingly, only 96 commercially driven underwater investigations have been conducted in the region in the past five years, 83 of which have occurred in the Nordic countries. As commercial archaeology is sanctioned by law in all of the BSR, this could reflect a higher exploitation rate in these states or simply better management structures for undertaking these types of operations.

The number of violations of UCH sites is unknown and probably very high

The accessibility of UCH is unrestricted in all but three states within the region, namely the Åland Islands, M–WP and Poland, where visitors have to have special authorisation. The Nordic countries have only imposed dive restrictions at particularly vulnerable sites. Of those wreck sites referred to in the report due to their ethical or environmental importance, dive bans are imposed at two sites only. These sites represent the death of over 46,000 humans, and, in the case of the 20th c wreck sites, potential future environmental hazards including oil leakage and undetonated bombs – issues that rarely come into focus when discussing cultural heritage.

Ensuring that UCH is respected when new cultural objects are discovered, whether in connection with commercial exploitation or otherwise, is as important as ensuring that protected monuments are not being violated. In the past five years, six of the BSS have reported infringements of cultural heritage laws in connection with underwater sites in the Baltic. Of 30 cases reported to the police, 20% have resulted in criminal proceedings being brought gainst the culprit but it is clear that few incidents get reported and that the actual numbers of dive related offences relating to UCH probably is much higher.

7.3 Education and Organisations

21 doctoral theses have been produced in the BSR since the 1960s

The education of future specialists in maritime archaeology is vital for the future development of the field, both for raising awareness of the importance of UCH and for promoting a ”seamless” approach to cultural heritage on land and under water. The subject of maritime archaeology is included in the general curriculum of archaeology at universities in Denmark and Germany. In the other Baltic Sea States separate undergraduate courses are offered at specific universities or university/colleges, and, in the case of Latvia, education at university level is lacking completely.

Master courses in the subject are currently offered at one university/college in Sweden, with the South-Danish university planning to follow lead in the autumn of 2006. However, the number of doctoral theses are increasing and, since the 1960s, nine universities in six states have accepted 21 disputations, 9 of which in the period 2000–2004.

Within the past five years, two out of 26 research projects in the BSR have been international

In respect of current and recent research within the field, only two projects out of a total of 26 in the past five years are, or have been, international in their nature, namely the MoSS-project and “Marine History in the Baltic Sea” (a project dealing with underwater vehicle engineering). The remaining research projects have mainly focused on monitoring and recording of shipwrecks or have been research driven excavations of submerged settlements or related to *in situ* conservation of wood and iron (the latter of which has taken place exclusively in Sweden and Finland). A common theme is that they have been local projects dealing with very specific subjects. Post doctoral research is carried out at only two universities – Kiel and Klaipėda.

The diving education available in the region largely reflects the fieldwork requirements of each state, varying between very basic training, more or less self taught, to very strict educational programmes including programmes designed for the purpose of obtaining some form of commercial diving licence. In Sweden the required licence is restricted to military personnel. Furthermore, the education available for amateur divers varies vastly within the region, with some states actively promoting education and even the involvement of amateurs in underwater archaeological projects whereas other states apply a more restricted view.

41 full-time diving maritime archaeologists are employed in the BSR. Out of a total number of 31 fieldwork units, Sweden and Denmark have seven and eight units respectively, however a majority of states have only one or two units responsible for underwater fieldwork operations. Equipment varies between full in-house facilities to the very basics but generally both equipment and personnel are hired in for specific jobs. A prerequisite for underwater fieldwork is the availability of proper conservation facilities for handling wet finds. Currently, all states have such facilities, with the exception of Estonia which lacks a functional freeze drier (needed for the conservation of organic material).

7.4 Tourism and Recreation

Underwater cultural heritage has much to offer in terms of tourism and recreation, but this presupposes an increased visibility of *what* it has to offer as well as *how* it can be accessed under safe condition - for the underwater heritage as well as the visiting diver/tourist.

There are 235,000(!) divers in the BSR - increasing Recreational divers can reach depths of 120m

There are currently 641 dive clubs organised through national sport diver associations and about 235,000 divers, capable of reaching a depth of 20m, in the BSR. As these figures rely upon statistical data provided by only two of nine dive organisations operating within the region the figures are very approximate, but indicate the existence of a considerable number of potential consumers of UCH within the region. The depth to which divers can reach has also increased in the past couple of years, enabling safe dives to depths as far down as 100–120m. In the past five years only, the number of divers has increased by 38% in the BSR, and in Estonia, Latvia and Lithuania by up to 80%.

A majority of the Baltic Sea States regard the diving community as a broad group of visitors with an interest in history, describing them as high earners with a good education. Furthermore, many states cite the group as being very important for local and regional economies. Despite this, there are no national policies aimed at underwater tourism within the BSR, nor any published reports investigating the impact of diving tourism. Instead the increase in interest by divers in UCH is "felt" through a) the fact that more underwater finds are reported by divers c) an increase in the number of divers wanting to get involved in UW archaeological investigations and c) an increase in the number of reported violations of UCH – the true number of violations is unknown, but is thought to be much higher than the number reported.

The National Board of Antiquities (NBA), charged with the responsibility of UCH in Finland, is the only state authority with the official standpoint to distribute information on shipwrecks and make divers aware of their importance. A direct result of this has been the establishment of the first and only official dive park in the BSR in 2000. Apart from the Finnish initiative, some small scale dive tours are organised in M–WP, Lithuania, Latvia and to a lesser extent in Russia.

In 2005, Maritime Museums in the BSR had 3,4 million visitors!

Apart from the recent international MoSS project, there are currently two on-going local projects within the region, with the specific aim of visualising UCH. There are some 30 museums which include displays of an underwater archaeological character within the region. In 2005, these museums together had no less than 3,4 million visitors, with the Vasa Museum in Stockholm, attracting about 890,000, and the Lithuanian Maritime Museum and the St.Petersburg Naval Museum, both attracting some 400,000, indicating a strong public interest in the seafaring history of the region. Within the region only Latvia lacks a National Maritime Museum.

7.5 The '100'

The '100' represent the one hundred most important underwater heritage sites in the Baltic Sea Region. These have been compiled so as to portray the range of underwater finds that exist and their unique historical value – both to the individual states as well as for the region as a whole. The '100' reflects a regional identity going back 10,000 years, incorporating geographical changes and flooded land areas in the south, as well as changes in society and developments in seafaring, communication and trade.

The '100' reflects a regional identity going back 10,000 years!

In total 71 wreck sites have been chosen for the list, ranging from commercial and naval vessels to wrecks whose function is still largely unknown as they have yet to be scientifically investigated. The relative importance of the wrecks is illustrated by the fact that two states have submitted nothing but wrecks and that they make up over 80% of the sites submitted by the Nordic countries. Interestingly, 28% of all of the wrecks date to the 20th century, reflecting the importance this century holds for many of the states in the region. The other types of underwater sites on the list include; three naval battle areas all related to the Russo–Swedish wars of the 18th century, nine submerged settlements, providing spectacular information on human living conditions 4,000-10,000 years ago, including a fishing structure, eight harbours, seven sea defence systems and one truly unique bridge dating to the Viking period.

66 of the '100' are located in shallow waters, i.e. above the 25m depth curve. Of these sites, only 27 are wrecks. Of the remaining wrecks, 19 are located at depths below 40m, including two below 100m. As has been mentioned, diving at underwater sites is restricted in some of the BSS, in total affecting 24 of the '100'-sites and at seven of the Nordic sites diving is prohibited altogether as these sites are regarded as particularly vulnerable. Another four sites are covered up to improve preservation conditions. However, the majority of the '100'-sites are accessible to the public, and in the case of the 18th c. *Kronprins Gustav Adolf* in Finland, a dive park has been established. A further three 20th wreck sites, located in Latvia and Lithuania, are said to be either very popular dive sites or important for local tourist industry.

20 of the '100' sites date to the 20th century Of these, only 15% are protected

64 of the '100' are protected under national or state cultural heritage legislations. Only in Denmark and M–WP are all the submitted sites protected whereas in Latvia and S–H, none are protected. Of the 20th c. sites only 15% are protected. In addition to these, two wreck sites are located outside national maritime boundaries, one 20th c. wreck and the remains of the 19th c. *Russalka*, submitted for the list by Estonia, and considered important to its history, but located within the EEZ of Finland.

Two of the wreck sites included in the '100', lie outside national maritime boundaries

7.6 Towards A Sustainable Future

Weaknesses in the current level of protection in the BSR primarily apply to 20th century wreck sites and UCH outside national maritime boundaries. For other types of underwater cultural objects, national/state legislations are fairly uniform. When it comes to management issues, these are closely linked, not only to the structures in place on a national or state level for supervising and enforcing cultural heritage law but, in particular, to the availability of people aware of the needs and potential of underwater archaeology.

There are some 15,500 registered underwater sites of cultural heritage value in the Baltic Sea. Of these, almost 9,000 are designated as national monuments. However, it is estimated that the real number of UCH sites in the Baltic Sea is close to 100,000. These figures, along with the fact that only 0.8% of the protected monuments in the BSR are located in the sea, signify the relative underdevelopment of the field of underwater archaeology in comparison to land archaeology. This is particularly evident by the fact that some states have no protected UW monuments in the Baltic Sea at all. Thus, the Baltic Sea States must become better at monitoring commercial activities in the sea, but also find resources to actively look for objects of cultural importance in the sea and place focus on registering, protecting and monitoring new and existing UW cultural objects. Here, much can be learned through co-operation.

The '100' provides an appreciation of the potential of UCH in terms of regional identity as well as for attracting the interest of the diving community – a large and steadily increasing group of potential tourists. The '100' include a wide range of cultural objects where in particular the wrecks stand out. This is mainly due to the special preservation conditions of the Baltic Sea coupled with its long and colourful seafaring history, making the region and its wrecks unique in the world. As the Baltic Sea is a relatively shallow sea, it could be compared to an enormous underwater maritime museum in which most underwater cultural heritage sites are accessible by divers.

The legacy of this rich heritage needs to be protected and managed for future generations, and as the “museum” belongs to all of the nations bordering the Baltic Sea, it is their common responsibility to ensure it is done.