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Maritime and coastal heritage

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Maritime and coastal heritage covers a very wide range of aspects. It includes maritime archaeological heritage in the sea as well as on the land, historical fleet, architectural heritage which is typical of the coastal zone, coastal landscapes with heritage value, maritime movable heritage and intangible maritime heritage. Comprehensive works that cover these maritime heritage themes for the Belgian part of the North Sea (BNS) and the adjacent coastal area, do not exist. Moreover, reviews that deal with a particular aspect of maritime heritage in an integrated way, beyond artificial and variable limits (legal, physical or disciplinary), are not available either.

Addressing maritime and coastal heritage in an integrated way offers benefits with regard to the understanding of relationships and elucidating the wider context. Furthermore, the various types of borders have also changed significantly over time. In the Roman period, for example, the coastline was located further seaward compared to the present situation, even though there were several tidal channels which penetrated into the hinterland (evolution coastline from 16th century see [HisGISKust](#)). This is why archaeological heritage that was originally formed on land, may nowadays be situated below sea level. It goes without saying that this heritage, if still available, should be seen in conjunction with the archaeological heritage situated in the current coastal plain.

10.1 Current situation

10.1.1 Maritime¹ archaeology

The concept of maritime archaeological heritage covers a wide range of aspects. The most important elements are:

- Shipwrecks and other wrecks (e.g. airplanes) as well as parts thereof, regardless of where they are found (in the sea, in rivers or former rivers or recycled anywhere on land). The expansion to sites on land only applies to shipwrecks and parts thereof (e.g. [Pieters et al. 2015](#));
- Settlements or other traces or remains of human activity in seas, rivers or other bodies of water and their palaeoenvironmental context (e.g. [Missiaen 2012](#), [Missiaen et al. 2017](#)). An important category in this regard can be linked to the theme of sea level rise after the cold phases of the ice ages;
- Archaeological sites and traces situated on land and their palaeoenvironmental context, which were entirely focused on the sea or the water for their former operations such as lighthouses, fishing villages, shipyards, seawalls, peat extraction, salt extraction, quays, drainage canals, etc.;
- Archaeological remains of sea fish that are found far inland during archaeological research (e.g. [Van Neer and Ervynck 2006](#), [Van Neer and Ervynck 2016](#));
- Palaeontological bones of terrestrial fauna found at sea (for the Belgian part of the North Sea (BNS) and adjacent beaches, see [Vermeersch et al. 2015](#)).

There is no restriction with regard to the age of the investigated archaeological heritage. A shipwreck from WWII deserves an appropriate archaeological treatment, which will obviously differ from the treatment of a shipwreck from the Bronze Age.

Since 2003, systematic research has been performed on maritime archaeological heritage by [Flanders Heritage Agency](#) and its precursors (Institute for the Archaeological Heritage (IAP), Flemish Institute for Immovable Heritage (VIOE)). From 2017, focus has been on inland waterways in particular (rivers, docks, the Zwin, etc.) and the intertidal area adjacent to the territorial sea.

For the entire spectrum of maritime archaeological heritage, as outlined above, a number of (partial) overviews are available for Flanders and the BNS:

- The database of Flanders Heritage agency (www.maritieme-archeologie.be) aims at structurally documenting and disclosing relevant information concerning maritime archaeological heritage in Flanders and in the BNS. On this website, more information can be found about shipwrecks (and their contents) which are present in the North Sea and in Flanders, artefacts from the sea, and maritime sites such as fishing villages and lighthouses.

In addition, there are two more databases that provide valuable information about parts of the above described heritage, namely shipwrecks, without having an archaeological perspective:

- The wreck database of the Flemish Hydrography (www.afdelingkust.be/nl/wrakkendatabank) has been developed from a perspective of safe shipping. The information in this database formed the basis for a book about shipwrecks in the North Sea which inventoried 277 wreck sites ([Termote and Termote 2009](#));
- The online database (www.wrecksite.eu; private initiative), which has become an internationally respected and consulted database on shipwrecks and their positions.

¹ Maritime Archaeology – Nautical Archaeology – Marine Archaeology – Underwater Archaeology are all related concepts. In the heritage sector, the term 'maritime archaeology' is increasingly used as the umbrella term for former mentioned categories.

In addition to the three databases mentioned above, a number of reviews are available that cover part of the maritime archaeological spectrum. The website of the so-called *Onderzoeksbalans* of Flanders Heritage Agency consists of two main parts: [Onderzoeksbalans Onroerend Erfgoed Vlaanderen](#) and [Bibliografie Onroerend Erfgoed Vlaanderen](#). Two digital summary documents are available on [maritime archaeology](#):

- An overview of the archaeological research in the BNS below the high water line (including the beach) (published in adapted format in [Pieters et al. 2010](#));
- An overview of shipwrecks and components found in rivers and on land in Flanders. The medieval shipwrecks from Flanders have also been included in a recent overview article on medieval ships ([Van de Moortel 2011](#)).

For the study of the maritime archaeological heritage of WWI, an overview work exists about the War under Water ([Termote 2014](#)). It offers a structural insight of the activities of the *Unterseeboot Flottille Flandern* during 1915-1918.

For the study of shipwrecks found on land, the research on the medieval shipwrecks in Doel is important in an international context (e.g. [www.onroerenderfgoed.be/nl/actueel/projecten/de-kogge](#), [Haneca and Daly 2014](#), [Vermeersch and Haneca 2015](#), [Vermeersch et al. 2015](#)). In recent decades, extensive research has been conducted in Flanders on the archaeological heritage of late medieval and early modern fishermen, focusing on the medieval fishing community of Walraversijde. A large part of the study of the archaeological research in Raversijde has been published in [Pieters et al. \(2013\)](#). With regard to the maritime landscapes of the Belgian coastal plains, there are a number of studies conducted by the Vrije Universiteit Brussel (e.g. [Tys 2004](#), [Tys 2013](#), [Tys 2017](#)). Recently, Ghent University, in close cooperation with the Flanders Marine Institute (VLIZ), took the first steps in structured research into the drowned (pre)historical landscapes off the Belgian coast ([Missiaen et al. 2017b](#), [De Clercq 2018](#)).

Within the IWT project 'Archaeological research in the North Sea: development of an efficient evaluation methodology and proposal for sustainable management in Belgium (*SeArch*)' (2013-2016), methodologies were provided for the existing knowledge gaps with regard to buried shipwrecks and prehistorical relics in the North Sea ([Van Haelst et al. 2016a](#), [2016b](#), [2016c](#), [Missiaen et al. 2016](#)). In addition, the project aims to provide guidelines for the different users of the North Sea, including the legal framework relating to the maritime archaeological heritage. The legal framework should ensure sound management of valuable heritage, but cannot stand in the way of appointed economic exploitation of the North Sea ([Missiaen et al. 2016](#), [Missiaen et al. 2017](#)).

At the end of 2016, the 'Zeebrugge project', commissioned by MOW – Maritime Access Division, started. It concerns a unique geological and archaeological study of Zeebrugge (offshore), including the study of palaeolandscapes. The study is part of the [Complex Project Coastal Vision](#) (formerly Flemish Bays Project). Final results are expected by the end of 2018 – beginning of 2019.

The other categories of maritime archaeological heritage on land, such as seawalls, port structures, lighthouses, lime kilns, salt extractions, etc. remain to a large extent unexposed in the archaeological research in Flanders. Water heritage Flanders ([Watererfgoed Vlaanderen](#)) is the Flemish umbrella organisation for wet and dry water heritage with the aim of stimulating new touristic initiatives and activities (e.g. [Schoeters 2017](#)). The dry water heritage on the coast includes the NAVIGO museum in Oostduinkerke, the North Sea Aquarium in Ostend, and the lighthouses of Ostend and Nieuwpoort. The sailing vessel 'Mercator' and the museum ship 'Amandine' in Ostend ([Van Dijck 2012](#)) and the the 'Doel Cog', on the other hand, are part of the wet water heritage.

10.1.2 Historical fleet

The historical fleet policy has been created relatively recently by two parallel developments. Firstly, since the 1980s, increased attention was paid to the vessel types that were in danger of disappearing or had already disappeared. This led to attempts to preserve ships, to restore them or to build replicas of ships that were already gone. The organisation of 'Ostend at Anchor' can be framed within this societal development. Secondly, from the beginning of the 1990s onwards, the focus on the historical fleet grew from the Industrial Heritage Cell within the former Department of Monuments and Landscapes (the current Flanders Heritage Agency). The link between the historical fleet and industrial heritage is obvious. The ships were built using materials which were also used in other economic sectors. Initially, wood was the preferred material for ships. Depending on the vessel type, the switchover to steel, the key product of industrial revolution, was made sooner or later. Since the 1960s, synthetic materials were increasingly used for recreational boating. The propulsion of the ships evolved from sails to steam engines, and subsequently to diesel engines. The historical fleet is inventoried in a database by Flanders Heritage Agency (<https://inventaris.onroerenderfgoed.be/ivm/varend/zoeken>). The database was adopted on 16 June 2017, which means that the government or other parties (such as ports) may attach certain legal effects and benefits to the database of the historical fleet. The Flanders Heritage Agency has published an extensive brochure with information on the inventory (database), the establishment and the protection of the Historical Heritage (see also [Brochure Heritage – Historical](#)

Fleet 2016). Immovable heritage also gives an overview of the literature through the website of the [Onderzoeksbalans – Bouwkundig Erfgoed](#).

Two types of vessels are of great importance for the coast specifically: fishing boats and sail yachts. An overview of the fishing boats since 1929 can be found in the [database of the Belgian fishing fleet](#) of the Flanders Marine Institute (VLIZ) (see also theme **Fisheries**).

The Panesi project took a closer look at the construction of fishing vessels on the coast based on the archives of the Panesi shipyard ([Van Dijck and Daems 2015](#)). The study outlines the history of shipbuilding on the coast and describes the development of the fishing boats build between 1870 and 1970.

The Mercator ship is a special case which was protected as a monument in 1996 and was considered as historical fleet in 2017. The steel barquentine of 78 m was built in 1932 according to the plans of Adrien de Gerlache (see also [VLIZ Wetenschatten 2012 – Adrien de Gerlache](#), [VLIZ Wetenschatten 2015a](#)). The Mercator was used to train merchant marine officers. Since 1961, it has been open to the public as a museum ([Vanden Bosch 2001](#)). Finally, the West-Hinder Light Ships (1950, Belliard yard, Ostend; [Janssens 1997](#), [De Graaf 2012](#), [VLIZ Wetenschatten 2015b](#)) must be mentioned. These floating lighthouses warned ships for shallow sandbanks and were replaced by unmanned light platforms in 1993.

10.1.3 Architectural heritage along the coast

The interest in the preservation of architectural heritage in Belgium goes back to the 19th century. The architectural heritage along the coast includes many components which are specifically maritime-related: hotels and other residential accommodation, tourist and recreational facilities and infrastructure (see also theme **Tourism and recreation**), coastal defence (civil and military) (see also theme **Safety against flooding** and theme **Military use**), lighthouses, sluices, all kinds of maritime business infrastructure, etc. The first two groups of architectural heritage on the coast mentioned above are closely linked to the rise of tourism in Flanders during the last 200 years. This coastal tourism especially took off in the last quarter of the 19th century ([Constandt 1986](#)). The [Belle Epoque Centre](#) in Blankenberge shows architectural accomplishments that originated on the coast between 1870 and 1914.

The architectural heritage of the coastal zone has been gradually inventoried since 1977 ([Maelfait et al. 2012](#)). And since, the vulnerable coastal heritage received more attention ([Cornilly 2005](#)). The results of the inventory are available online for the public: <https://inventaris.onroerenderfgoed.be>. Specifically, for the province of West Flanders, there is *Monumentaal West-Vlaanderen*, an illustrated overview in three parts of all protected monuments and sites in the province on 1 January 2011. The coastal area is mainly covered in Volume III, published in 2005 ([Cornilly 2005](#)). The update for the province of West Flanders after 1 January 2001 was discussed in the heritage magazine 'In de Steigers'. In view of the redistribution of competences since January 2018, the province of West Flanders will no longer issue new numbers. An overview of the spatial distribution of the protected architectural heritage along the coast and additional information can be consulted on the geoportal of Flanders Heritage Agency (<https://geo.onroerenderfgoed.be>).

For certain groups of architectural heritage such as lighthouses ([Wazée 1999](#)), military heritage on the coast from WWI ([Deseyne 2007](#), [Vernier 2012](#)), the Atlantic Wall ([Philippart et al. 2004](#), [Philippart 2014](#)), tourism-related heritage ([Cornilly 2006](#)), and modern architecture ([Cornilly 2007](#)), thematic overview publications exist as well, although they are not exhaustive.

The industrial archaeological heritage is increasingly addressed in the context of heritage conservation. This industrial heritage includes typical maritime components such as shipyards, port infrastructure and fish processing companies ([Onderzoeksbalans – Bouwkundig erfgoed](#)). Because of its maritime location, Flanders hosted a fairly large number of shipyards that built both wooden and metal vessels for inland, coastal and maritime navigation until the 20th century. The study of the industrial heritage of shipbuilding in Flanders remains limited to a few case studies, such as the Van Praet and Van Damme shipyards in Baasrode ([Segers 1994](#)) and a first major overview of fisheries-related shipyards by [Desnerck and Desnerck \(1974\)](#) and [Desnerck and Desnerck \(1976\)](#). Pioneering work on the port of Antwerp was conducted by Albert Himler (e.g. [Himler 1993](#), [Asaert et al. 1993](#) and [Himler and Moorhamers 1982](#)). The other Flemish ports have been far less studied. Also the industrial heritage linked to sea fisheries (fish processing companies) has been little explored nor mapped up till now. Information on the history of fish smoking and drying companies in West Flanders for the period 1850-1950 is available (e.g. [De Clerck 2006](#), [De Clerck 2007](#)). An overview of the history of Belgian oyster farming is given by [Polk \(2000\)](#), [Halewyck and Hostyn \(1978\)](#), [Pirlet \(2012\)](#), [Steevens and Van Moerbeke \(2015\)](#) and [Pirlet \(2016\)](#) as well as on the following website: www.vliz.be/wiki/Historiek_van_de_Belgische_oesterweek (see also theme **Marine aquaculture**).

10.1.4 Landscapes with heritage value²

The coastal landscape, bordered by the Pleistocene sand region, has been largely shaped by humans. Without embankments and drainage, this area would look completely different. There has been a significant human impact, although some areas such as *De Grote Keignaard* in Zandvoorde have quite a natural appearance (Cornilly 2005). The protected landscapes in the coastal zone include very diverse areas ranging from creek areas (*Lapscheure*, *De Grote Keignaard* in Zandvoorde), backlands (*Lampernisse*), dune regions (*Westhoekduinen*, *Houstaegerduinen* in De Panne, *Cabour* in Adinkerke), tidal areas (the Zwin and Yser Estuary), heathlands (Westende), transitional areas (*Zwinbosjes*, *Duinenweg/Duinenstraat* in Raversijde) to specific and completely human-made areas such as the Moeren region.

An overview of the spatial distribution of the known landscape heritage can be found in the *inventory of landscapes with heritage value* and on the geoportal of Flanders Heritage Agency (<https://geo.onroerenderfgoed.be>). Anchor sites, or in other words very valuable landscape ensembles from a heritage perspective, are represented in the *landscape atlas*. An overview of the protected landscapes in West Flanders on 1 January 2001 can be found in 'Monumentaal West-Vlaanderen' (Cornilly 2005). The situation after 1 January 2001 is recorded in the heritage magazine 'In de Steigers', in the *inventory of landscapes with heritage value*, in the *geoportal* of Flanders Heritage Agency, and via the website *Monumentenwacht Vlaanderen*.

10.1.5 Movable and intangible heritage³

The term 'movable heritage' covers historically valuable objects which are usually to be found in museum collections, archives or heritage libraries. Museums focus their collection policy on a particular theme. Certain museums focus on the historical story of a city, region or country, whereas others focus on collecting art, technology or everyday objects. An overview of the museums along the coast can be found on the website of 'Uit in Vlaanderen'. There are about twenty museums located in the coastal zone⁴, some of which focus specifically on the coast (see www.erfgoedinzicht.be for the digital disclosure to the collection of these museums). Furthermore, several libraries are located along the coast. Some of them have publications with historical value in their collection. An overview of these collections is given on the website 'collectiewijzer' of the Flemish heritage library. The *VLIZ library* of the Flanders Marine Institute exclusively collects publications about the sea and coast. *The library and documentation centre of the National Fisheries Museum (NAVIGO)* focuses on the history of fisheries in the broadest sense.

Furthermore, the archives of the various levels of government are often important sources of movable heritage and 'the *Archiefbank Vlaanderen*' contains overviews of private archives that are important for maritime heritage (e.g. from the free fisheries schools). The State Archives of Belgium preserve many documents related to coastal municipalities. An overview of the latter archives can be found in the online *database*. The provincial archive has its own database, *Probat*, where in addition to the archives of the province of West Flanders, various municipal archives can be searched as well (e.g. De Haan, Koksijde, Middelkerke, Blankenberge). The archive of Ostend has its own *website*. In addition, the various image databases should also be mentioned for their role in the disclosure of historical imagery. The *provincial image bank* contains photographs of many coastal municipalities. The municipalities of De Panne, Koksijde and Nieuwpoort are included in the image bank *Westhoek verbeeldt* of the *Erfgoedcel CO7*. Ostend has its own *image bank*, which was recently integrated in the image bank (*beeldbank*) *Kusterfgoed*. De 'beeldbank Kusterfgoed' collects mainly the heritage collections of the municipalities Middelkerke, Ostend, De Haan and Blankenberge, and also focuses on the collections that belong to local heritage players and private persons. The initiative 'a century of sea fisheries in Belgium' of VLIZ collects historical data about the landings and legislation of the Belgian fisheries (see also theme Fisheries). Recently, a reference work on the core aspects of the broader fisheries sector during 500 years of Flemish sea fisheries was published (Lesrauwaet et al. 2018). This work is based on archive, data and literature research, and the information is provided via the central online platform 'History of Belgian sea fisheries'. Finally, the local historical societies also preserve a lot of interesting materials. An overview of all societies on the coast is available on the following website: *Heemkunde Vlaanderen*.

Comparable to the protection of buildings, valuable (sub-)collections or documents can also be protected by decree (*Topstukken decreet*). The list of valuable objects and collections (*topstukkenlijst*) provides an overview of the protected movable heritage. Some objects from the collections of the NAVIGO museum and *Museum aan de Stroom (MAS)* are also included in the Dutch initiative *Maritiem Digitaal*, a searchable collection system of the maritime world. In addition, items from the NAVIGO museum collection are made digitally accessible by *Lukas-Art Vlaanderen*.

² Research into the genesis and significance of the maritime landscape (drowned palaeolandscapes) has been included in maritime archaeology.

³ Research on prehistoric heritage is included in maritime archaeology.

⁴ It should be noted that certain actors (museums, libraries, archives, etc.) that are not located in the coastal zone also have interesting collections on maritime and coastal heritage.

Intangible cultural heritage represents traditions, customs, knowledge and practices inherited or historically developed by a group of people - simply living traditions, that are still continued. Dialects, processions or crafts are just some examples of intangible heritage. In this context, the Government of Flanders launched the [Platform for intangible heritage in Flanders](#). An overview of intangible heritage is offered in the [inventory of intangible heritage](#). Individuals or organisations must submit an application themselves to be included in the inventory. This inclusion is a prerequisite to apply for UNESCO recognition. Some examples of intangible heritage on the coast are the horseback shrimp fishermen in Oostduinkerke and the carnival of Blankenberge.

The typical coastal intangible heritage is currently threatened by several factors. The fisheries heritage as well as the fisheries sector are under pressure. Rising fuel prices, increasing regulation and decreasing catches cause the professional reorientation of many fishermen. Because of this, the movable and intangible heritage related to fisheries has an increasingly smaller source of supply. A museum such as [NAVIGO museum](#) collects everything related to fisheries and its history, but there are also other initiatives such as oral history projects ([Rappé 2008](#), [Strubbe 2011](#)), which are committed to the preservation of this heritage. As well as [Sincfala](#), the museum of the Zwin region, which does not only cover 2,000 years of folk history in the Zwin region but also offers a fisheries collection about the local fishermen and their families.

10.2 Policy Context

On an international level, the policies related to cultural heritage are primarily defined by the United Nations Educational, Scientific and Cultural Organisation ([UNESCO](#)). Important legal instruments are the [Convention concerning the Protection of the World Cultural and Natural Heritage](#) (1972), and specifically for maritime and coastal heritage, the [Convention on the Protection of the Underwater Cultural Heritage](#) (2001) and the [Convention for the Safeguarding of the Intangible Cultural Heritage](#) (2003) (see [website](#) for full list of UNESCO legal instruments). A [database](#) updated by UNESCO also contains many national laws of the Member States related to cultural and natural heritage. The International Council on Monuments and Sites ([ICOMOS](#)) is an international non-governmental organisation dedicated to the preservation of monuments and sites throughout the world, working closely with UNESCO and also acting as an advisory body for it. ICOMOS consists of an international committee, national committees and scientific committees. For underwater heritage, there is an active international scientific committee, namely the International Committee on the Underwater Cultural Heritage ([ICUCH](#)) that *inter alia* promotes the Convention of 2001. Furthermore, Belgium is also involved as member of the Advisory Council at the organisation '[European Maritime Heritage](#)'.

The main legal framework for activities at sea is the UN Convention on the Law of the Sea (UNCLOS 1982). In this almost globally ratified treaty, two clauses concerning heritage have been added. The UNESCO Convention on the Protection of Underwater Heritage has the intention to further complement and specify UNCLOS regarding the underwater cultural heritage.

At European level, the policy on cultural heritage is developed by the Directorate-General for Education and Culture ([DG EAC](#)) of the European Commission, which has only recently recognised immovable heritage (landscapes, architectural heritage and archaeological heritage) as part of the cultural heritage. The Commission proposes a new cultural agenda in order to respond to challenges of globalisation and to intensify the cooperation inside the EU ([COM \(2007\) 242](#), [COM \(2010\) 390](#)). By endorsing the [Agenda of Rome](#) (25 March 2017), the EU promised to work towards a social Europe, a union which preserves our cultural heritage ([COM \(2017\) 206](#)). At the initiative of the European Commission, 2018 is the EU year of cultural heritage, in which there will be intensive cooperation with major European heritage organisations such as Europa Nostra and Nemo. In addition, the [Council of Europe \(culture, heritage and diversity\)](#) plays a very important part in heritage conventions, such as the [Convention for the Protection of the Architectural Heritage of Europe](#) (Granada 1985), [Convention for the Protection of the Archaeological Heritage of Europe](#) (revised) (Valletta 1992), [European Landscape Convention](#) (Firenze 2000) and the [Convention on the Value of Cultural Heritage for Society](#) (Faro 2005) (see [website](#) for an overview of the European cultural heritage legislation). [The European Heritage Network](#) (HEREIN) is a permanent information system that assembles public authorities of the Member States responsible for cultural heritage (focusing on the architectural and archaeological heritage) under the umbrella of the Council of Europe. The HEREIN network also provides an overview of the heritage policies in the Member States.

In Belgium, immovable cultural heritage is a competence of the Regions whereas the movable and intangible heritage is covered by the communities. Archaeological heritage in the North Sea under Belgian supervision is a federal competence. In this context, the law of 4 April 2014 on the protection of underwater cultural heritage in the BNS and the associated royal decree are of importance (see website [www.vondsteninzee.be](#) for more information). This law (the so-called 'OCE law') implements the Belgian ratification of the UNESCO Convention for the Protection of the Underwater Cultural Heritage (2013) to a considerable extent. Under the OCE law, discoveries younger than 100

years old can be recognised as cultural heritage under water, which is not possible through the UNESCO Convention. According to the OCE law, every discovery at sea must be reported to the Governor of West Flanders. He serves as 'receiver of the cultural heritage under water' and is not only responsible for the registration and the announcement of discoveries, but also offers advice to the competent secretary of state for the North Sea concerning a discovery's possible heritage status. On 21 September 2016, a RD was assigned imposing measures concerning in situ protected under water heritage, and several ministerial decisions (MD of 4 October 2016) were adopted for the protection of underwater cultural heritage, in which measures for protection of 9 of the 11 already affirmed wreckages in the Belgian North Sea are included (see [measures of enactment of the law of 4 April 2014](#), see further 10.3.1. Maritime archaeology). Concerning the shipwreck sites UB-29 and *HMS Wakeful*, these measures were not necessary because of their location within a fairway. These sites are therefore indirectly protected.

The international and European regulations on underwater cultural heritage and the current legal situation in Belgium regarding this subject have been examined in the context of the [SEARCH project](#) on the archaeological heritage in the North Sea ([Maes and Derudder 2014](#), [Derudder and Maes 2014](#), [Missiaen et al. 2016](#), [Missiaen et al. 2017](#)). In addition, a 'best practice' brochure was developed with recommendations about how to implement the underwater heritage best in the schedule and performance of works at sea, as well as with different protocols on alerting archaeological discoveries (download everything through www.sea-arch.be/en/results).

In Flanders, the competences with regard to immovable, movable and intangible heritage are covered by different bodies:

- [Flanders Heritage Agency](#), part of the Environment Department ([OMG](#)), is responsible for the policy preparation and evaluation as well as for the policy implementation (policy-oriented, scientific research, realisation of inventories, protection, management support and communication) with regard to immovable heritage (see also [Brochure Onroerend Erfgoed – Samen de zorg voor onroerend erfgoed vanzelfsprekend maken 2017](#)). The agency carries out these tasks in an integrated way since 1 January 2013. The [OMG Inspection Agency](#) of the Environment Department is responsible for the supervision and enforcement;
- The Department of Culture, Youth, Sports and Media ([CJSM](#)) is responsible for the policy concerning movable and intangible heritage. The policy regarding this heritage has its own website within the Department (www.kunstenenerfgoed.be). The Flemish Interface Centre for Cultural Heritage ([FARO](#)) plays an intermediary role between the cultural heritage field (movable and intangible heritage) and the government, supports cultural heritage organisations, local and provincial governments and managers of cultural heritage, and promotes the development of the cultural heritage field. In addition, the organisation [Herita vzw](#) supports and unites everyone involved in heritage. [Herita vzw](#) also manages several heritage sites and organises activities related to heritage (e.g. Open Monumentendag);
- The policy notes on immovable heritage ([beleidsnota onroerend erfgoed \(2014-2019\)](#)) and culture ([beleidsnota cultuur \(2014-2019\)](#)) contain the strategic lines of the heritage and cultural policy in Flanders, which are concretised and prioritised in annual policy letters;
- Since 1 January 2015, a new decree on immovable heritage has been in place (see [Brochure Onroerend Erfgoed – De Regelgeving 2014](#), [Brochure Onroerend Erfgoed – Een toelichting 2014](#)) that replaces three preceding decrees (Monument decree of 1976, Archaeology decree of 1993 and Landscape decree of 1996) and a law on the preservation of monuments and landscapes (1931). All the maritime immovable heritage present in the coastal zone, including the beach up to the average low water mark at springtide, is included in this new decree;
- Other important legal documents at the Flemish level are the Topstukkendecreet (decree of 24 January 2003, protection of cultural heritage because of its special value in Flanders), the decree of 29 March 2002 with regard to the protection of the historical fleet ([Provincie West-Vlaanderen 2008](#)) and the Cultural Heritage decree of 6 July 2012 with regard to cultural heritage (decree of 6 July 2012 and the revision of 24 February 2017, concerning Flemish cultural heritage policy). The Cultural Heritage decree of 27 February 2017 is linked to the [Implementing decree of 31 March 2017](#) and contains a Strategic Vision Note ([Strategische Visienota](#)) to recognise and support cultural heritage organisations;
- A revision of the Historical Fleet decree was ratified by the Government of Flanders on 9 May 2014. The revised decree entered into force with the Implementing decree of 27 November 2015 (see also [Brochure Onroerend Erfgoed – Varend Erfgoed in Vlaanderen](#)).

The Government of Flanders has positioned the depot policy on the agenda in 2008 by appointing the regional depot policy to the five provinces and the Flemish Community Committee. The [province of West Flanders](#) is responsible for the 'depot policy' and invests in maritime heritage by developing projects in which coastal actors can participate (see [De Provincie aan de Kust. Beleidsbrief Kust 2011](#)). Equally as important in this context is the establishment of the heritage cell [Kusterfgoed](#) (www.kusterfgoed.be) in 2015, at which four coastal municipalities (Middelkerke, Ostend, De Haan and Blankenberge) work together around movable and intangible heritage at the coast. Since 1 January 2018, the Government of Flanders, and no longer the municipalities themselves, determines the beacons of this regional depot policy (see further 10.5.5 Movable and intangible heritage; website depotwijzer.be).

10.3 Spatial Use

10.3.1 Maritime archaeology

The geographic position of the maritime heritage in marine areas is included in a number of databases. These also play an important role in the policy and management decision-making. Flemish partners have been involved in two European projects: the *Archaeological Atlas of the 2 Seas project* (in which the maritime archaeological heritage in France, England and Belgium has been mapped) and the *MACHU project* (Managing Cultural Heritage Underwater) in which a Geographical Information System (GIS) with the position of underwater cultural heritage in European seas has been developed.

As far as the BNS concerns, there are three databases that offer structured information: www.maritieme-archeologie.be, [wreck database](#) (and [map viewer](#)) and www.wrecksite.eu. Within the *SeArch project*, an interactive geoportal concerning the underwater heritage (including prehistorical discoveries) was developed in the BNS (www.sea-arch.ugent.be).

As far as maritime heritage in the North Sea is concerned, it is not evident to claim specific marine space for this purpose as heritage may potentially be present anywhere. It seems more appropriate to take advantage of the existing protective measures for *inter alia* nature to also conserve and protect a representative sample of the underwater heritage in situ. The aim of this policy is that, when underwater heritage has to disappear for compelling reasons, it gets the appropriate care and does not disappear without control. The locations of underwater heritage sites in the BNS which are recognised as cultural heritage underwater by the law of 4 April 2014 are listed in a register on the following website: www.vondsteninzee.be.

Since 2014, underwater cultural heritage has indeed received a spatial translation by the recent recognition and protection of eight ship wreck sites (the lightship *West-Hinder*, de *HMS Wakeful*, a 19th century *wooden sailing ship* that perished in front of the coast of Ostend, the VOC ship *'t Vliegende Hart*, the *SS Kilmore*, the WWI submarine *U-11*, the *HMS Brilliant* and the wreck site on the *Buiten Ratel Zandbank*) and the MD of 6 April 2018 recognised three more shipwreck sites (the French destroyer *Torpilleur Branlebas*, the wooden gunboat *H.M. Motor Launch 561*, and the German submarine *UB-29*) (figure 1).

In annex to the RD of 20 March 2014 concerning the marine spatial plan (MSP), the cultural and ecological importance of the more than 215 (ship)wrecks that lay in the BNS is acknowledged (*Maes and Seys 2014*). In a new MSP (*MSP 2020-2026, public consultation 2018*), the respect of underwater cultural heritage in the BNS plays an important purpose, wherein:

- the most valuable cultural heritage under water is in situ protected according to a legal procedure;
- the acknowledged wrecks for which protection measures apply are included;
- appropriate mitigating measures are adopted if cultural heritage would be threatened by human activities;
- wrecks are enabled in the context of nature preservation.

10.3.2 Architectural heritage along the coast

The new geoportal of Flanders Heritage Agency (<https://geo.onroendergoed.be>) provides an overview of the geographic location of the architectural heritage in the coastal area. Additional information about the heritage elements can be obtained via click through functions. Coastal municipalities such as Ostend can dispose of an *Action Plan Architectural Heritage* to protect, preserve, manage and evaluate future developments.

10.3.3 Landscapes with heritage value

The geoportal of Flanders Heritage Agency (<https://geo.onroendergoed.be>) provides an overview of the geographic location of the architectural heritage in the coastal area (see also the inventory *landscapes with heritage value*).

10.4 Societal interest

Despite the fact that the importance of heritage is generally recognised, the economic significance, benefits and societal return on investment are often unknown. The study by *De Baerdemaeker et al. (2011)* deals with the socio-economic impact of the immovable heritage (policy) in Flanders. Flanders is mostly associated with heritage, art

and artists, beer, and good food and beverages, according to a *Reputatieonderzoek (2017)* by Tourism Flanders (*Toerisme Vlaanderen*). Furthermore, the report of the project *Cultural Heritage Counts for Europe* discusses the value of cultural heritage and its impact on Europe's economy, culture, society and the environment. In general, marine and maritime cultural heritage are underappreciated (*Pieters 2017*). The social and economic advantages that this heritage entails are often unknown.

With regard to the coastal zone, primarily the economic benefits related to coastal tourism are known (see also theme *Tourism and recreation*). According to *De Baerdemaeker et al. (2011)*, 189,229 (or 10% of) overnight stays in hotels on the coast were related to the presence of immovable heritage in 2009. Along with day trippers and recreationists, heritage tourism expenditure amounts for more than 2 million visitors annually, whereas the total heritage-related

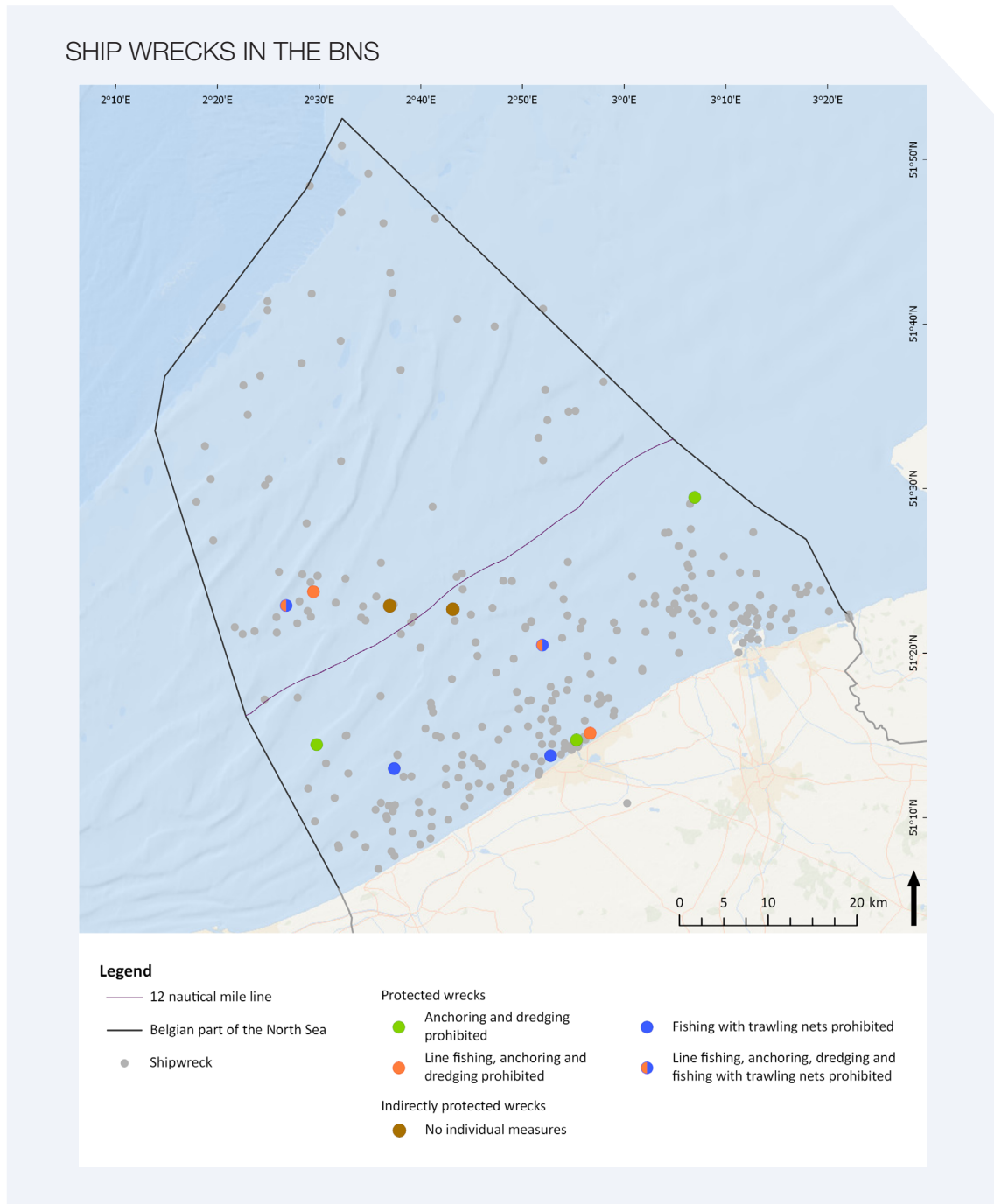


Figure 1. Ship wreck sites in the BNS. The individual protective measures are displayed for the 11 recognised ship wreck sites (Source: Flanders Heritage Agency, MD of 4 October 2016).

tourism expenditure amounts to almost 60 million euro. In the publication *Tendrapport Kust (2015-2016)*, numbers on the cultural attractions are available (see also theme **Tourism and recreation**). According to *Maes et al. (2005) (GAUFRE project BELSPO)*, many shipwrecks in the BNS create a tourism revenue. However, this kind of revenue is rather diffuse and difficult to quantify.

The other aspects of the societal importance of cultural heritage in the coastal zone are less known and only some fragmented figures and information exist:

- According to *Maelfait et al. (2012)*, more than 4 million euro of grants were allocated between 2008 – 2010 by the Government of Flanders for the restoration and maintenance of cultural heritage in the coastal zone;
- The proximity of immovable heritage creates a better living environment which affects the value of housing. In De Panne, where 44% of the municipal surface is protected (in this variable, the landscape heritage in particular weighs in on the architectural heritage), the house would get around 21,000 euro added value. In Knokke-Heist, this figure is 17% and a house will gain approximately 8,300 euro in added value (*De Baerdemaeker et al. 2011*);
- In a number of historic shipyards, social employment projects are developed;
- Museums are also associated with education. However, there are no data available regarding their impact;
- The recent 'Zeebrugge project' is a good example of how an economic driven project (Complex Project Coastal Vision) can happen in synergy with research into drowned landscapes and underwater heritage. The broad media attention for the recent discoveries of fossil bone material in the 'Scheur' near Zeebrugge confirms this great social relevance.

10.5 Sustainable use

10.5.1 Maritime archaeology

Until recently, underwater heritage was barely taken into account, mainly because of the ignorance about it. In 2014, however, a new law on the protection of underwater cultural heritage in the BNS entered into force (law of 4 April 2014). This law introduces an obligation to report findings in the BNS of which the finder may suspect that they are cultural heritage. Discoveries in the territorial sea, the exclusive economic zone or the continental shelf have to be reported to the Governor of West Flanders on the website, www.vondsteninzee.be, where they are subsequently entered in a register (see also the SeArch project established protocols: *Van Haelst et al. 2016a, 2016c*). Archaeological finds on the beach should be reported to the *Flanders Heritage Agency* (see also *Van Haelst et al. 2016b, De Blauwe 2017*). The law falls within the scope of the Belgian ratification (2013) of the UNESCO Convention (Paris 2001) on the protection of the underwater cultural heritage. At the end of 2016, five new shipwrecks in the North Sea were recognised as cultural heritage on the basis of this law. With the MD of 6 April 2018 another three wrecks were recognised, which ensures that a total of 11 wrecks are recognised (e.g. the sailing ship on the Buiten Ratel, the HMS Brilljant, the light ship West-Hinder and the Torpilleur Branlebas). In the meantime, also protective measures are in place for these 11 heritage sites (whether or not indirectly for HMS Wakeful and the UB-29) (MD of 4 October 2016). Furthermore, the amendment of the law on the marine environment in view of marine spatial planning (law of 20 January 1999) is important as well. Underwater heritage is also mentioned in the annex to this maritime spatial plan (RD of 20 March 2014) (*Maes and Seys 2014*). There is no intention to claim specific areas for heritage purposes in the North Sea (as is the case for the other user functions). Instead, it is examined how existing protective measures can be used to achieve multiple use of certain marine areas. In the *Nemo Link project*, which aims at connecting transmission networks of the United Kingdom and Belgium, is strived towards maximal evasion of known or newly detected heritage sites to reduce the effect on the maritime cultural heritage to a minimum (see also theme **Energy (including cables and pipes)**). Knowledge about the heritage sites and their position along the cable route is crucial herein.

10.5.2 Historical fleet

Since 29 March 2002, there has been a decree that regulates the protection of the historical fleet (i.e. *Varend(er)goeddecreet*). This decree was modified on 9 May 2014 and has, together with the accompanying decision on the historical fleet of 27 November 2015, the purpose of supporting owners and users of heritage vessels in keeping their vessels in service. They can develop a management plan for their vessel, in which for the period of several years of maintenance, the restorations, a budget and the opening of the vessel are worked out (see also *Brochure Onroerend Erfgoed – Varend erfgoed in Vlaanderen 2016*). Based on this plan, a grant can be claimed (maintenance and/or management grant). The historical fleet policy is implemented by Flanders Heritage Agency. A separate section of the Royal Commission for Monuments and Sites has been created to advise the minister on the historical fleet. On 1 January 2015, this commission was changed to the Flemish Commission for Historical Fleet (VCVE). In order to achieve a responsible conservation policy, an inventory of the historical fleet has been developed (<https://inventaris.onroerenderfgoed.be/ivm/varend/zoeken>).

In the beginning of 2018, 28 vessels were already protected under the historical fleet policy (see [inventory](#)). Not all of the protected and inventoried vessels are linked to the coast. Other sectors, such as inland shipping, are included in these numbers as well.

10.5.3 Architectural heritage along the coast

Due to the growing scarcity of open space at the coast, the remaining heritage is under increasing pressure both in the coastal and hinterland municipalities ([Maelfait et al. 2012](#)). The protection of immovable heritage is regulated by the decree on immovable heritage (see [Brochure Onroerend Erfgoed – De Regelgeving 2014](#), [Brochure Onroerend Erfgoed – Een toelichting 2014](#)), which entered into force in 2015 and replaces three preceding decrees (Monument decree of 1976, Archaeology decree of 1993 and the Landscape decree of 1996) and the law of 1931 on the conservation of monuments and landscapes. Since 2009, the architectural heritage has been ‘established’ in the inventory (<https://inventaris.onroenderfgoed.be>), which has certain legal consequences: demolition becomes less evident (with a few exceptions), whereas a change of function is made easier as long as it benefits the preservation of the cultural heritage value ([Maelfait et al. 2012](#)). The protection decisions regarding immovable heritage can be consulted on the following website: <https://beschermingen.onroenderfgoed.be>.

10.5.4 Landscapes with heritage value

The scarcity of open space on the coast also applies to landscapes with heritage value. In addition to the protected landscapes with heritage value, which usually have an important ecological value as well, the immovable heritage sector is currently mainly working with the instrument of the so-called anchorage areas. These areas are designated by the Flemish minister for Heritage, and constitute the contribution from the sector to the AGNAS consultation (defining the natural and agricultural structure in the Flemish Spatial Plan - [Ruimtelijk Structuurplan Vlaanderen](#)). An anchorage area is a valuable landscape with a series of heritage elements (landscape, architectural, archaeological, maritime). An anchorage area is described in the landscape atlas (see <https://geo.onroenderfgoed.be>).

In the past, these anchorage areas only received a legal status after the ‘designation’. From then on, the local government is obliged to take it into account when developing a Spatial Implementation Plan (SIP) ([Landschappen: een kennismaking 2013](#)). The decree on immovable heritage ([Onroenderfgoeddecreet](#)) no longer allows such a ‘designation’. In order to preserve the immovable heritage, items from the landscape atlas can be determined in the ‘established’ landscape atlas. An ‘established’ item can be used by the municipality, province or Flemish Region in a SIP as a basis for the demarcation of a heritage landscape. Anchor sites that were ‘designated’ under the old regulation have been equated with an item from the ‘established’ landscape atlas and with a heritage plan ([onroenderfgoedrichtplan](#)).

10.5.5 Movable and intangible heritage

The list of objects and collections with an exceptional value ([topstukkenlijst](#)) contains several hundred pieces or (sub-) collections. Some of these are linked to the coast. It mainly concerns paintings from Ensor, Permeke and Spillaert from the collection of Mu.Zee (Ostend), KMSKA (Antwerp), and MSK Ghent. To be incorporated in this list, an object has to meet strict selection criteria. It should be both rare and essential. Grants can be requested for the restoration of these valuable pieces (decree of 24 January 2003).

A great deal of movable heritage has not been included in the list of pieces with an exceptional value. Therefore, the province of West Flanders has developed a so-called [depot policy](#) with the support of the Government of Flanders (more information: [Steen and Van den Nieuwenhof 2008](#)). On 27 May 2016, the Government of Flanders reached an agreement on slimming down the provinces including the discontinuation of provincial tasks regarding cultural heritage policy. As from 1 January 2018, the Government of Flanders itself will determine this regional depot policy. Since 2008, this policy focuses on two lines including the registration of movable heritage possessed by museums, local heritage societies and other heritage managers as well as the conservation and management of these pieces. In order to assist museums and heritage associations in registering their collections, the heritage database [www.erfgoedinzicht.be](#) was developed.

The [inventory](#) of intangible heritage currently contains 53 elements, two of them are specific to the coast: the carnival of Blankenberge and horseback shrimp fishing in Oostduinkerke. The inventory is established according to the bottom-up principle. Organisations or individuals must submit an application to have an element of intangible cultural heritage included in the inventory. Elements included in the inventory must receive an annual progress report (via the

applicant) with information about the activities concerning the protection of the element. For now, the annexation in the inventory only increases the visibility of the element. Being in the inventory is a prerequisite to be included in the [UNESCO list of intangible heritage](#). In 2013, horseback shrimp fishing in Oostduinkerke was recognised by UNESCO as intangible heritage.

Legislation reference list

Overview of the relevant legislation at the international, European, federal and Flemish level. For the consolidated European legislation we refer to [Eurlex](#), the national legislation can be consulted in the [Belgisch staatsblad](#) and the [Justel-databanken](#).

International agreements, treaties, conventions, etc.

Title	Year of conclusion	Year of entering into force
World Heritage Convention	1972	1996
United Nations Convention on the law of the sea (UNCLOS)	1982	1994
Convention on the protection of the underwater cultural heritage	2001	2009 (ratified by Belgium in 2013)
Convention for the safeguarding of the intangible cultural heritage	2003	2006

European legislation

Title	Year	Number
Convention for the protection of the architectural heritage of Europe	1985	1987
Convention for the protection of the archaeological heritage of Europe (revised)	1992	1995 (ratified by Belgium in 2010)
European Landscape Convention of the Council of Europe	2000	2004
Convention on the value of cultural heritage for society	2005	2011

Belgian and Flemish legislation

Abbreviation	Title	File number
Decree of 3 March 1976	Decreet tot bescherming van monumenten en stads- en dorpsgezichten	1976-03-03/30
Decree of 30 June 1993	Decreet houdende bescherming van het archeologisch patrimonium	1993-06-30/33
Decree of 16 April 1996	Decreet betreffende de landschapszorg	1996-04-16/34
Decree of 29 March 2002	Decreet tot bescherming van varend erfgoed	2002-03-29/37
Decree of 24 January 2003	Decreet houdende bescherming van het roerend cultureel erfgoed van uitzonderlijk belang (topstukkendecreet)	2003-01-24/40
Decree of 16 July 2010	Decreet houdende instemming met het verdrag ter bescherming van het cultureel erfgoed onder water, aangenomen in Parijs op 2 november 2001	2010-07-16/10
Decree of 6 July 2012	Decreet houdende het Vlaams cultureel-erfgoedbeleid (Erfgoeddecreet)	2012-07-06/31
Decree of 12 July 2013	Decreet betreffende het onroerend erfgoed (Onroerenderfgoeddecreet)	2013-07-12/44
Decree of 24 February 2017	Decreet houdende de ondersteuning van cultureelerfgoedwerking in Vlaanderen (Cultureelerfgoeddecreet)	2017-02-24/17
RD of 20 March 2014	Koninklijk besluit tot vaststelling van het marien ruimtelijk plan	2014-03-20/03
RD of 25 April 2014	Koninklijk besluit betreffende de bescherming van het cultureel erfgoed onder water	2014-04-25/21
RD of 21 September 2016	Koninklijk besluit betreffende de reglementaire maatregelen ter bescherming van het cultureel erfgoed onder water	2016-09-21/12
MD of 4 October 2016	Ministerieel besluit betreffende individuele maatregelen ter bescherming van het cultureel erfgoed onder water	2016-10-04/03
Law of 7 August 1931	Wet op het behoud van monumenten en landschappen	1931-08-07/30
Law of 20 January 1999	Wet ter bescherming van het mariene milieu en ter organisatie van de mariene ruimtelijke planning in de zeegebieden onder de rechtsbevoegdheid van België	1999-01-20/33
Law of 4 April 2014	Wet betreffende bescherming van het cultureel erfgoed onder water	2014-04-04/07

