

Underwater Cultural Heritage («SeArch»): Technological Innovation, a Legal Framework and Public Access

Patrimonio Cultural Subacuático («SEArch»): innovación tecnológica, marco legal y acceso público

Sven Van Haelst

Flanders Heritage Agency
sven.vanhaelst@rwo.vlaanderen.be

Marnix Pieters

Flanders Heritage Agency
marnix.pieters@rwo.vlaanderen.be

Tine Missiaen

Renard Centre for Marine Geology
tine.missiaen@ugent.be

Abstract: Large parts of the Belgian territorial sea and the continental shelf are affected by commercial activities such as aggregate extraction, wind farms, dredging, cable/pipeline projects, intensive fishing, etc. All these activities constitute a serious threat for the underwater cultural heritage. The «SeArch» (2013-2016, www.sea-arch.be) project will offer solutions to these challenges through the realization of three objectives: to develop a reliable survey methodology based on geophysical and remote sensing techniques that allows accurate and cost-effective evaluation of the archaeological potential of marine areas under development; work out comprehensive proposals for a transparent and sustainable management policy regarding the marine historic environment and for the further development and implementation of a legal framework based on the international commitments (Unesco 2001 convention); and offer guidance to stakeholders (marine industry, government agencies, fisheries, ...) on how to implement the new methodology and management approach and increase the general awareness with regards to underwater cultural heritage.

Key words: Belgian territorial sea and continental shelf, commercial activities, underwater cultural heritage, management policy, research project.

Resumen: actividades comerciales tales como extracción de arena y grava, construcción de parques eólicos, dragados, tendido de cables submarinos, pesca, etc. afectan intensivamente al fondo del mar territorial y a la plataforma continental de Bélgica y amenazan al patrimonio cultural subacuático. El proyecto «SeArch» (2013-2016, www.sea-arch.be) busca soluciones a través de tres objetivos: confeccionar un método de prospección basado en técnicas geofísicas y de teledetección que permitan evaluar de manera correcta y barata el potencial arqueológico de áreas marítimas en desarrollo; elaborar propuestas integrales para realizar una política de gestión sostenible y transparente relacionada con el entorno histórico y para desarrollar un marco legal basado en los compromisos internacionales (Convención Unesco 2001); y ayudar a los interesados (industria marítima, administraciones públicas, pesquerías, etc.) con el desarrollo de la nueva metodología y de la política de gestión y, a través de esta actividad, movilizar e incrementar la conciencia ciudadana y política con respecto al patrimonio cultural subacuático.

Palabras clave: plataforma continental y mar territorial belga, actividades comerciales, patrimonio cultural subacuático, política de gestión, proyecto de investigación científica.



Underwater Cultural Heritage ('SeArch') - Technological Innovation, a Legal Framework and Public Access

Introduction

Large parts of the Belgian continental shelf are affected by commercial activities such as aggregate extraction, wind farms, dredging, cable/pipeline projects, intensive fishing, infrastructural works for harbour extension, etc. All these activities constitute a serious threat for the underwater cultural heritage. The 'SeArch' project (2013-2016) wants to provide different solutions for this urgent problem.



Marine Spatial Planning in the Belgian part of the North Sea. (© Annelies Van De Wiele, Marjolijn Rabaet, Charlotte Herremans en Steven Vandenbroucke, 61 Bevegegeest 100 000... Een marijn nummer (de plan voor onze Noordzee, P00 Verkeersconferentie), Verlichting van de Noordzee en Luchthaven, maart 2014)

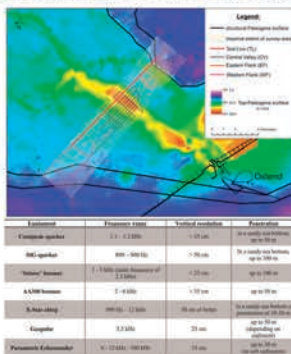
Technological Innovation

To develop a reliable survey methodology based on geophysical and remote sensing techniques that allows accurate and cost-effective evaluation of the archaeological potential of marine areas under development (offshore, nearshore, intertidal areas).

After thorough assessment of the present-day geophysical & remote sensing technology and the available archaeological & geological data of the Belgian part of the North Sea, different test sites (offshore, nearshore+intertidal) were selected to be surveyed.

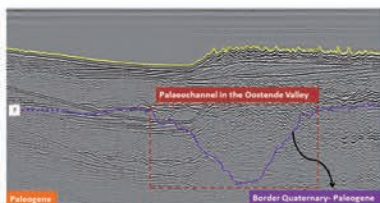
Oostende valley survey

In October 2013 and May 2014 a wide range of marine acoustic sources and receivers were tested over a buried Pleistocene river valley, the Oostende Valley, nowadays covered by a large sand bank.



Characteristics of the equipment used during the Oostende Valley survey (© Ghent University, Research Centre of Marine Geology)

- A wide range of acoustic sources and receivers were used
- where possible simultaneously ('one-sweep survey')
- Emphasis on advanced ('smart') processing



First data interpretation of the Oostende Valley survey (© Ghent University, Research Centre of Marine Geology)

Legal Framework

Work out comprehensive proposals for a transparent and sustainable management policy regarding the marine historic environment and for the further development and implementation of a legal framework based on the international commitments (UNESCO 2001 convention).



In 2013-2014 Belgium has ratified and implemented the UNESCO 2001 Convention on the Protection of the Underwater Cultural Heritage. The new Federal law "Wet betreffende de bescherming van cultureel erfgoed onder water" came into force allowing Belgium to protect and preserve the Underwater Cultural Heritage.

This new law also states that finds, made within the Belgian part of the North Sea, have to be reported to the "Receiver of Cultural Heritage Underwater".



Dredgers reported the discovery of an airplane propeller, indicating the crash site of a WWII airplane. (© DEME)

The SeArch project will develop protocols to report and deal with archaeological discoveries at sea. Furthermore it will provide guidance, advice and procedures for every stage of marine development from assessment of new license areas, to mitigation and monitoring of sensitive sites.

Public Acces / Outreach / Communication

Offer guidance to stakeholders (marine industry, government agencies, fisheries, harbor authorities,...) on how to implement the new methodology and management approach and increase the general awareness with regards to underwater cultural heritage.



More Information

www.sea-arch.be

Marnix Pieters (Flanders Heritage Agency)
Marnix.pieters@rwo.vlaanderen.be

Sven Van Haelst (Flanders Heritage Agency)
sven.vanhaelst@rwo.vlaanderen.be

Tine Missiaen (Ghent University)
Tine.missiaen@ugent.be

The 4-year project started in January 2013 and is funded by the Flanders Agency for Innovation by Science and Technology (IWT). It involves a multidisciplinary consortium between Ghent University, Flanders Heritage Agency, Flanders Marine Institute (VLIZ) and Deltares (The Netherlands):

