



# Archaeological heritage in the North Sea

Development of an efficient assessment methodology and approach towards a sustainable management policy and legal framework in Belgium.

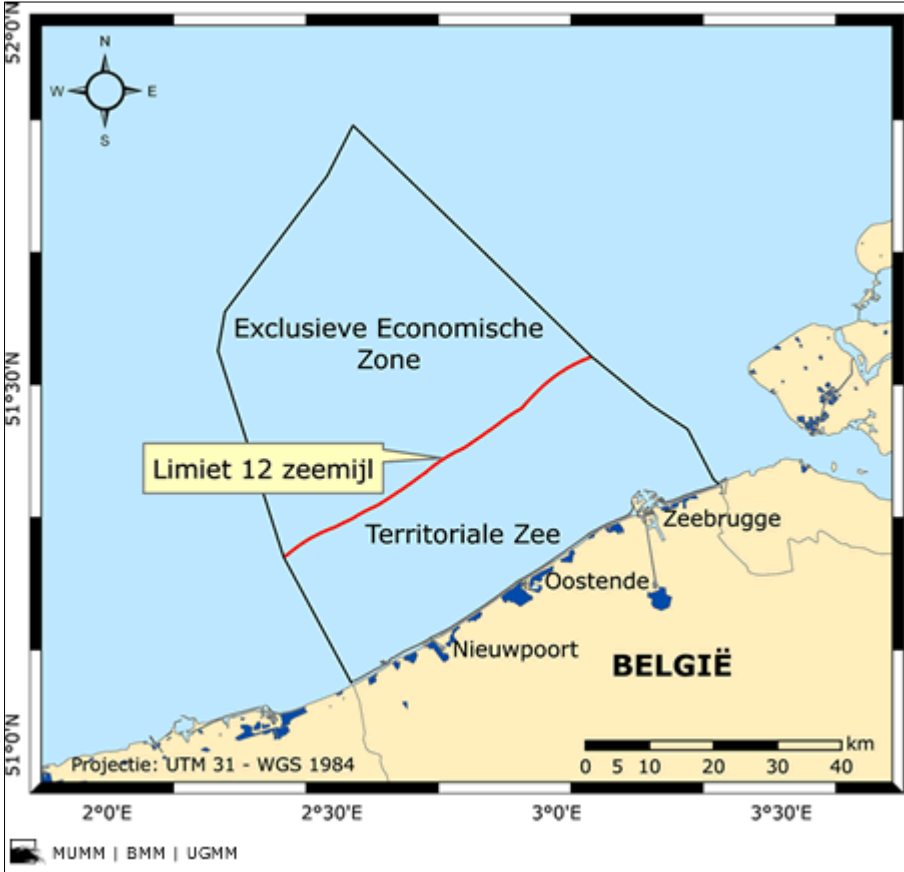
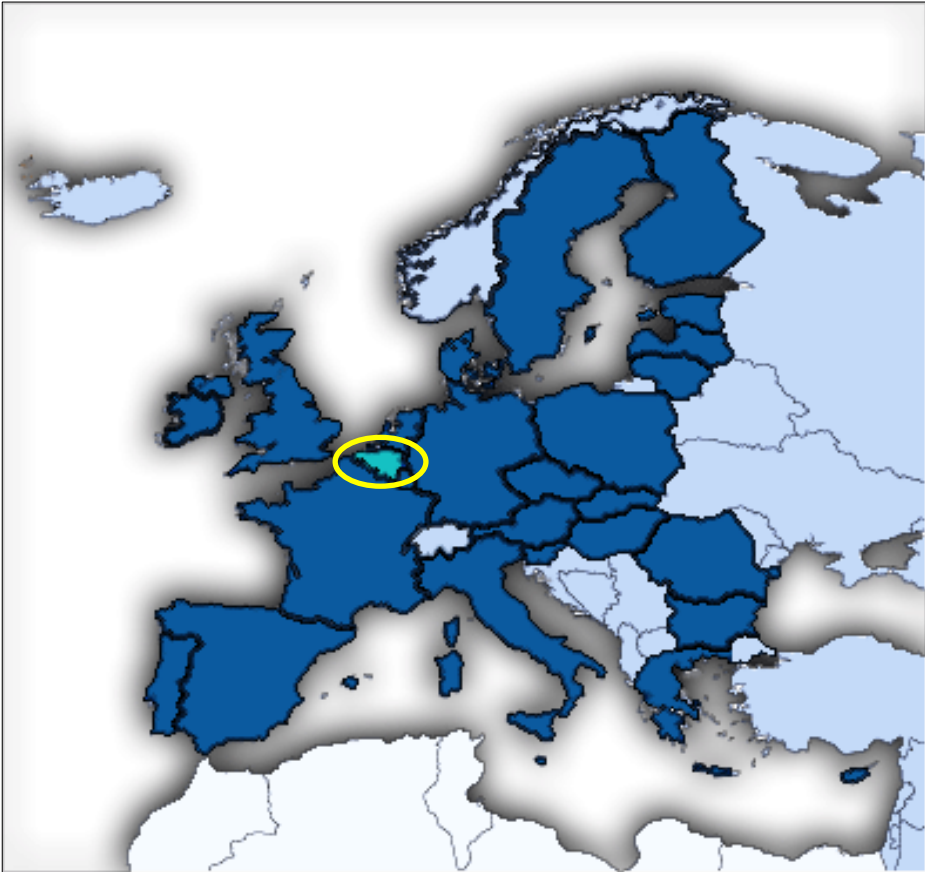


2013 - 2016



Agency for Innovation by Science and Technology

# Threats to the UCH within the Belgian part of the North Sea



# Commercial activities



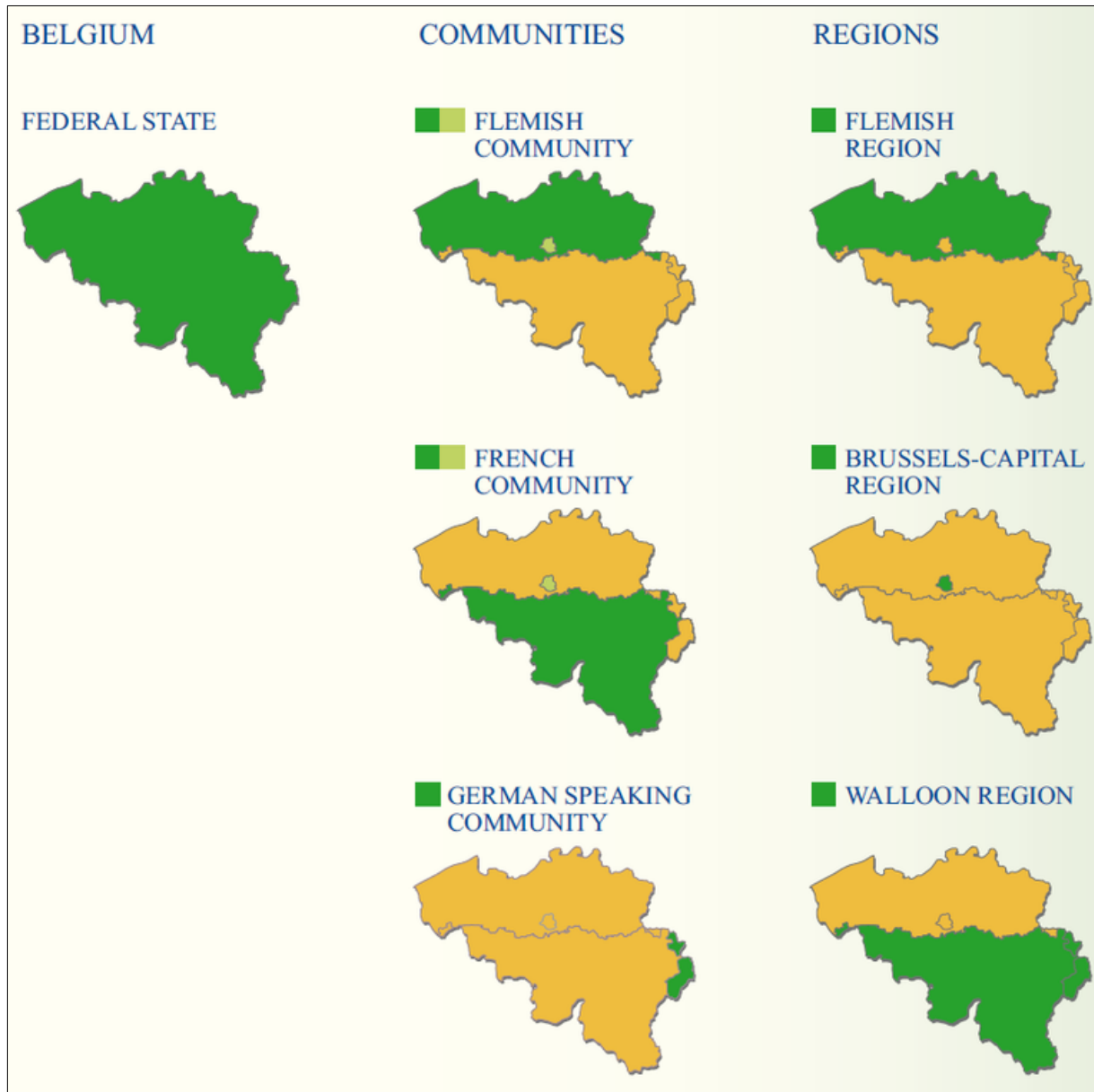
# Lack of regulations regarding UCH



?



# Complex state structure in Belgium



# Main objectives

## **1) Technology / Methodology**

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, and intertidal areas).

## **2) Management / Policy**

To develop a transparent and sustainable management policy and legal framework in Belgium regarding the marine historic environment.

## **3) Outreach / Communication**

To develop practical guidance towards the stakeholders (marine industry, fisheries, government agencies, harbor authorities, ...), on how to implement the new methodology and management approach, and to increase the general awareness with regards to UCH.

## Project Partners



## Subcontractors



## **Stakeholders & Advisory committees**

- Government agencies
- Marine Industry (dredging, aggregates, renewable energy...)
- Fisheries
- Harbour authorities
- Scientific world
- Public/social sector
- ...

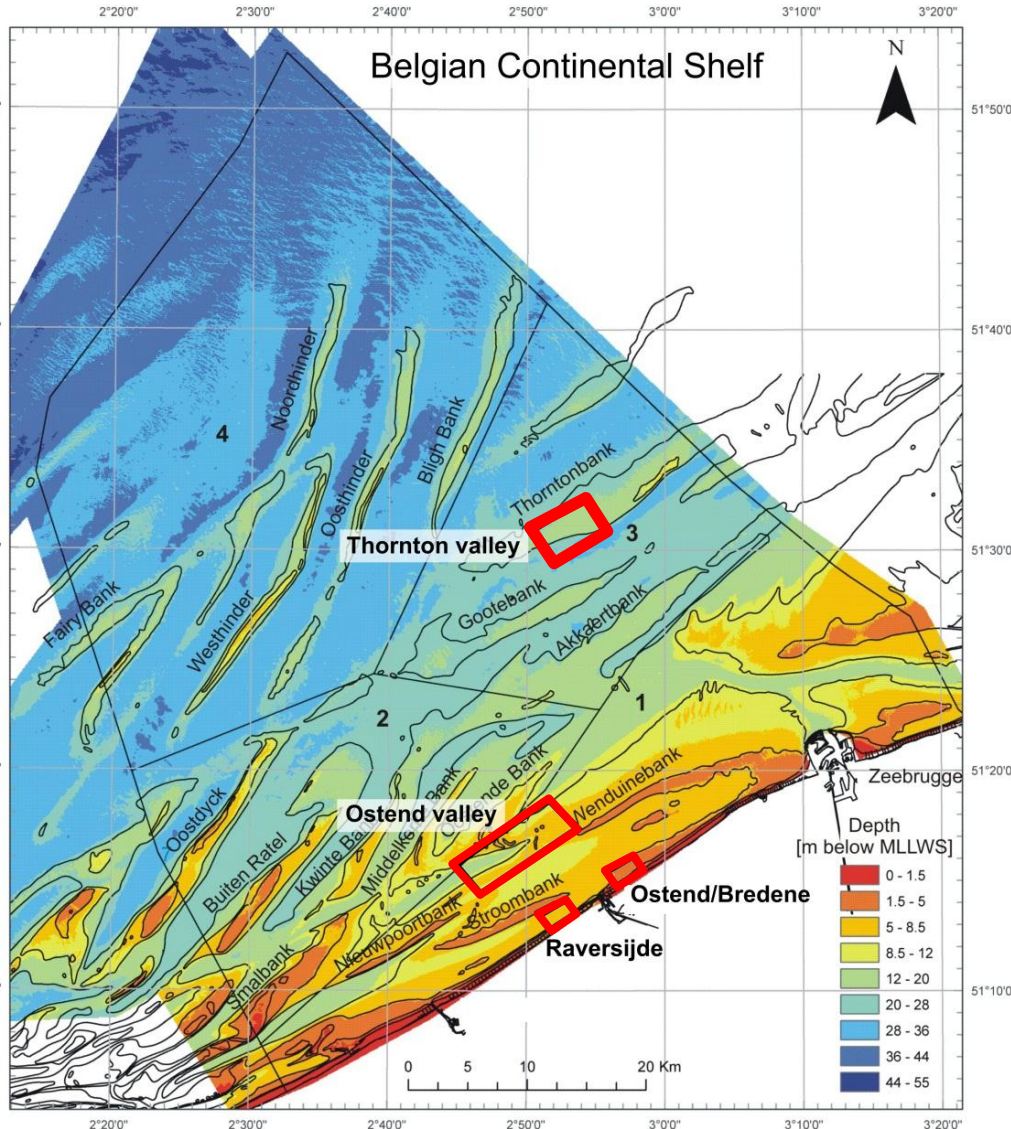


# Results so far

## 1) Technology

- Assessment of the geophysical & remote sensing technology (offshore + intertidal)
- Study of the archaeological & geological data
- Selection of test sites
- Survey planning

# Selection of testsites



Criteria:

- Variation in depth
- Sediments types
- Expected archaeology/materials
- Available ground-truth

2 offshore sites

2 intertidal sites

## **Survey October 2013,**

Ostend valley (offshore)

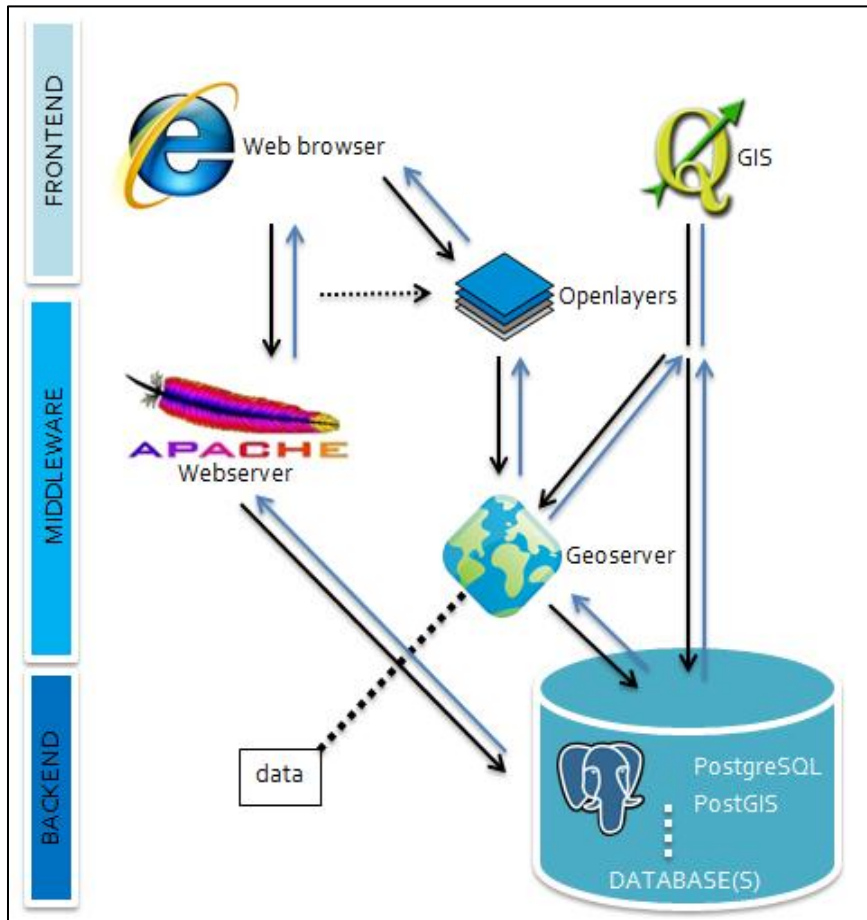
- Wide range of acoustic sources and receivers (single- & multichannel)
- Where possible simultaneously ('one-sweep survey'),
- Gas + gas-free areas
- Emphasis on advanced ('smart') processing

## **Winter 2013-2014**

Nearshore /Intertidal research with focus on

- Integration LIDAR and bathymetry
- S-waves and surface waves (in view of gas-rich sediments)

# GIS based Spatial Data Infrastructure



Archaeological, geological, geophysical, remote sensing... data & metadata

Project partners, stakeholders and external parties...

Consult and visualize the available data via a user friendly interface & WebGIS

-Strong tool for scientific research

-Basis of a Decision Support System

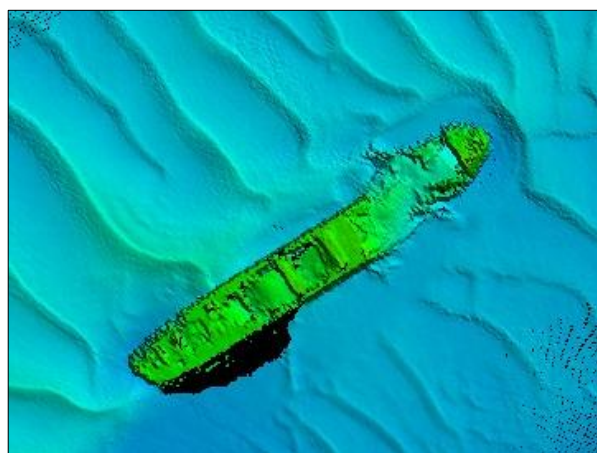
(Licensing & monitoring)

## **Results so far**

### **2) Management**

- large scale consultation of all stakeholders.
- Integration of UCH protection into Belgian Marine Spatial Planning
- Find Protocols

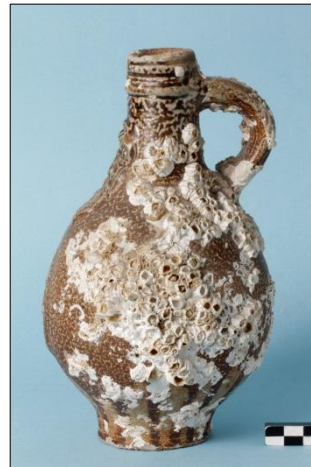
# Protocols for archaeological discoveries











# Results so far

## 3) Outreach

-Increase general awareness regarding the UCH (Continues dissemination)

-Lectures, project leaflets, poster, website....

-Visiting vessels, wharves, harbours...

-...





[www.sea-arch.be](http://www.sea-arch.be)