

ENHANCING HNS PREPAREDNESS THROUGH TRAINING AND EXERCISING

MARINER



Project overview

Using technology towards a better preparedness to HNS spills

28th April 2017. CIIMAR, Porto



Funded by
European Union
Humanitarian Aid

Background

- The transportation of chemicals has grown considerably in the recent years (estimated 215 Million tonnes in 2015 ([source](#)));
- Approximately 2,000 different chemicals are transported by sea ([source](#));
- **Accidents involving chemicals happen:** Around 100 incidents happened in European waters between 1987 and 2006. (EMSA, [Source](#)).
- **HNS spills pose risks to the environment and human health;**
- **HNS response can be extremely challenging**
- **Fragmented research on HNS preparedness and response.**

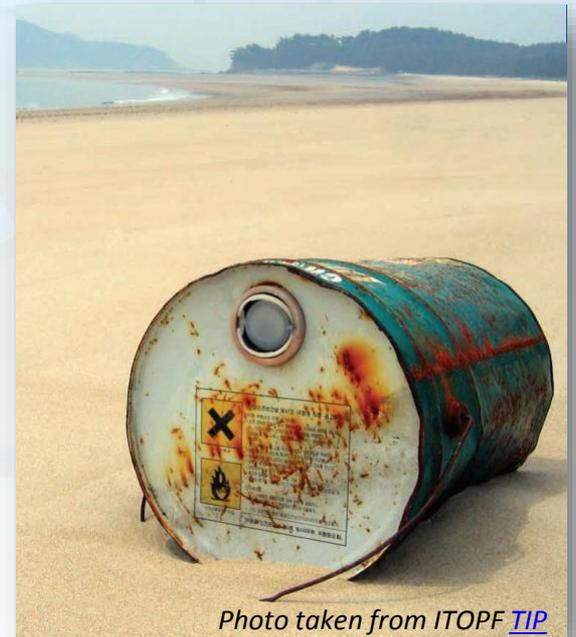


Photo taken from ITOPF [TIP](#)

Project bullet points

Objective:

Improve regional cooperation in planning, preparedness and response to HNS spills by:

- Compiling HNS R&D outcomes and making them accessible to planners, responders and other stakeholders
- Improving training and exercise capabilities;
- Upgrading and/or improving tools to support decision making and response;
- Increasing awareness and encouraging information exchange.

Co-financing Programme: Call 2015 for prevention and preparedness projects in the field of civil protection and marine pollution. DG-ECHO.

Policy area of activity: Preparedness.

Start date: 1st January 2016

End date: 31st December 2017

European Commission contribution: 748.910 EUR (75 %)

Total budget: 998.547 EUR



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Partners



1. Centro Tecnológico del Mar – Fundación CETMAR [Link](#) *Coordinator*
2. INTECMAR - Instituto Tecnológico para o Control do Medio Mariño de Galicia [Link](#)
3. Universidade de Vigo [Link](#)



4. Action Modulers [Link](#)
5. CIIMAR: Interdisciplinary Centre of Marine and Environmental Research [Link](#)



6. Public Health England [Link](#)



7. Cedre - Centre of Documentation, Research and Experimentation on Accidental Water Pollution [Link](#)



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Advisory Board



1. **Salvamento Marítimo - Sasemar**
2. **Ministry of Agriculture and Fisheries, Food and Environment. Sea Protection Division**
3. **Galician Coastguards**



4. **Maritime Authority Directorate General. Marine Pollution Response Directorate**



5. **Maritime & Coastguard Agency**

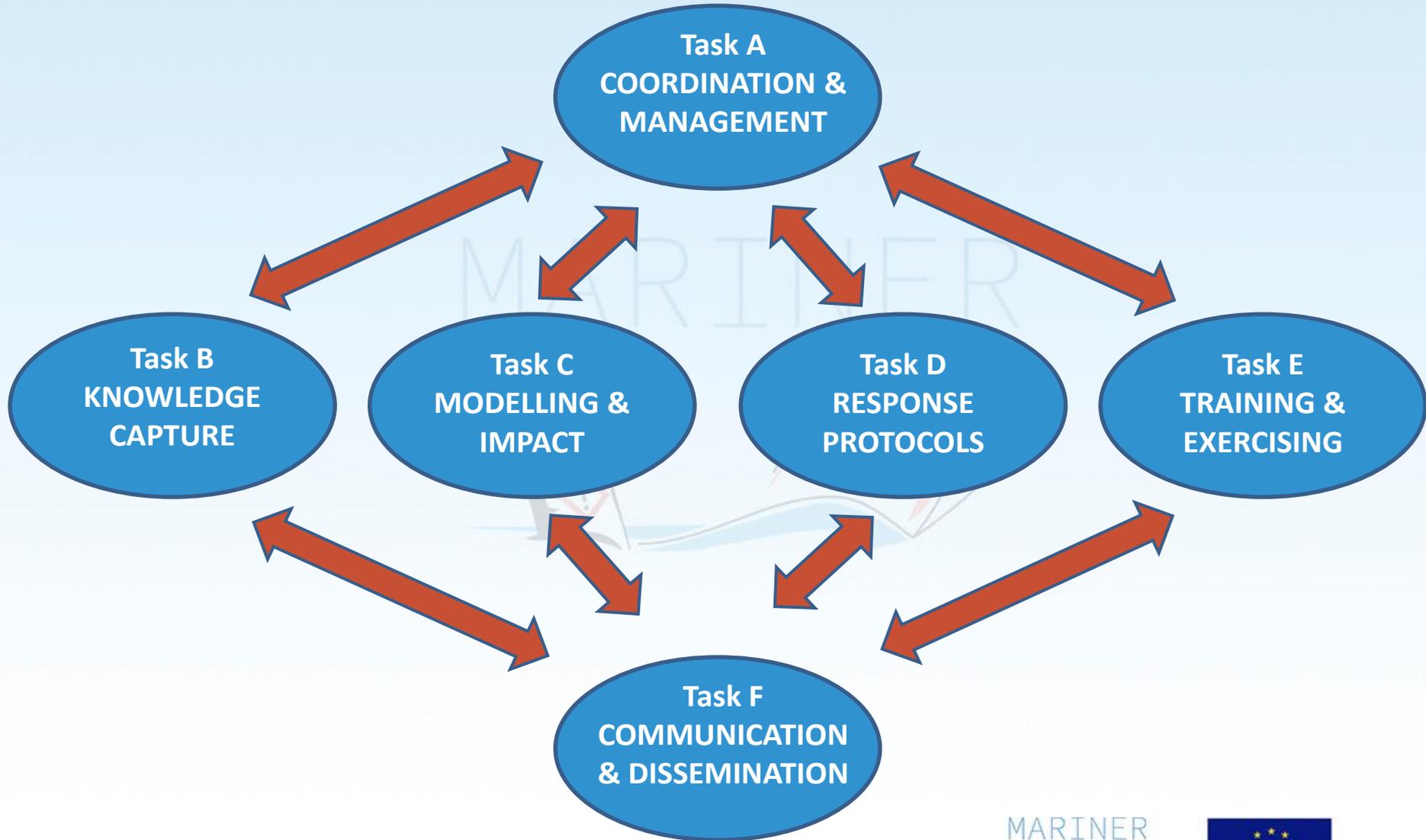


6. **Secretariat General for the Sea**



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Project tasks



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HNS knowledge compilation & facilitation

Specific objective:

Identify and compile existing HNS preparedness and response knowledge generated by EU funded public research as well as existing resources and make them easy available to end users through a user friendly tool connected to existing platforms and by targeted transfer actions.

Manager: CETMAR

Participants: All

Main results :

- A user friendly visualization and knowledge management **tool gathering all relevant information addressing key issues on HNS.**
- Set of **graphical materials.**
- **Key outputs transferred.**



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HNS modelling and environmental impact

Specific objective:

- Improve the interoperability and the operational use of tools for modelling HNS transport, behaviour and biological impact;
- Definition of protocols and guidelines for environmental impact assessment of HNS spills.



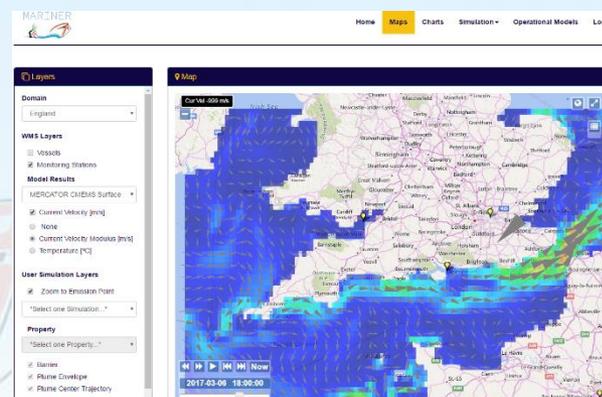
Manager: Action Modulers.

Participants: INTECMAR, CIIMAR, CEDRE, Uvigo.

Main results

- Improved **HNS spill model integrated into a Common Operating Picture**. Includes a module on environmental effects at population level..

- Cross border guidelines and **protocols for HNS environmental impact assessment**.



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HNS response – seeking synergies with experts

Specific objective:

- Identification of existing expertise from chemical industry, civil protection mechanisms and fire's crews and their main response protocols and equipment to be adapted for marine events.
- Development of Good Practices and training and exercise activities to test protocols and new equipment with antipollution vessels operating in coastal areas.

Manager: INTECMAR.

Participants: CEDRE, PHE, CIIMAR, AM, Uvigo.

Main results

- **Adapted equipment and response protocols to be included in contingency plans**
- **Training and exercise events to test the adapted protocols in specialized antipollution vessels.**
- **Multilingual video on training**



HNS training and exercising

Specific objective:

- Develop and trial an innovative training and exercise software tool aimed at shoreline maritime HNS incident preparedness for public health protection.
- Apply and incorporate EU and international cross-border preparedness protocols within exercise scenarios.
- Develop training materials packages and delivery of courses addressed to cover key issues of HNS preparedness and response, including modelling .

Manager: Public Health England.

Participants: CEDRE, Uvigo, AM, CIIMAR, INTECMAR.

Main results:

- **Web based database exercise tool.**
- **E-learning materials on exercises and risk assessment.**
- **Training package on HNS spill management.**
- **Training package on HNS modelling.**



Communication

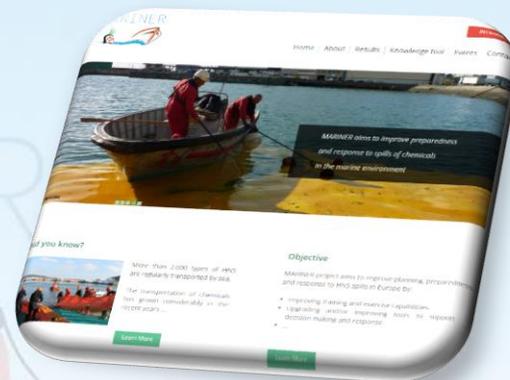
Specific objectives:

Transfer project outputs to competent authorities through targeted actions and to raise awareness among the general public.



Main results:

- **Website:** www.mariner-project.eu
- **Twitter:** [@MARINER_HNS](https://twitter.com/MARINER_HNS)
- **Workshops:**
 - **Matosinhos (PT).** “Using Technology towards a better preparedness to HNS spills”. 28th April 2017.
 - **Wales (UK).** Presentation of the web based database exercise tool and training session. 28th June 2017.
 - **Brest (FR).** Training course on HNS spill management. 12th – 14th September 2017.
- **Final Conference: Vigo (ES).** December 2017.
- **Introductory video:** [link](#)



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Project results

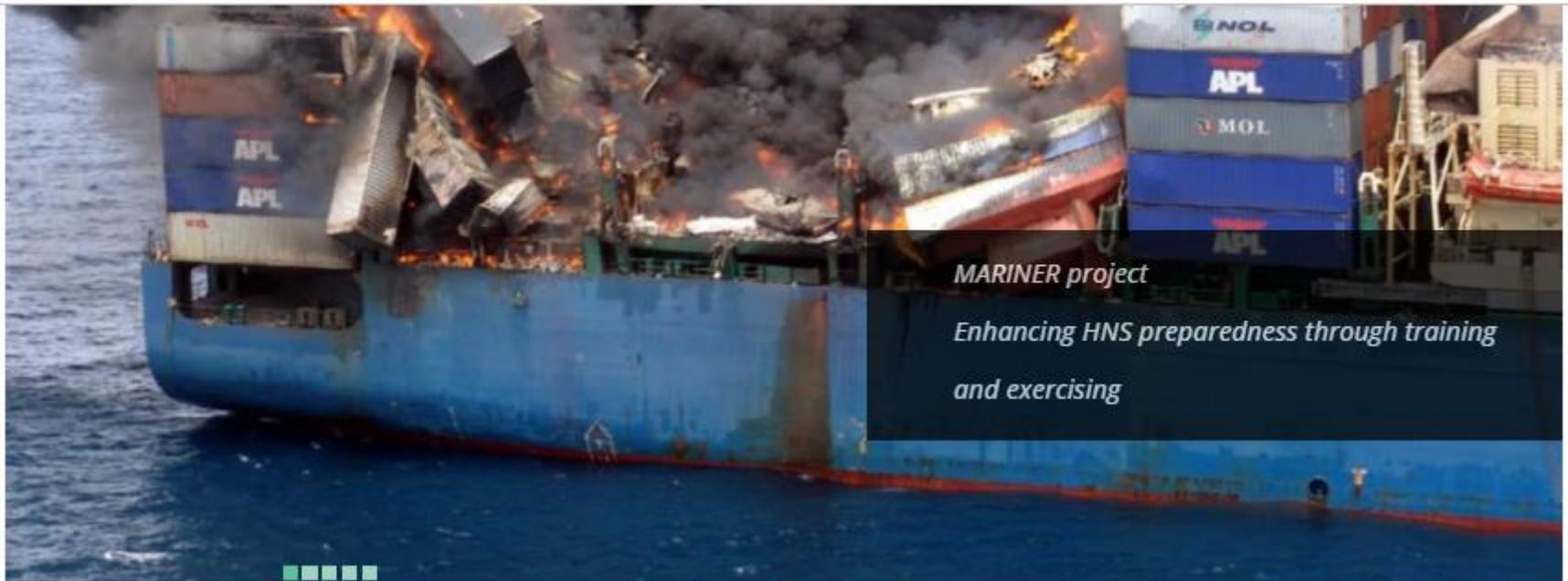
www.mariner-project.eu

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INTRANET

Home | About | Results | Knowledge tool | Events | Contact



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Project results

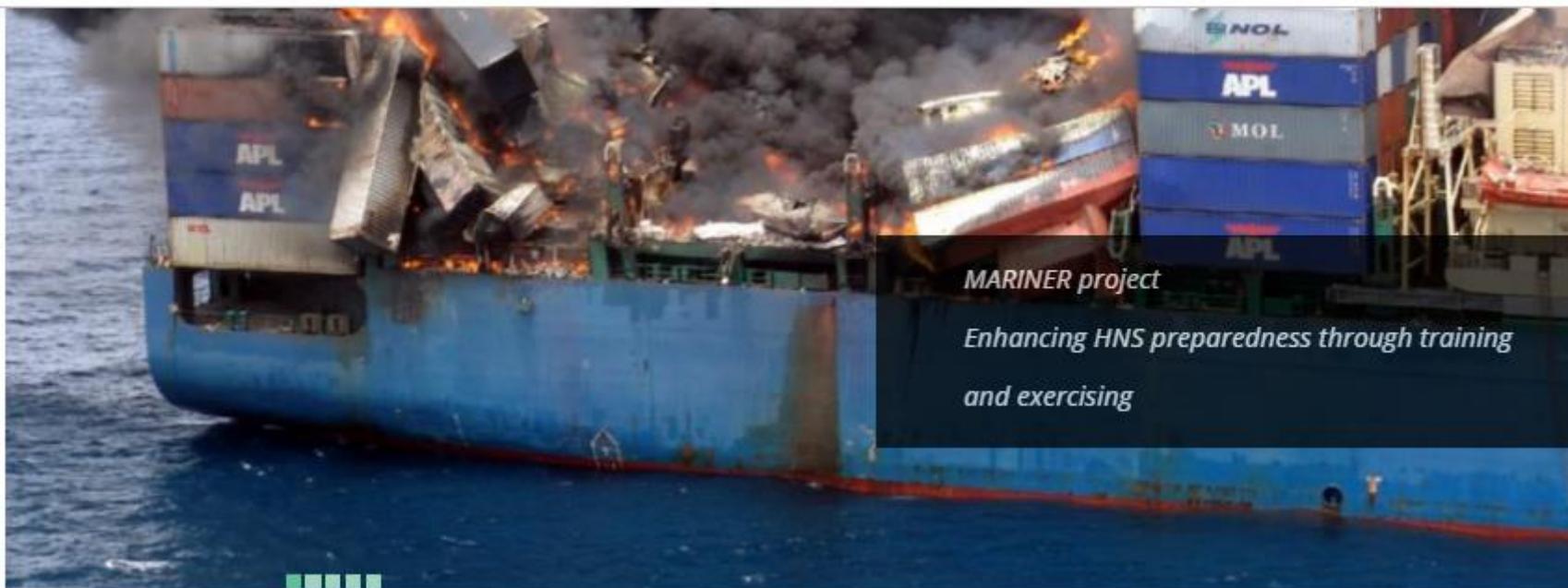
www.mariner-project.eu

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HNS knowledge compilation & facilitation

Resources recorded: 440

- **Sourced from projects: 298**
 - Number of projects assessed: 44
- **Sourced from organisations: 142**
 - Number of organisations: 28

Title	Summary	Authors	Status	Date of publication	# of publications	Availability	Link to NO/Resource	Target environment
1 Regional Resource Database	A database of regional information on traffic, cargo, maritime use, future developments and risk reduction measures to underpin the risk assessment for marine pollution (shore oil and HNS)	BE-AVARE project partners	Completed	Unknown	Unknown	No	http://www.be-avare.eu/avare-portal/avare-portal.html	Marine/Costal Environment
2 Data request note	Requirement of the BE-AVARE project is a need for the Bonn Secretariat and the project partners, who intend the corresponding data for feeding the project database. This report does not only describe the type of data requested but also the precise data format. Due to the large variety of national databases, it is essential for the project that the indicated formatting requirements are followed.	BE-AVARE project partners	Completed	map C/No		Yes	http://www.be-avare.eu/avare-portal/avare-portal.html	Marine/Costal Environment
3 Methodology for risk assessment of marine pollution (shore oil and hazardous and noxious substances, HNS)	The key element that was addressed by the methodology included ship traffic, classification of oil spill response mode, traffic prognosis, frequency and quantity of oil spills, oil spill related to offshore installations, hazard identification, determination of consequence and the qualitative analysis of HNS risks.	BE-AVARE project partners	Completed	August 2012	No	Yes	http://www.be-avare.eu/avare-portal/avare-portal.html	Marine/Costal Environment
4 Report on current and future traffic densities and use of the maritime space in the region	For a better traffic prognosis, existing traffic patterns and densities were established. This was done by using AIS data to more precisely identify and then drawing a picture for the identified area area. The resulting traffic model was eventually a baseline rate covering all identified routes.	ABBA MARIT	Completed	February 2014	No	Yes	http://www.be-avare.eu/avare-portal/avare-portal.html	Marine/Costal Environment
5 Development of an Environmental and Socioeconomic Security Methodology	For a better traffic prognosis, existing traffic patterns and densities were established. This was done by using AIS data to more precisely identify and then drawing a picture for the identified area area. The resulting traffic model was eventually a baseline rate covering all identified routes.	TRISYS SCHALLER	Completed	November 2013	No	Yes	http://www.be-avare.eu/avare-portal/avare-portal.html	Marine/Costal Environment
6 HNS risk evaluation report	Check top study of marine pollution (shore oil and HNS) transported in bulk and as pack aged goods. The report of HNS in the Bonn-Agreement area is based on a qualitative risk assessment approach in order to identify HNS risk assessment and the regional resource database. The report includes a general description of the potential impact of and	J. M. Van Duyn, E. van Beren	Completed	March 2014	No	Yes	http://www.be-avare.eu/avare-portal/avare-portal.html	Marine/Costal Environment
7 Existing and desired risk reducing measures	This technical report is a risk reduction measures in the order Bonn Sea Area and those that most likely will be implemented by 2020.	Intermaritime (ICOM), Magdalena (IMO), (ICOM), Carsten T. V. B.	Completed	February 2014	No	Yes	http://www.be-avare.eu/avare-portal/avare-portal.html	Marine/Costal Environment

Database:

- Title
- Link
- Type
- Potential applicability
- Summary
- Target environment
- Potential end user
- Geographical scope
- Authors
- Area of knowledge
- Language

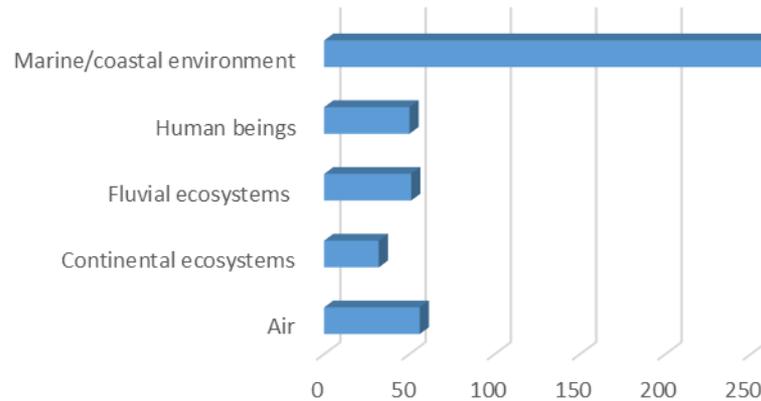


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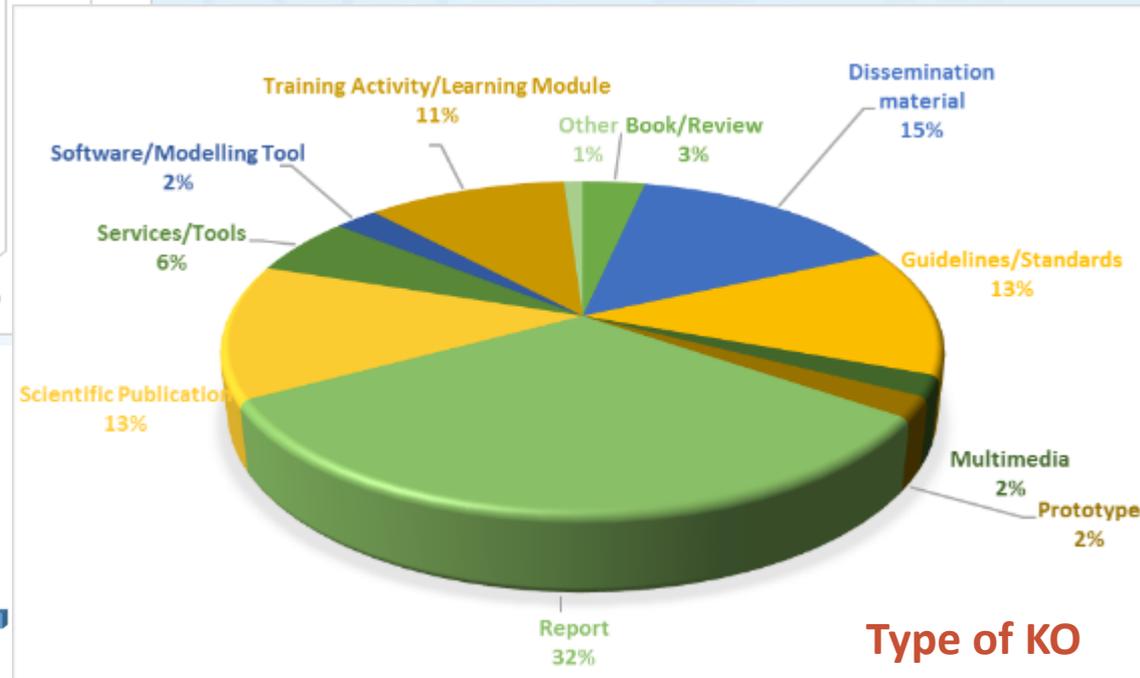
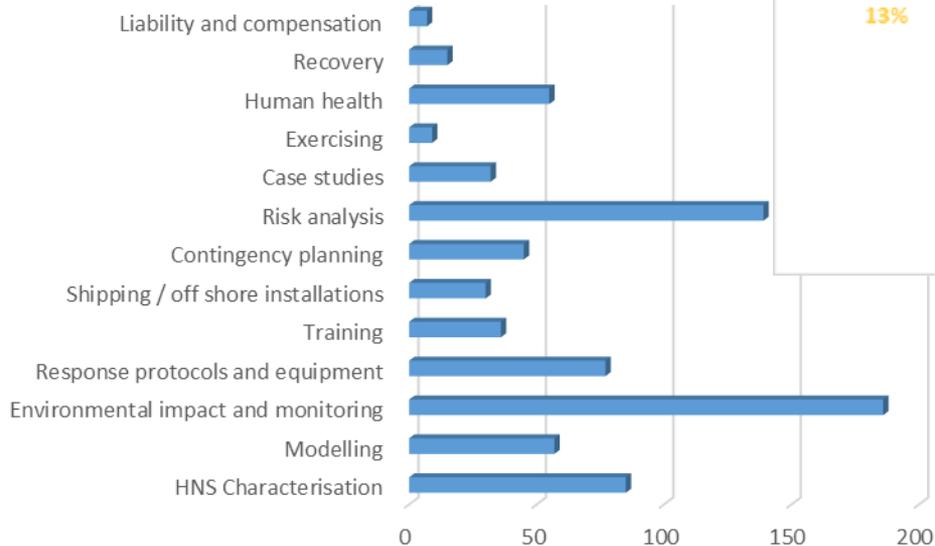
HNS knowledge compilation & facilitation

SOURCE: Projects

Target environment



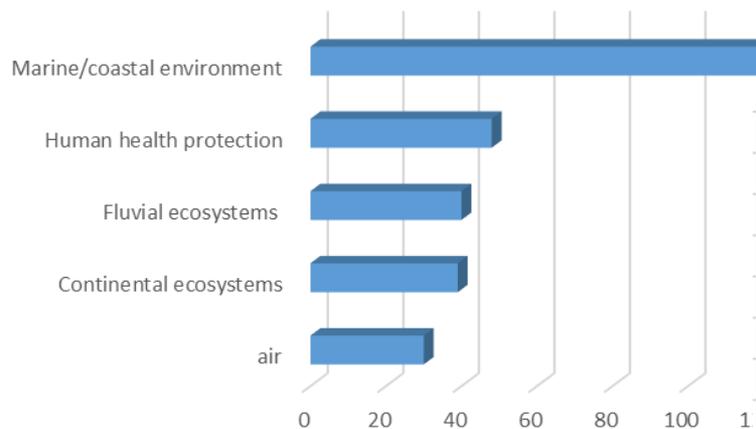
Areas of knowledge



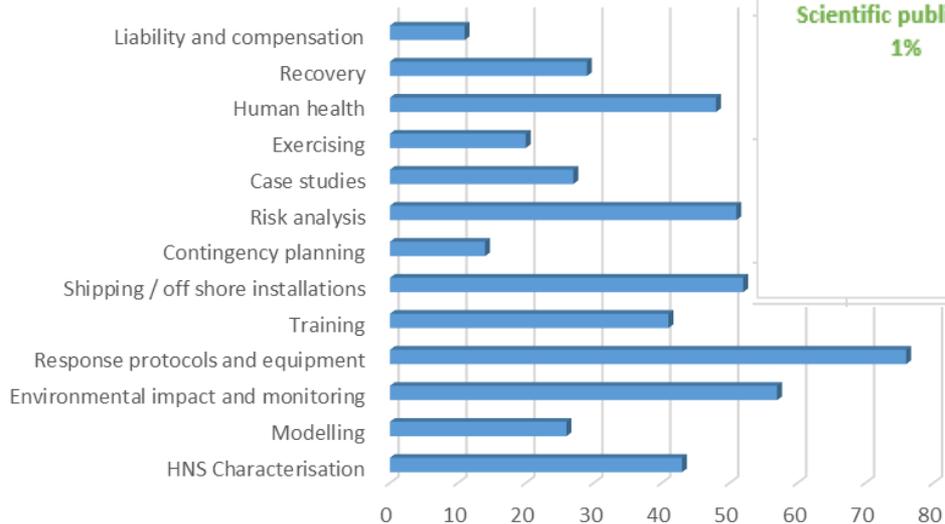
HNS knowledge compilation & facilitation

SOURCE: Organisations

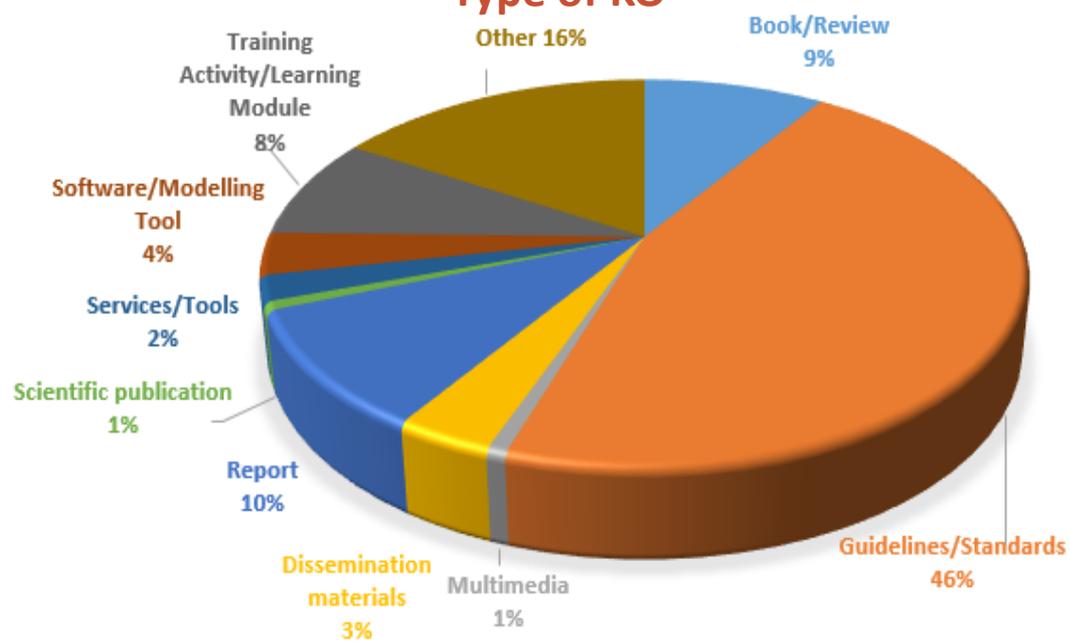
Target environment



Areas of knowledge



Type of KO



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HNS knowledge compilation & facilitation

Online knowledge tool

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HOME ABOUT PROJECTS ORGANISATIONS KNOWLEDGE OUTPUTS CONTACT HELP

MARINER Knowledge tool

Projects
National and EU projects

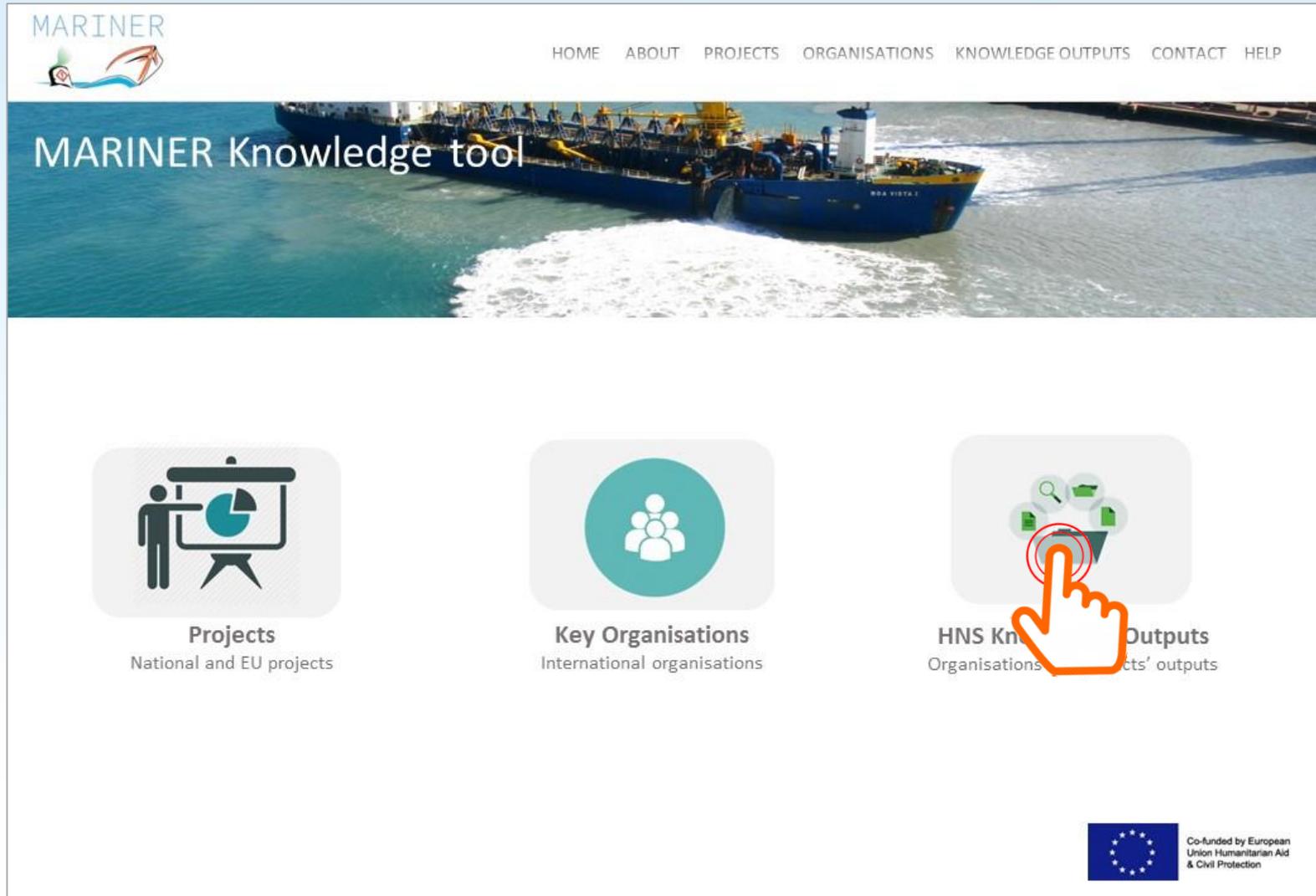
Key Organisations
International organisations

HNS Knowledge Outputs
Organisations and projects' outputs

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HNS knowledge compilation & facilitation

Online knowledge tool



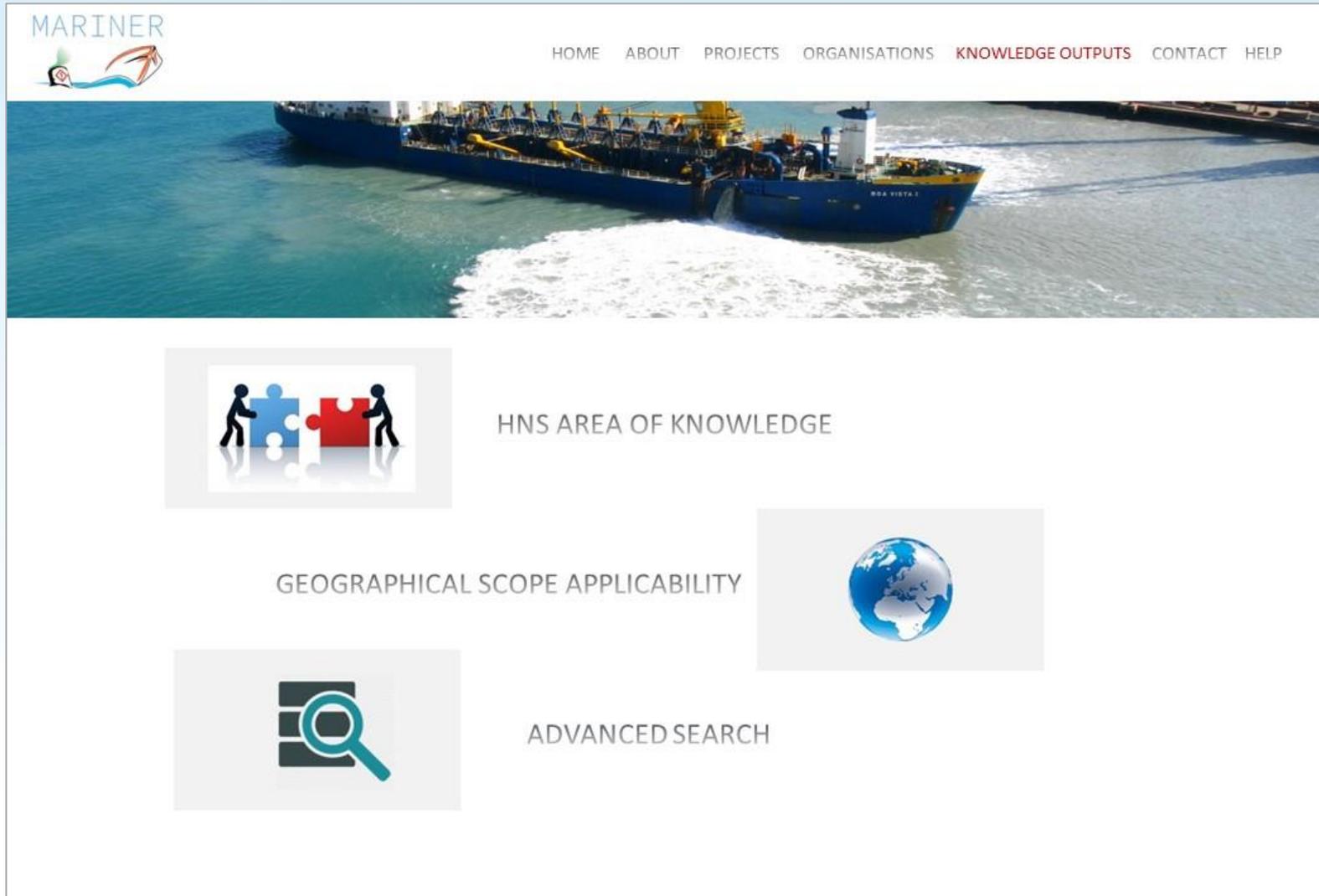
The screenshot shows the MARINER Knowledge tool website. At the top left is the MARINER logo, which includes a stylized figure and a red ribbon. To the right of the logo is a navigation menu with the following items: HOME, ABOUT, PROJECTS, ORGANISATIONS, KNOWLEDGE OUTPUTS, CONTACT, and HELP. Below the navigation menu is a large banner image of a blue ship at sea, with the text "MARINER Knowledge tool" overlaid in white. Below the banner are three main content areas, each with an icon and a title:

- Projects**: National and EU projects. The icon shows a person standing next to a presentation board with a pie chart.
- Key Organisations**: International organisations. The icon shows a group of three stylized human figures inside a teal circle.
- HNS Knowledge Outputs**: Organisations' outputs. The icon shows a hand cursor pointing at a document with a magnifying glass and other symbols.

At the bottom right of the page is the European Union flag logo and the text: "Co-funded by European Union Humanitarian Aid & Civil Protection".

HNS knowledge compilation & facilitation

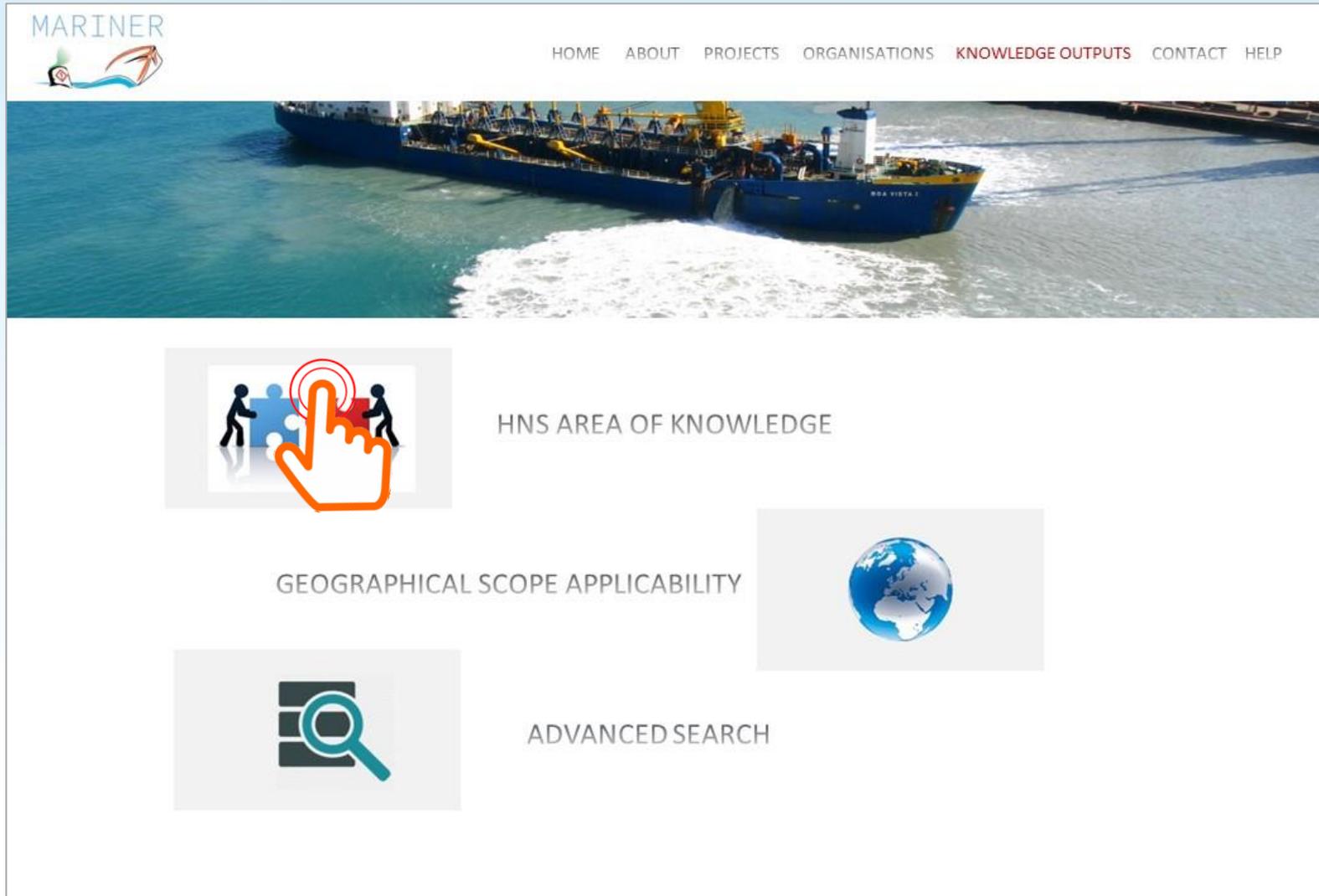
Online knowledge tool



The screenshot displays the MARINER website interface. At the top left is the MARINER logo, which includes a stylized figure and a blue wave. To the right of the logo is a navigation menu with the following items: HOME, ABOUT, PROJECTS, ORGANISATIONS, KNOWLEDGE OUTPUTS (highlighted in red), CONTACT, and HELP. Below the navigation menu is a large banner image of a blue offshore supply vessel, the ROA VISTA I, moving through the water. The main content area features three interactive buttons: 1. A button with an icon of two figures placing puzzle pieces, labeled 'HNS AREA OF KNOWLEDGE'. 2. A button with a globe icon, labeled 'GEOGRAPHICAL SCOPE APPLICABILITY'. 3. A button with a magnifying glass icon over a list, labeled 'ADVANCED SEARCH'.

HNS knowledge compilation & facilitation

Online knowledge tool



The screenshot displays the MARINER website interface. At the top left is the MARINER logo, which includes a stylized orange and blue figure. To the right of the logo is a navigation menu with the following items: HOME, ABOUT, PROJECTS, ORGANISATIONS, KNOWLEDGE OUTPUTS (highlighted in red), CONTACT, and HELP. Below the navigation menu is a large photograph of a blue offshore supply vessel, the ROA VISTA 1, moving through the water. The main content area features three interactive buttons: 1. 'HNS AREA OF KNOWLEDGE' with an icon of two people and a hand pointing at a puzzle piece. 2. 'GEOGRAPHICAL SCOPE APPLICABILITY' with an icon of a globe. 3. 'ADVANCED SEARCH' with an icon of a magnifying glass over a document.

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HOME ABOUT PROJECTS ORGANISATIONS **KNOWLEDGE OUTPUTS** CONTACT HELP

ROA VISTA 1

HNS AREA OF KNOWLEDGE

GEOGRAPHICAL SCOPE APPLICABILITY

ADVANCED SEARCH

HNS knowledge compilation & facilitation

Online knowledge tool



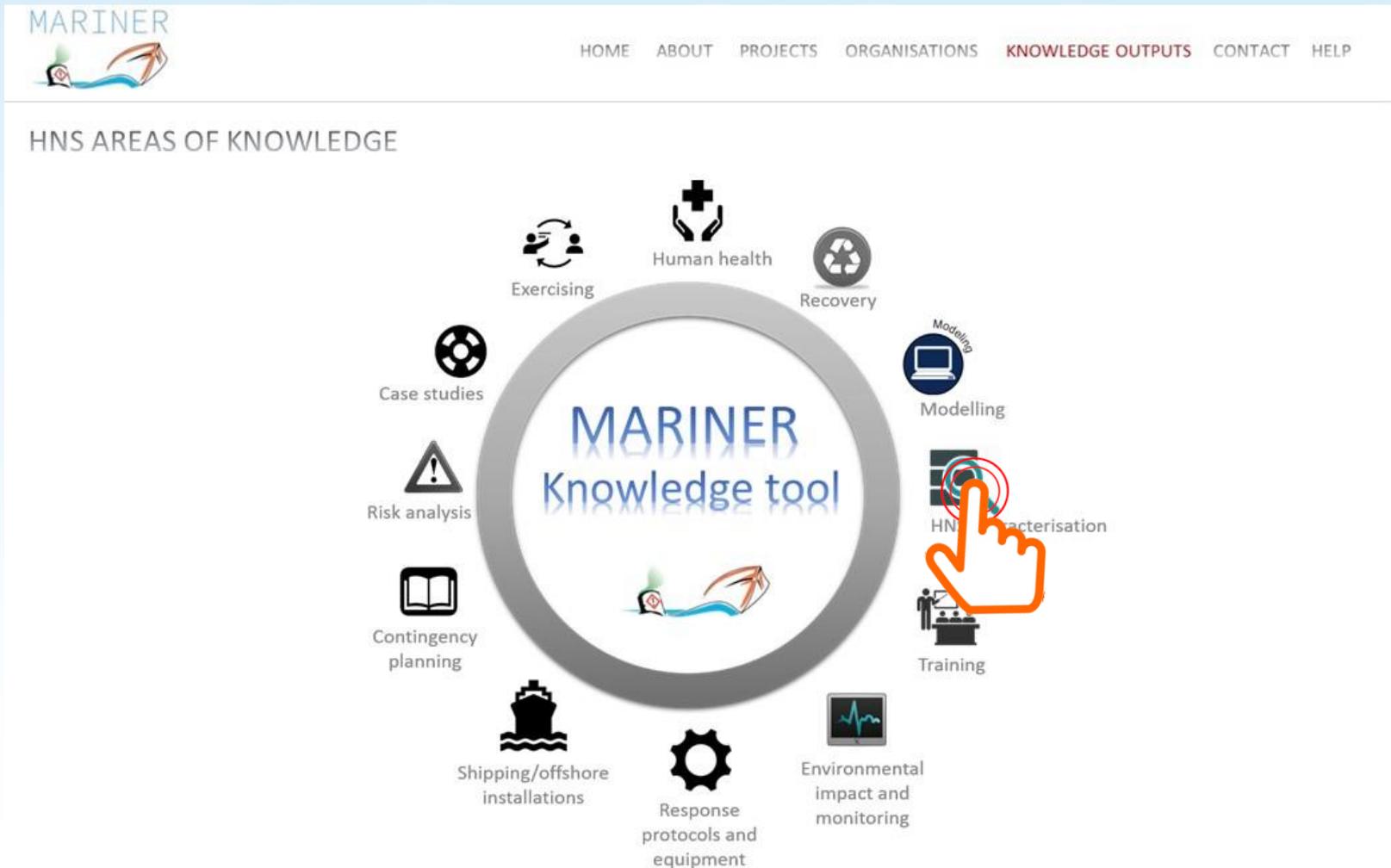
[HOME](#) [ABOUT](#) [PROJECTS](#) [ORGANISATIONS](#) **[KNOWLEDGE OUTPUTS](#)** [CONTACT](#) [HELP](#)

HNS AREAS OF KNOWLEDGE



HNS knowledge compilation & facilitation

Online knowledge tool



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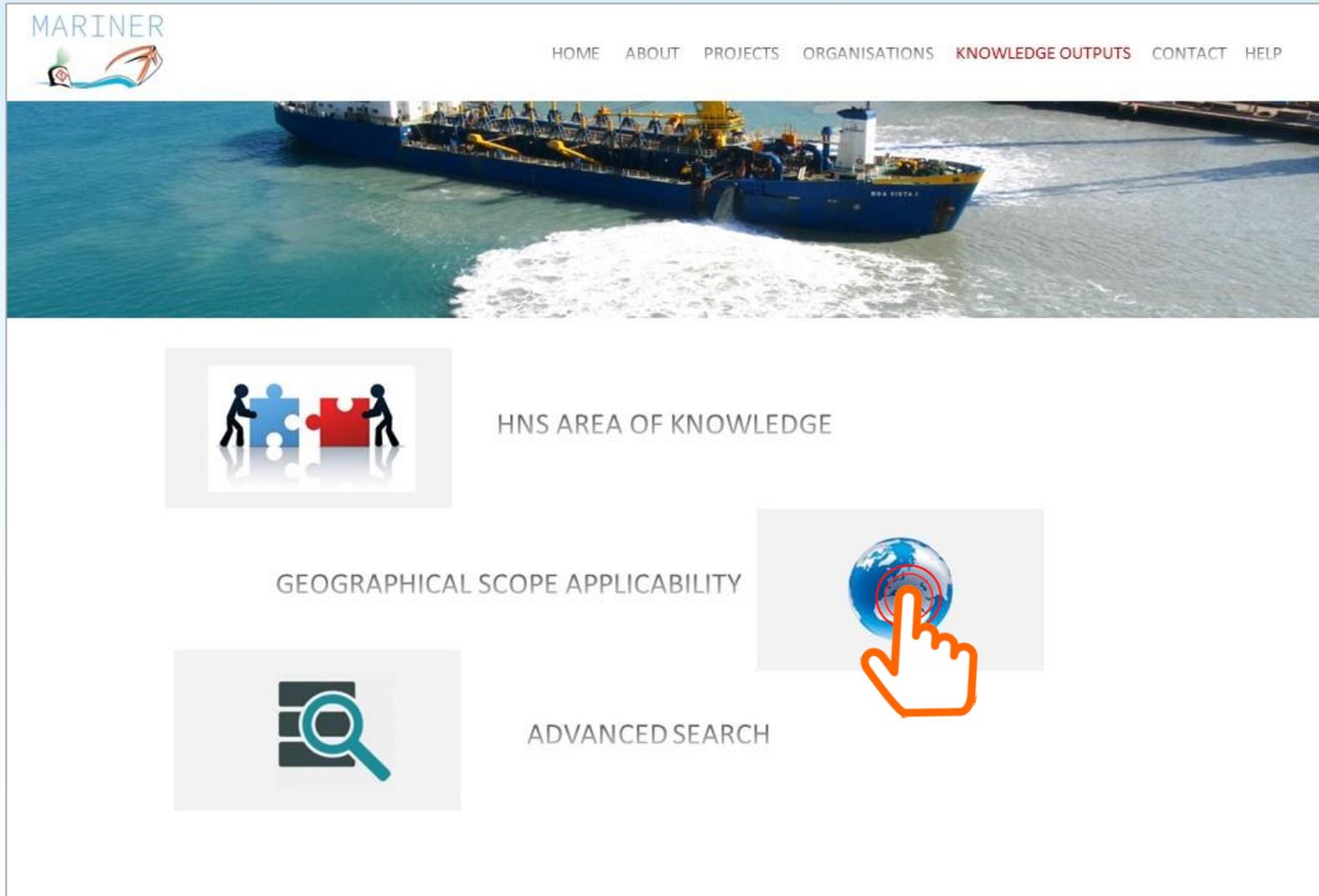
HOME ABOUT PROJECTS ORGANISATIONS **KNOWLEDGE OUTPUTS** CONTACT HELP

HNS AREAS OF KNOWLEDGE



HNS knowledge compilation & facilitation

Online knowledge tool



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HNS knowledge compilation & facilitation

Online knowledge tool

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HOME ABOUT PROJECTS ORGANISATIONS KNOWLEDGE OUTPUTS CONTACT HELP

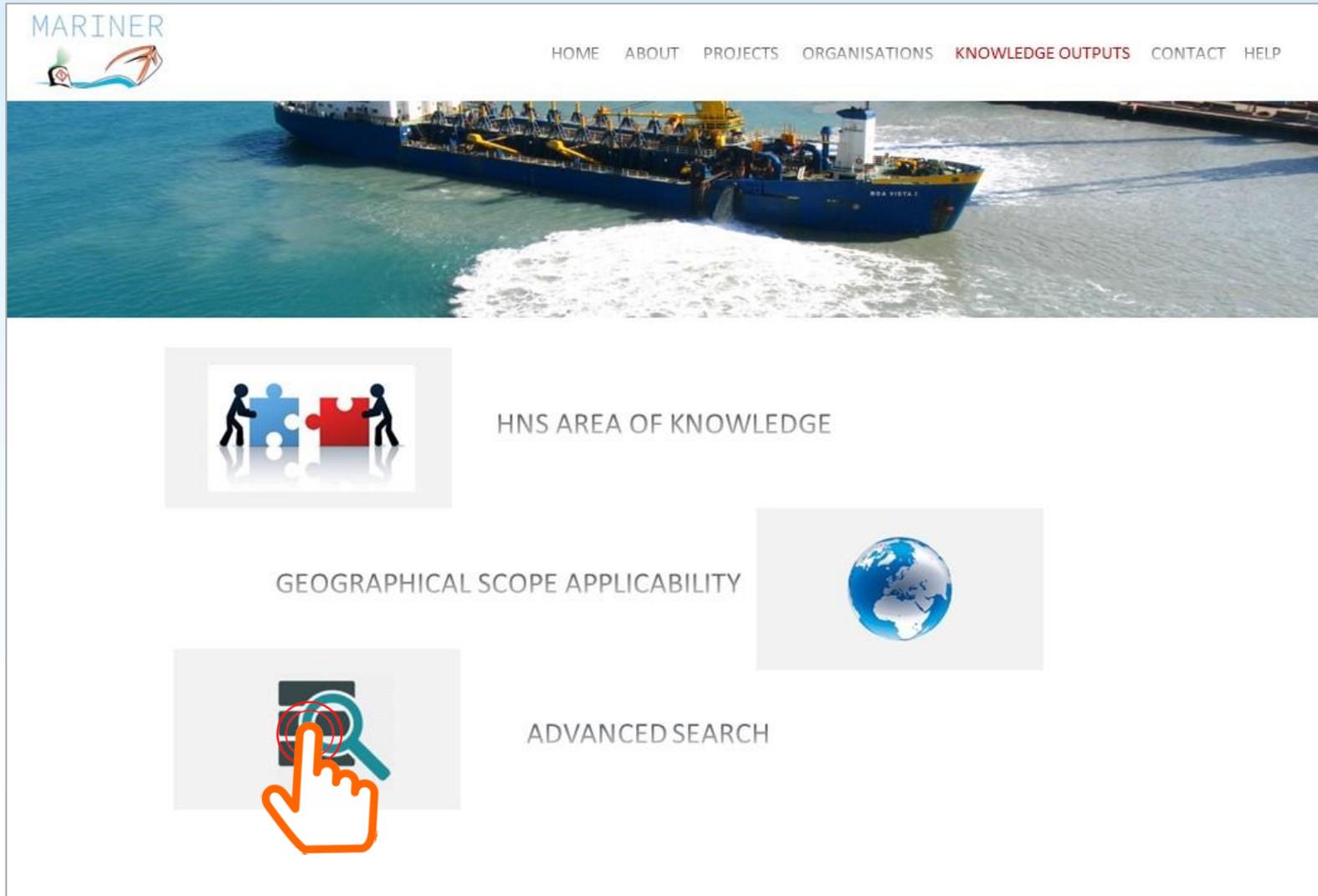
GEOGRAPHICAL SCOPE AVAILABILITY



(*) Taken from MEECE FP7 Project website (<http://www.meeceatlas.eu/Menu/>)

HNS knowledge compilation & facilitation

Online knowledge tool



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HOME ABOUT PROJECTS ORGANISATIONS **KNOWLEDGE OUTPUTS** CONTACT HELP

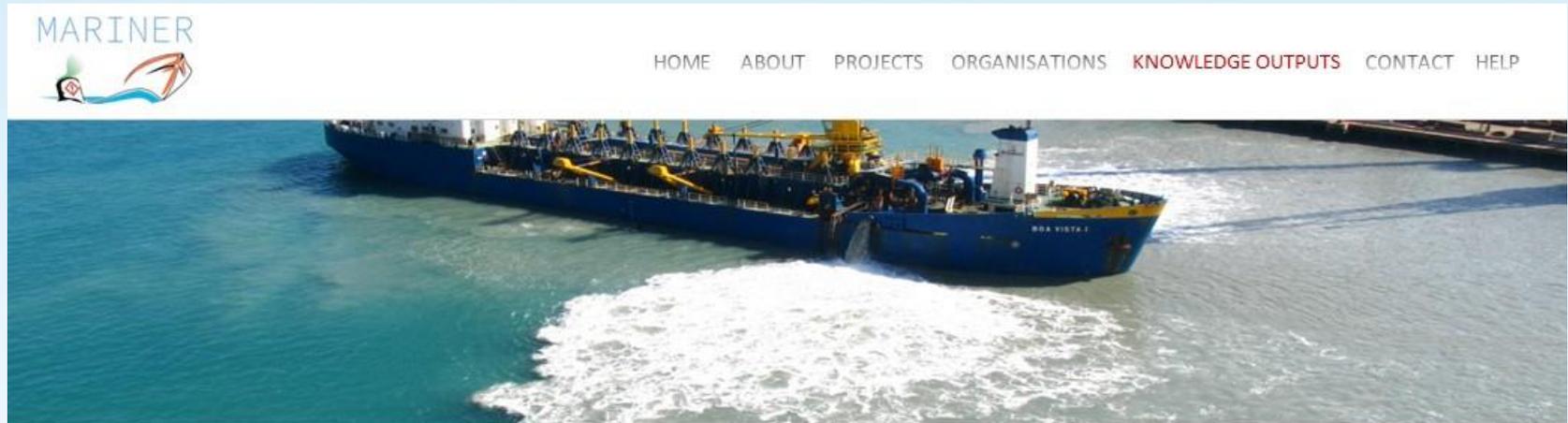
HNS AREA OF KNOWLEDGE

GEOGRAPHICAL SCOPE APPLICABILITY

ADVANCED SEARCH

HNS knowledge compilation & facilitation

Online knowledge tool



ADVANCED SEARCH

Free search

Target environment <input type="button" value="?"/> <input type="text" value="Select environment"/>	Geographical scope applicability <input <br="" type="button" value="?"/> <input type="text" value="Select area"/>
HNS areas of knowledge <input <br="" type="button" value="?"/> <input type="text" value="Select area"/>	Potential end-users <input <br="" type="button" value="?"/> <input type="text" value="Select end-users"/>
Type of resource <input <br="" type="button" value="?"/> <input type="text" value="Select type"/>	Language <input <br="" type="button" value="?"/> <input type="text" value="Select language"/>

(*) Modified from OBIS online database (www.iobis.org)

Thank you!

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For further information, do not hesitate to contact:

- Marisa Fernández: mfernandez@cetmar.org
- Patricia Pérez: pperez@cetmar.org



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