

ENHANCING HNS PREPAREDNESS THROUGH TRAINING AND EXERCISING

MARINER



Project overview

UK MARINER Workshop. 28th June 2017. Cardiff

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;**
- **Fragmented research on HNS preparedness and response.**

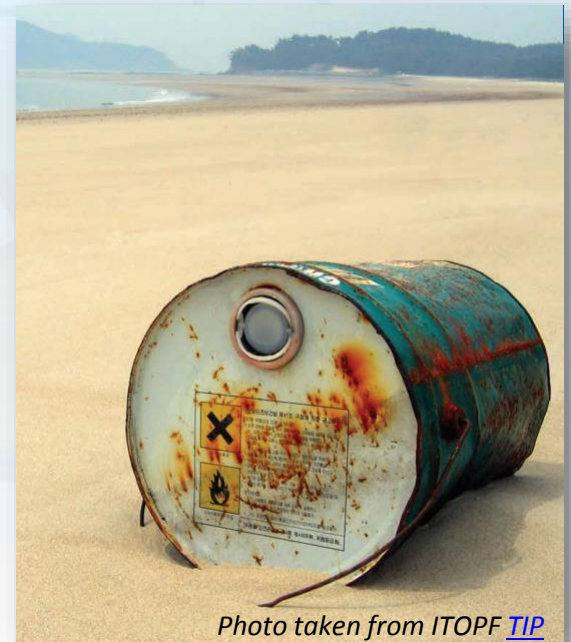


Photo taken from ITOPF [TIP](#)

Project bullet points

Objective:

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

- Capitalizing and translating relevant HNS R&D outcomes into operational resources applicable by planners and responders;
- Improving training and exercising 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



Partners



1. Centro Tecnológico del Mar – Fundación CETMAR [Link](#)
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**

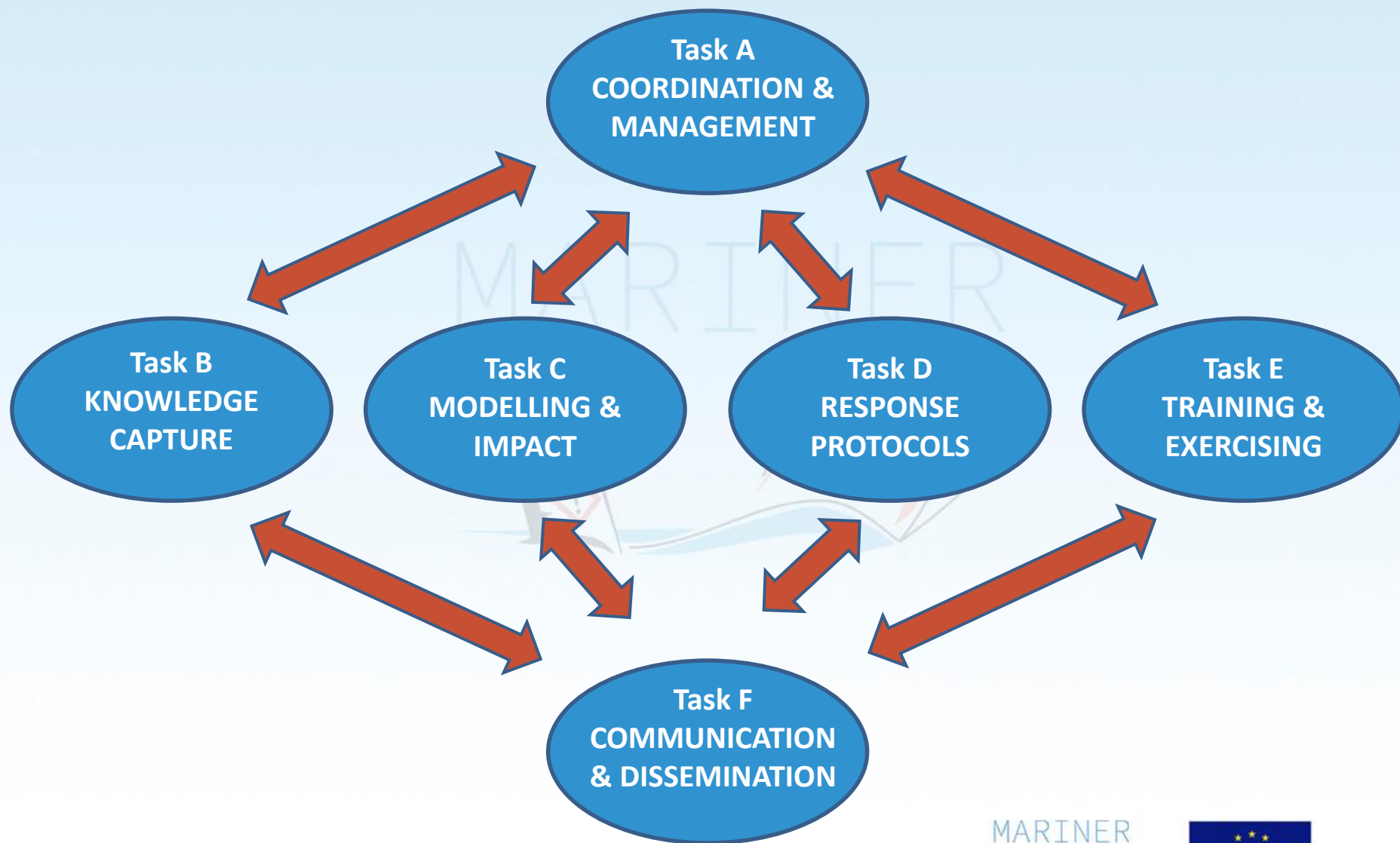


6. **Secretariat General for the Sea**



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Project tasks



Task B: 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 :

- **Knowledge tool:** Online user-friendly tool that gives access to a database collating all the relevant information on HNS
- Set of **graphical materials**.
- **Key outputs transferred.**



Task C: 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.

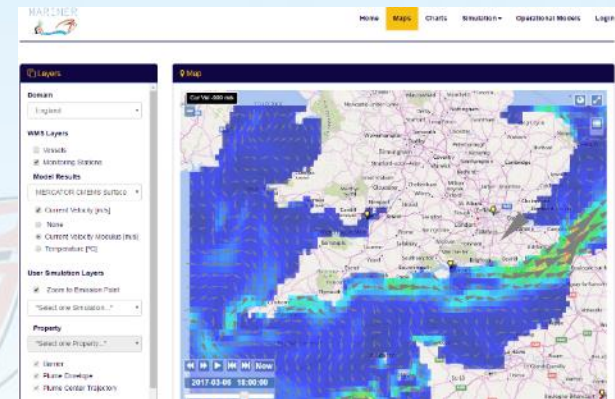
Manager: Action Modulers.

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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Task D: 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 guidance documents for Good Practices and training for specialized antipollution vessels operating in coastal areas.

Manager: INTECMAR.

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

Main results

- **Adapted 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**



Task E: HNS training and exercising

Specific objective:

- Develop and trial an innovative training and exercise process and bespoke 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.

Manager: Public Health England.

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

Main results:

- Web based database exercise tool.
- E-learning on International Health Regulations
- Training packages on:
 - HNS spill management
 - HNS modelling



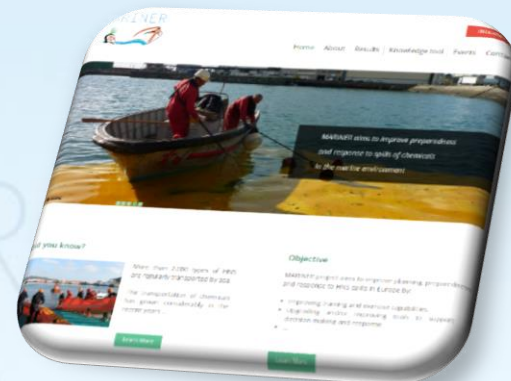
Task F: Communication

Specific objectives:

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

Main results:

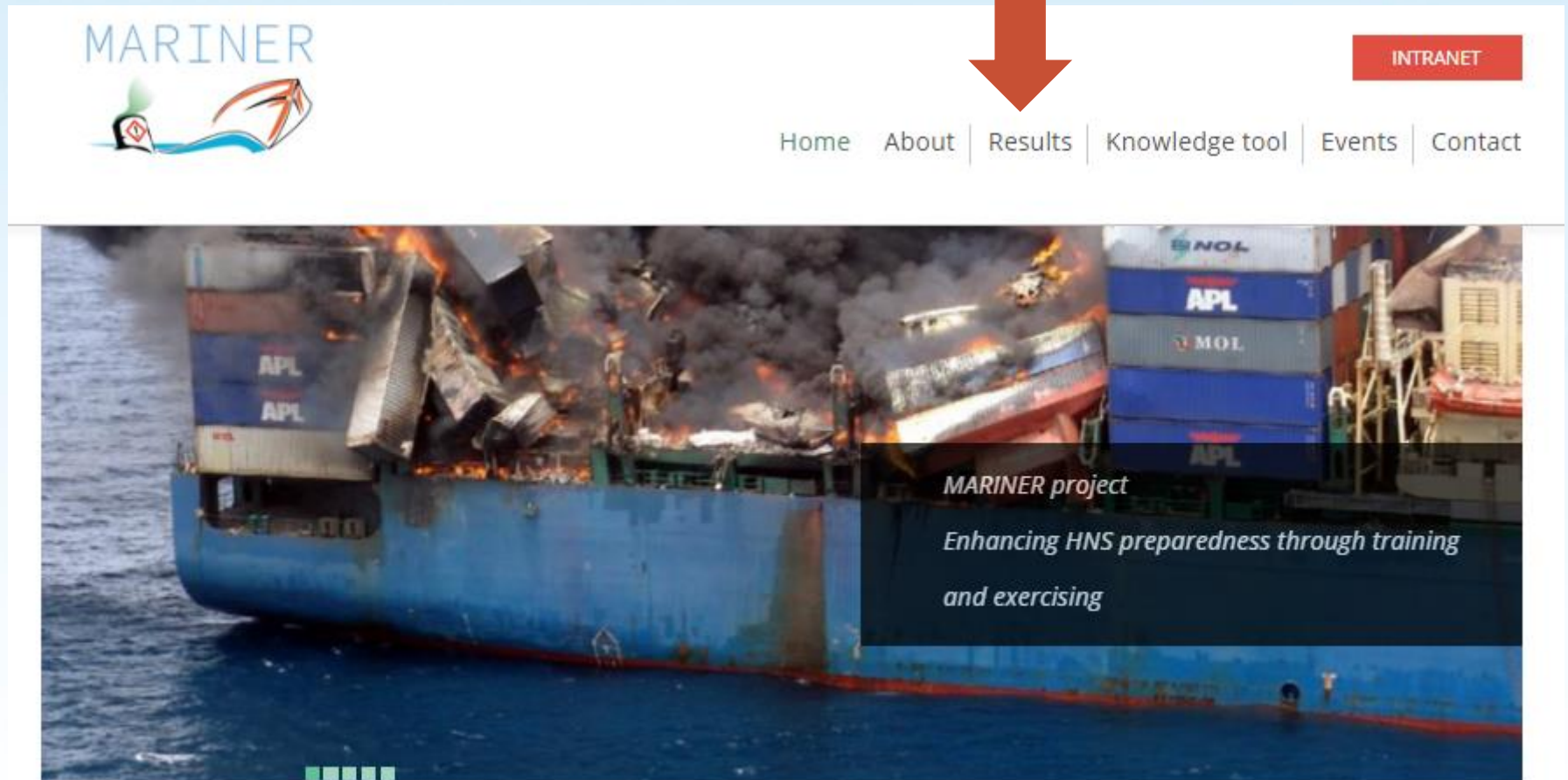
- **Website:** www.mariner-project.eu
- **Twitter:** [@MARINER_HNS](https://twitter.com/MARINER_HNS)
- **Workshops:**
 - **Matosinhos (PT).** “Using Technology towards a better preparedness to HNS spills”. 28th April 2017.
 - **Wales (UK).** Presentation of the web based database exercise tool and training 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](#)
- **Quarterly newsletters**



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Project results

www.mariner-project.eu

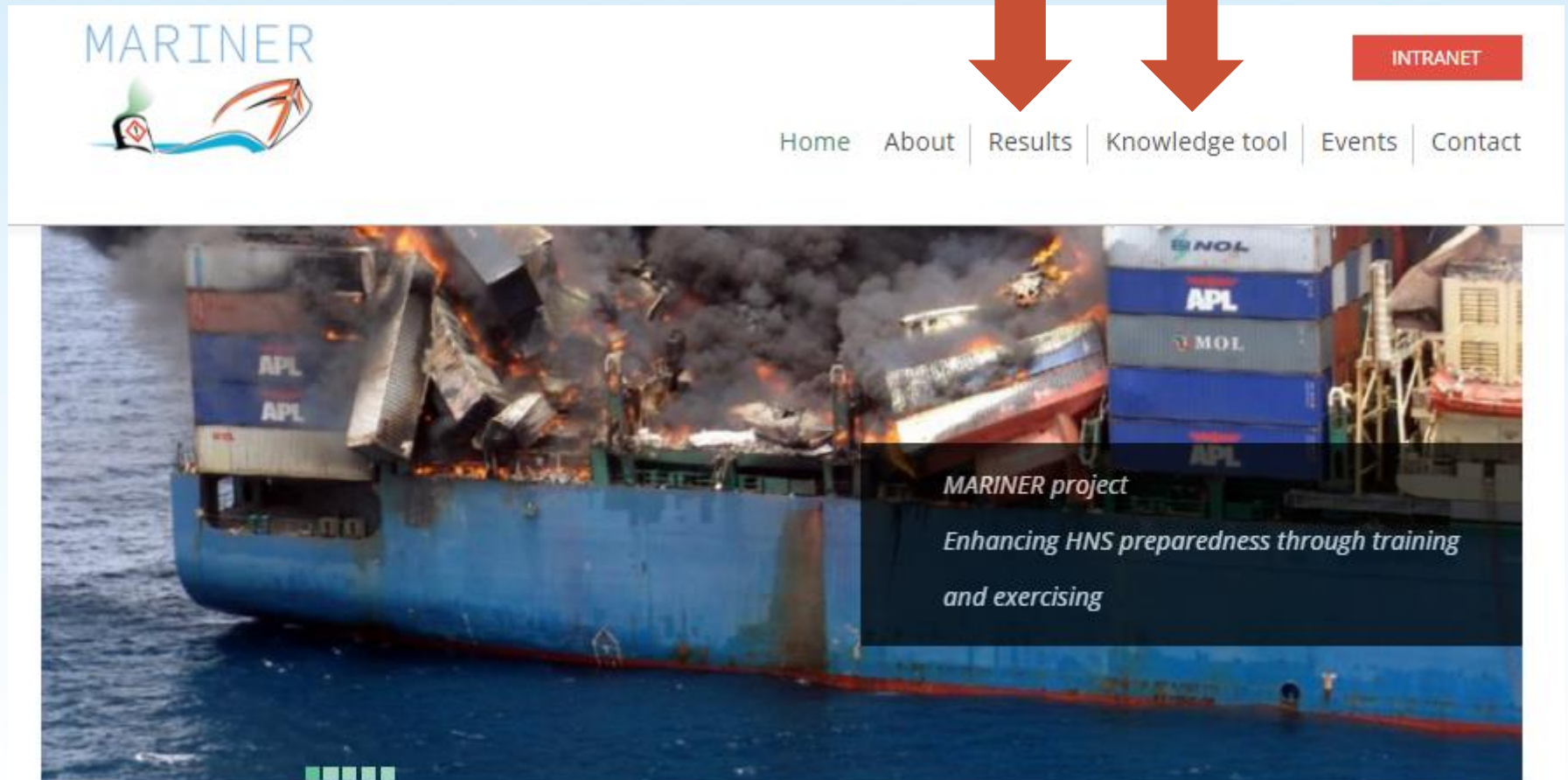


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Project results

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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

Id	Topic	Summary	Authors	Status	Date of publication	Complementarity	Availability	Link to RDS/Resource	Target audience
1	Regional Resource Database	A database of regional information on traffic, transport, maritime uses, future developments and risk reduction measures. The database is an assessment for marine pollution prevention and response.	BE-AWARE project partners	Completed	Unknown	Unknown	No	https://data.basinsproject.eu/gis/index.html	Marine Coastal Environment
2	Report on noise	The report presents the assessment results of the BE-AWARE project. It is aimed at the three Environment and the project partners, who need to take the corresponding data for the project. This report does not only cover the noise data, but also the other data. The report is intended for the project partners. Due to the large amount of additional data, it is not possible to include all the data in the report. The report is intended for the project partners. The report is intended for the project partners. The report is intended for the project partners.	BE-AWARE project partners	Completed	Aug 2018	No	Yes	https://data.basinsproject.eu/gis/index.html	Marine Coastal Environment
3	Methodology for a risk assessment of marine pollution (inter alia of hazardous and minor substances, HME)	The key aspects that were addressed by the methodology included ship traffic, classification of all transport mode traffic categories, frequency of shipping of all ship types related to different destinations, level of hazardous substances, and the resulting positive impact on HME risk.	BE-AWARE project partners	Completed	August 2018	No	Yes	https://data.basinsproject.eu/gis/index.html	Marine Coastal Environment
4	Report on current and future traffic patterns and use of the maritime space in the region	The key aspects that were addressed by the methodology included ship traffic, classification of all transport mode traffic categories, frequency of shipping of all ship types related to different destinations, level of hazardous substances, and the resulting positive impact on HME risk.	ASSA NAUT	Completed	February 2018	No	Yes	https://data.basinsproject.eu/gis/index.html	Marine Coastal Environment
5	Development of an Environmental and Socio-economic Scenario Methodology	The key aspects that were addressed by the methodology included ship traffic, classification of all transport mode traffic categories, frequency of shipping of all ship types related to different destinations, level of hazardous substances, and the resulting positive impact on HME risk.	BRUNNEN SCHULLEN PFLUGMANN	Completed	November 2018	No	Yes	https://data.basinsproject.eu/gis/index.html	Marine Coastal Environment
6	HME risk evaluation report	The key aspects that were addressed by the methodology included ship traffic, classification of all transport mode traffic categories, frequency of shipping of all ship types related to different destinations, level of hazardous substances, and the resulting positive impact on HME risk.	ATM Van Oort, van Oort, van Oort	Completed	March 2018	No	Yes	https://data.basinsproject.eu/gis/index.html	Marine Coastal Environment
	Eating and drinking risk reducing measures	The key aspects that were addressed by the methodology included ship traffic, classification of all transport mode traffic categories, frequency of shipping of all ship types related to different destinations, level of hazardous substances, and the resulting positive impact on HME risk.	NOVUS MAGNETIC	Completed	February 2018	No	Yes	https://data.basinsproject.eu/gis/index.html	Marine Coastal Environment

Database:

- Title
- Summary
- Authors
- Link
- Target environment
- Area of knowledge
- Type
- Language
- Geographical scope

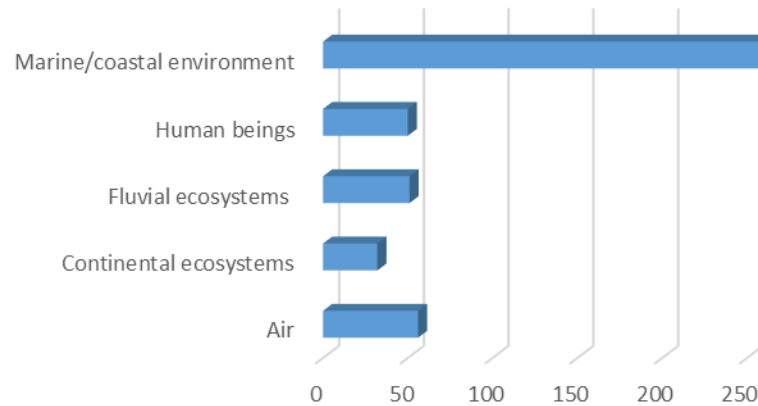


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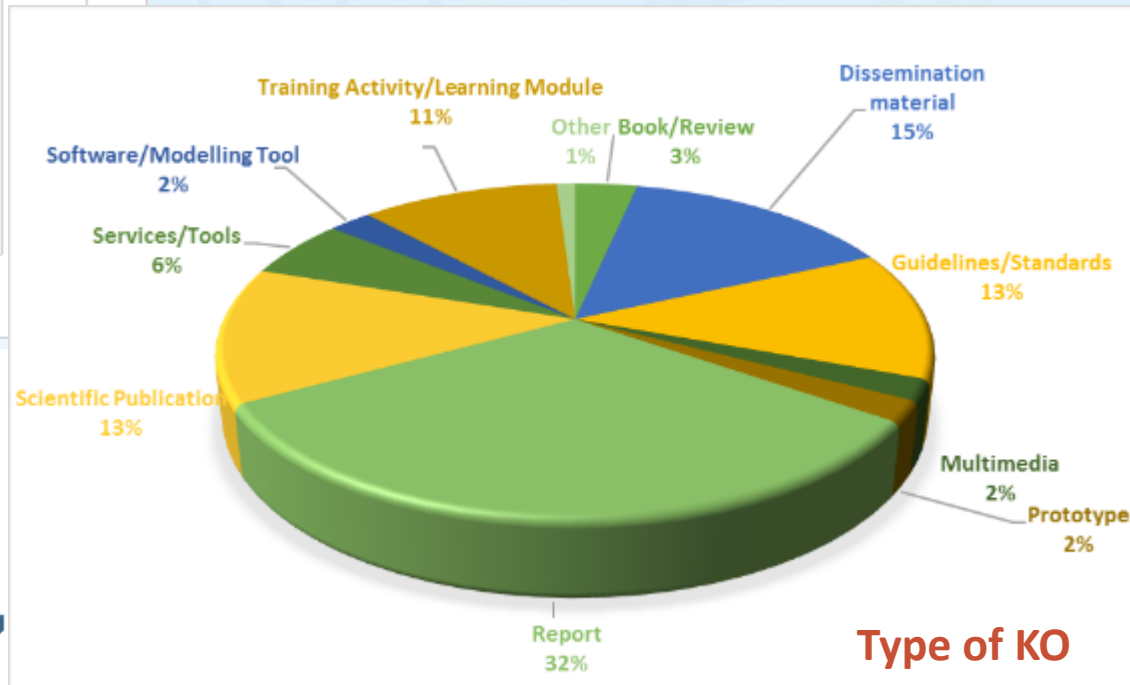
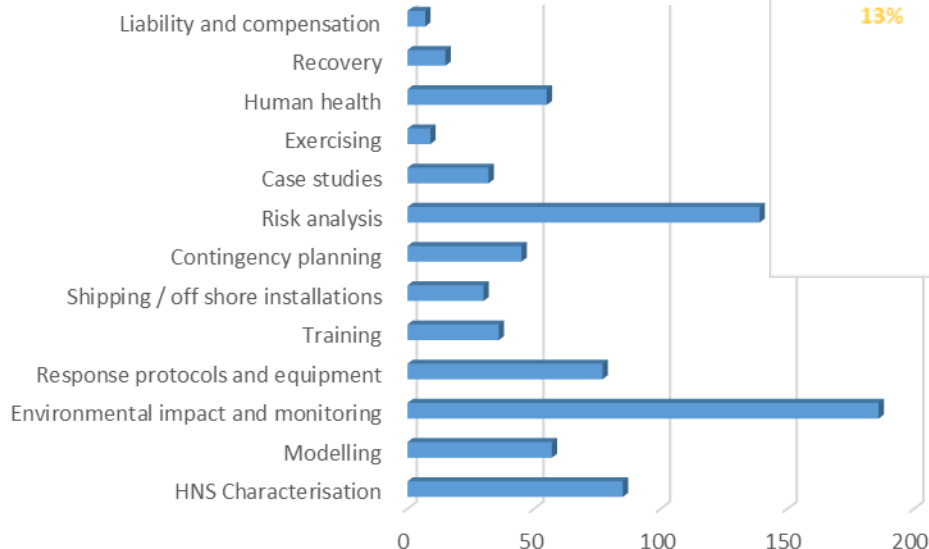
HNS knowledge compilation & facilitation

SOURCE: Projects

Target environment



Areas of knowledge

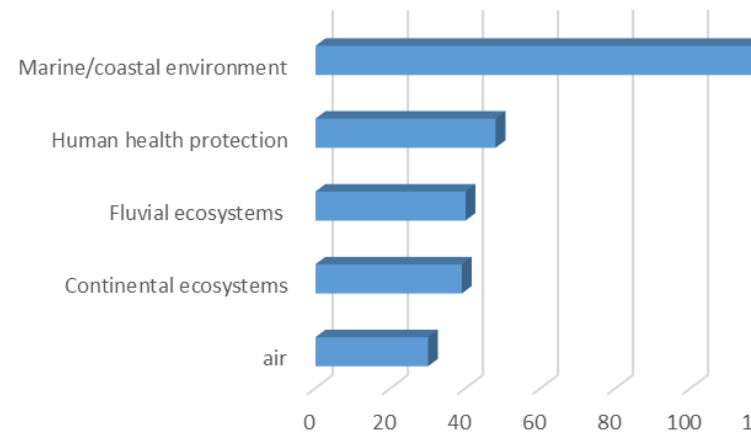


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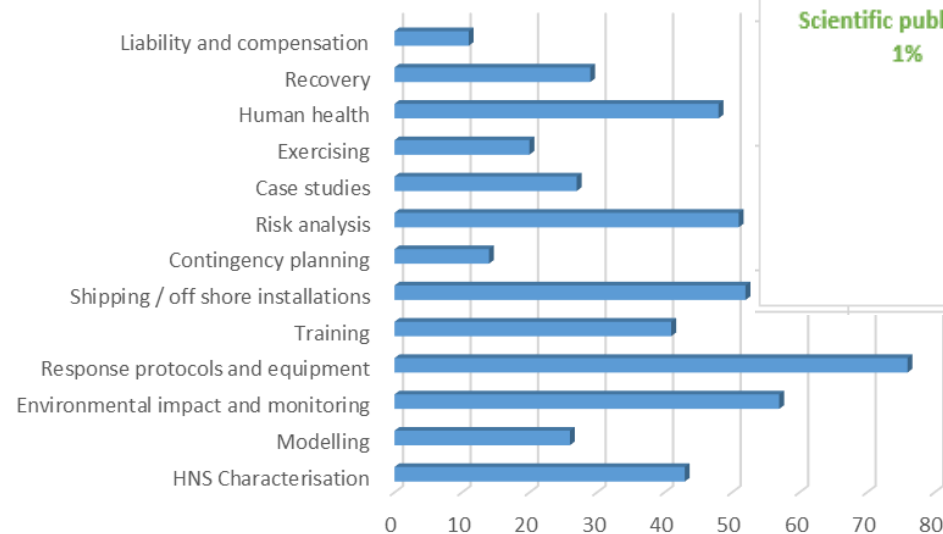
HNS knowledge compilation & facilitation

SOURCE: Organisations

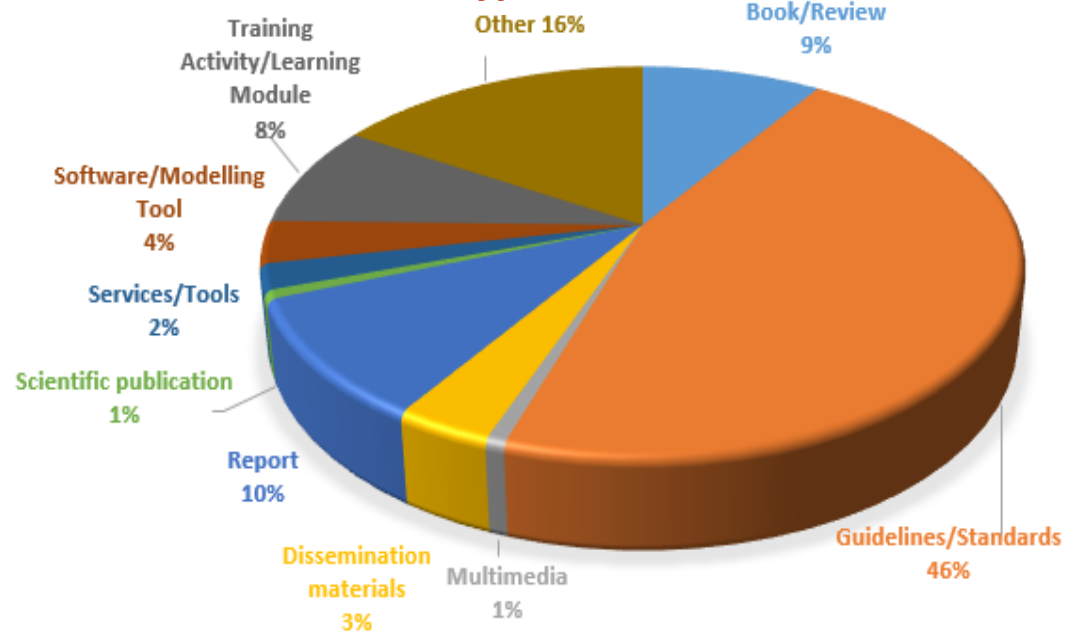
Target environment



Areas of knowledge



Type of KO

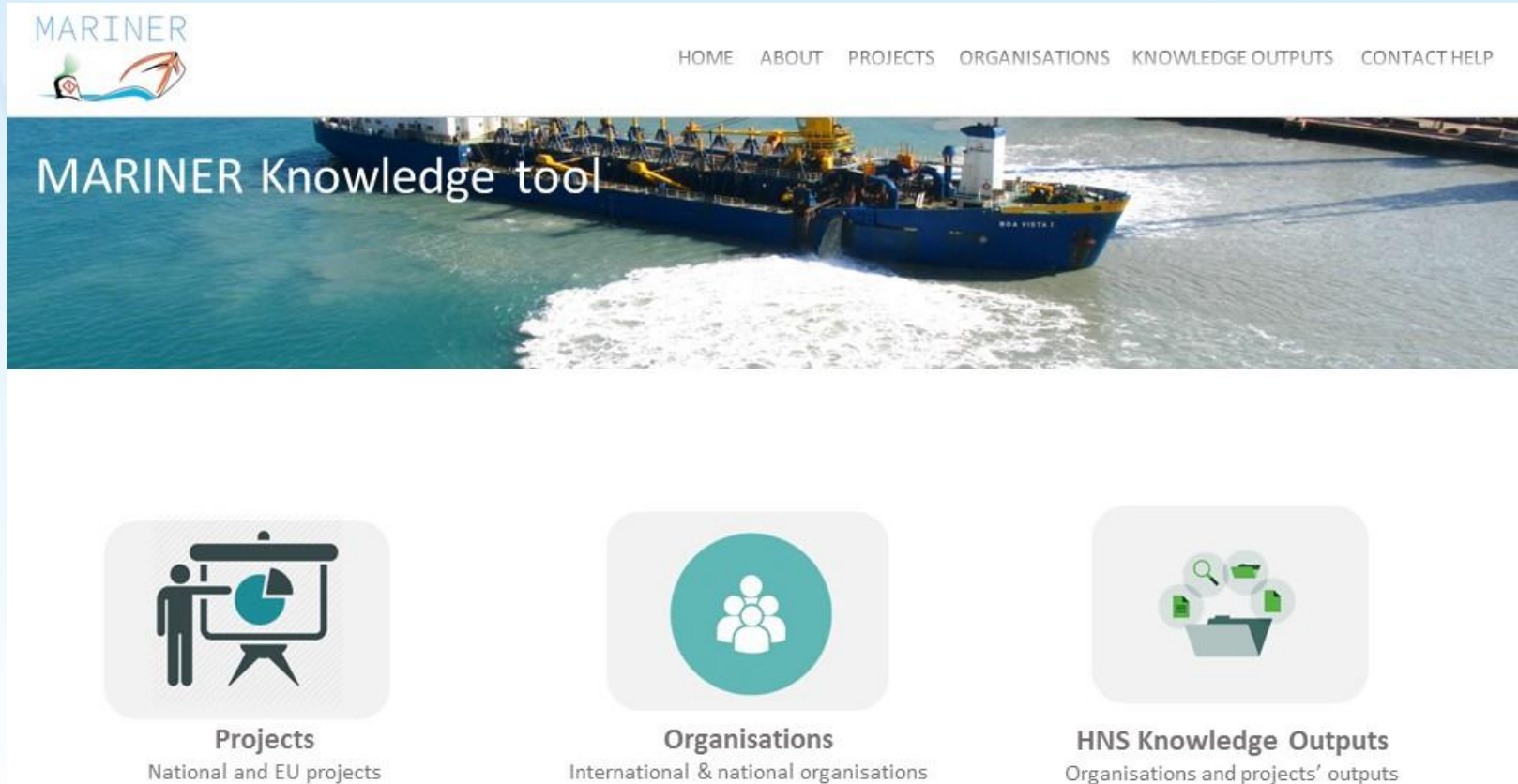


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HNS knowledge compilation & facilitation

Online knowledge tool



The screenshot shows the MARINER Knowledge tool website. At the top left is the MARINER logo, which includes a stylized orange and blue wave and a small icon of a person. To the right of the logo is a navigation menu with links: HOME, ABOUT, PROJECTS, ORGANISATIONS, KNOWLEDGE OUTPUTS, and CONTACT HELP. Below the navigation menu is a large banner image of a blue ship with yellow equipment, moving through the water. The text 'MARINER Knowledge tool' is overlaid on the left side of the banner. Below the banner are three main sections, each with an icon and a title:

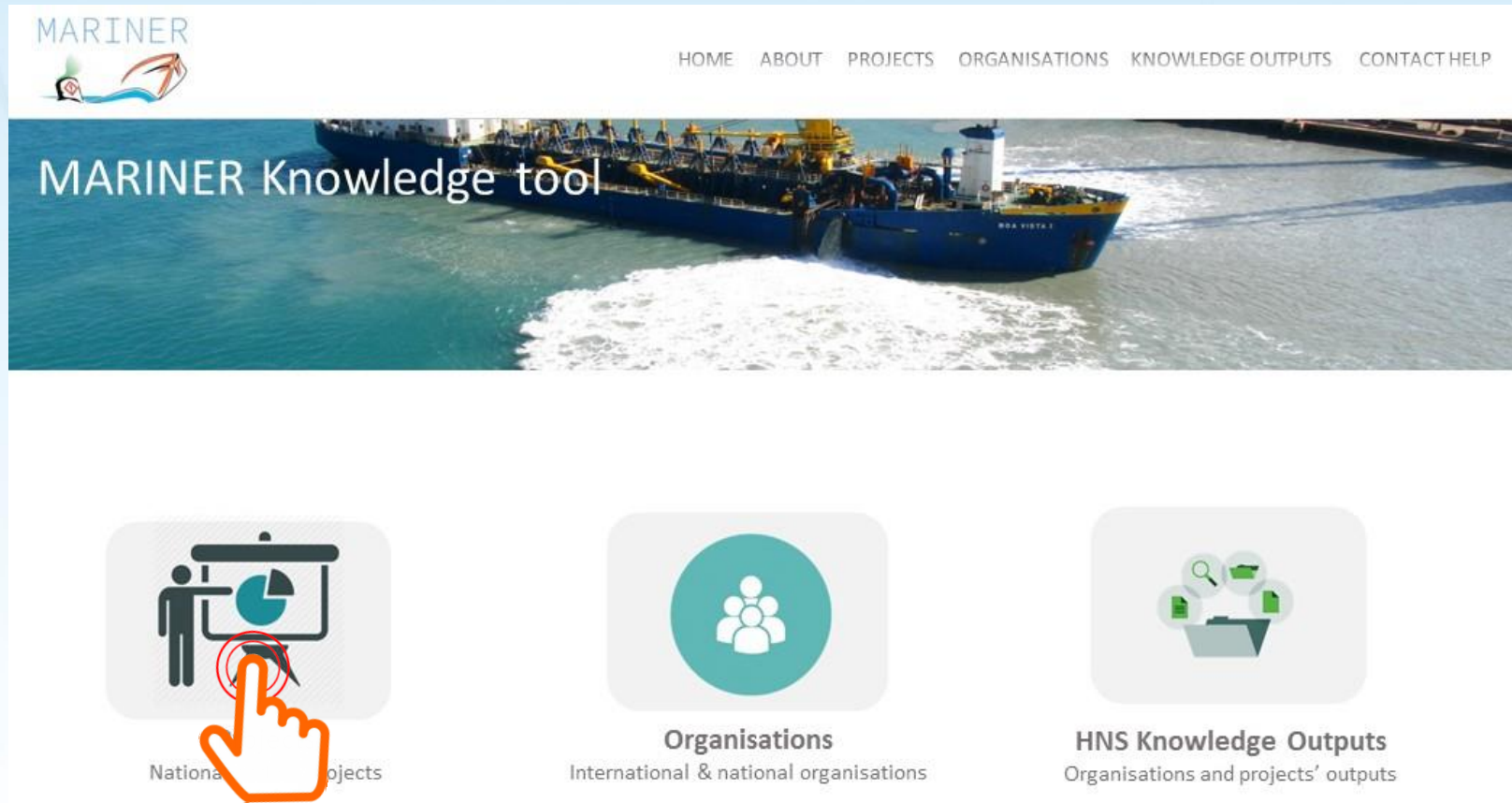
- Projects**: National and EU projects. The icon shows a person standing next to a presentation board with a pie chart.
- Organisations**: International & national organisations. The icon shows a group of stylized people figures inside a teal circle.
- HNS Knowledge Outputs**: Organisations and projects' outputs. The icon shows a laptop with a magnifying glass over it, surrounded by document icons.



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- National projects**: The icon shows a person standing next to a screen displaying a pie chart. An orange hand cursor is pointing at the icon.
- Organisations**: The icon shows a teal circle with white silhouettes of three people.
- HNS Knowledge Outputs**: The icon shows a grey laptop with a magnifying glass over it, and several green document icons floating around.

Below each icon is a title and a subtitle:

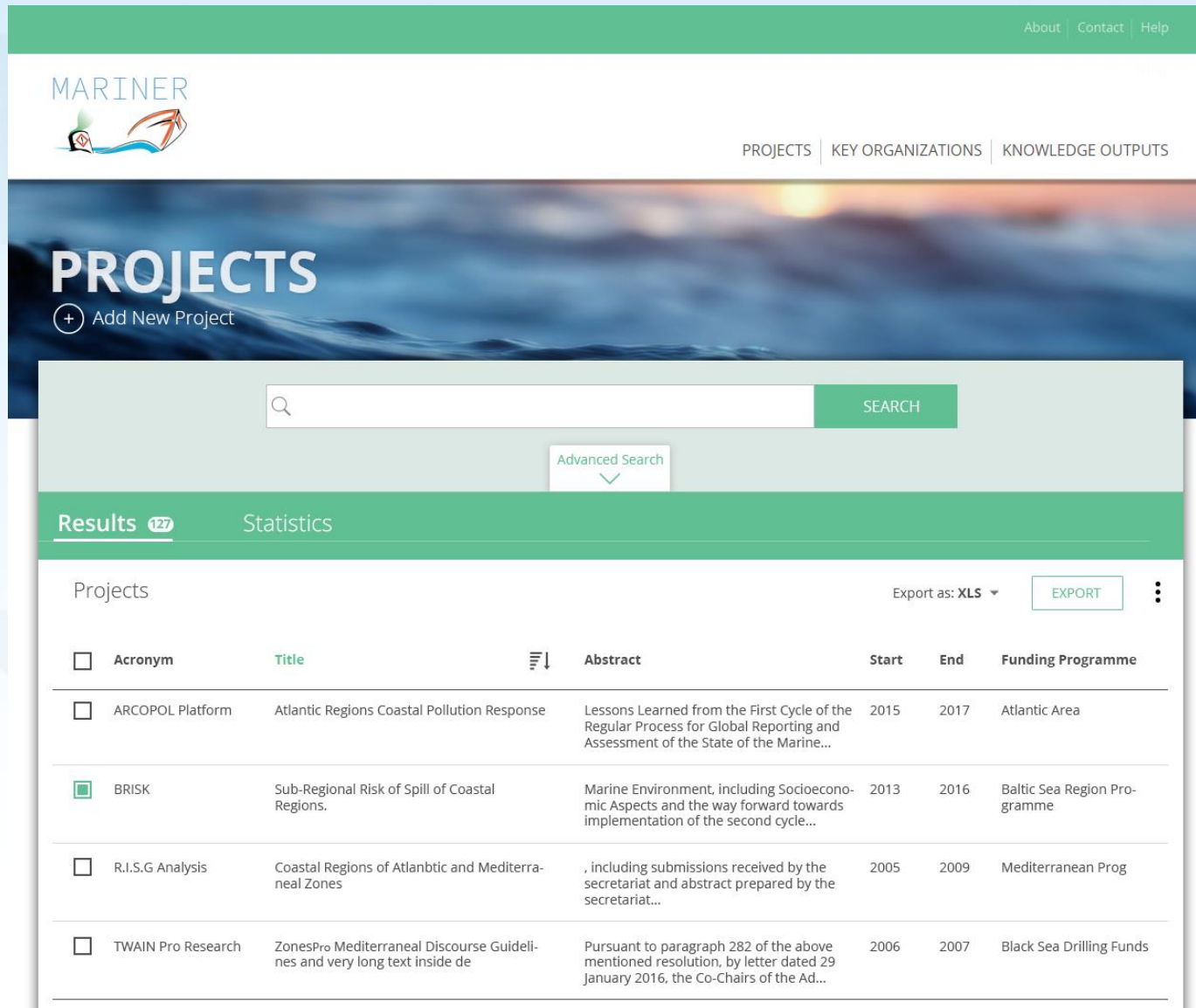
- National projects**: National projects
- Organisations**: International & national organisations
- HNS Knowledge Outputs**: Organisations and projects' outputs



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HNS knowledge compilation & facilitation

Online knowledge tool



The screenshot displays the MARINER online knowledge tool interface. At the top, there is a green header bar with navigation links: "About", "Contact", and "Help". Below this, the MARINER logo is visible on the left, and navigation links for "PROJECTS", "KEY ORGANIZATIONS", and "KNOWLEDGE OUTPUTS" are on the right. The main section features a large blue banner with the word "PROJECTS" in white, accompanied by a "+ Add New Project" button. Below the banner is a search bar with a magnifying glass icon and a green "SEARCH" button. An "Advanced Search" link with a downward arrow is positioned below the search bar. The results section is titled "Results 127" and includes a "Statistics" link. The "Projects" section shows a table of results with columns for "Acronym", "Title", "Abstract", "Start", "End", and "Funding Programme". The table lists four projects: ARCOPOL Platform, BRISK, R.I.S.G Analysis, and TWIN Pro Research. Each project entry includes a checkbox, the project name, a brief description, and the start and end years. An "Export as: XLS" dropdown and an "EXPORT" button are located at the top right of the table.

About | Contact | Help

MARINER

PROJECTS | KEY ORGANIZATIONS | KNOWLEDGE OUTPUTS

PROJECTS

+ Add New Project

SEARCH

Advanced Search

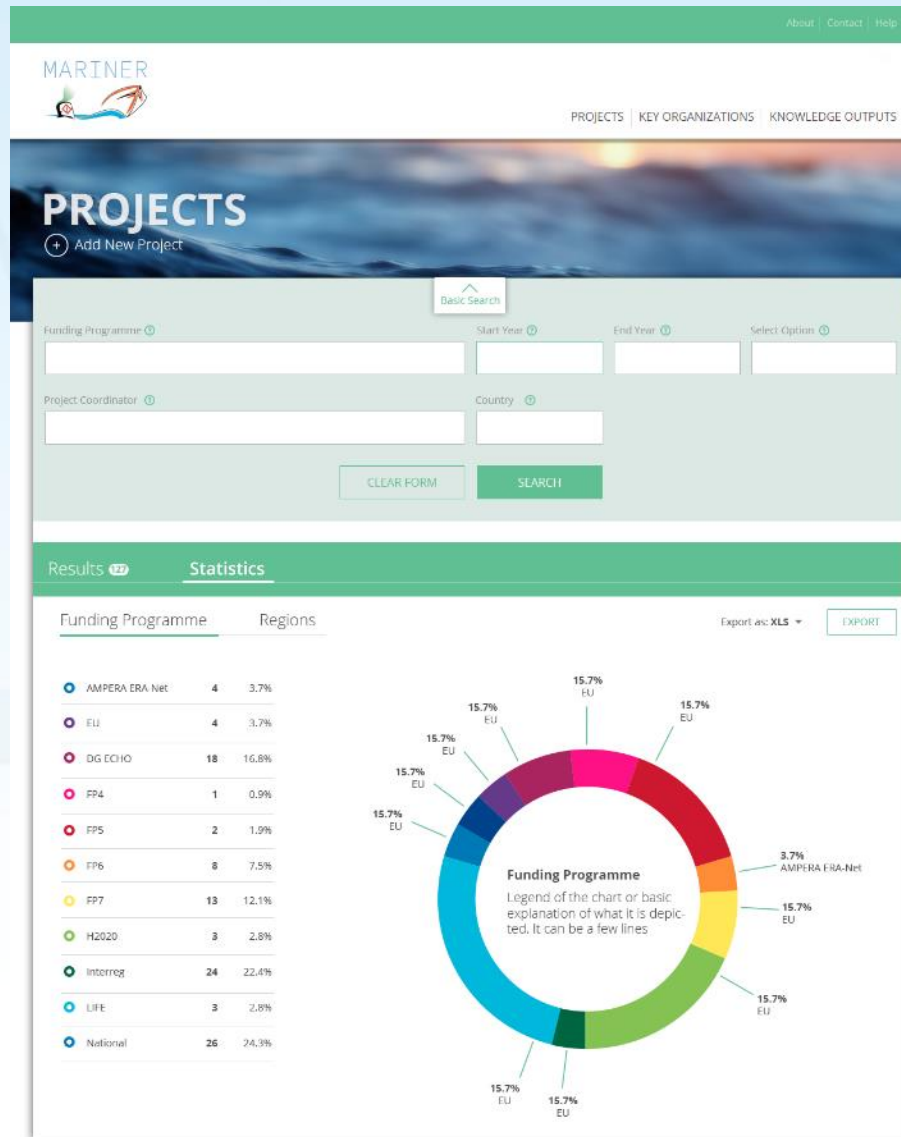
Results 127 Statistics

Projects Export as: XLS EXPORT

<input type="checkbox"/>	Acronym	Title	Abstract	Start	End	Funding Programme
<input type="checkbox"/>	ARCOPOL Platform	Atlantic Regions Coastal Pollution Response	Lessons Learned from the First Cycle of the Regular Process for Global Reporting and Assessment of the State of the Marine...	2015	2017	Atlantic Area
<input checked="" type="checkbox"/>	BRISK	Sub-Regional Risk of Spill of Coastal Regions.	Marine Environment, including Socioeconomic Aspects and the way forward towards implementation of the second cycle...	2013	2016	Baltic Sea Region Programme
<input type="checkbox"/>	R.I.S.G Analysis	Coastal Regions of Atlantic and Mediterranean Zones	, including submissions received by the secretariat and abstract prepared by the secretariat...	2005	2009	Mediterranean Prog
<input type="checkbox"/>	TWIN Pro Research	ZonesPro Mediterranean Discourse Guidelines and very long text inside de	Pursuant to paragraph 282 of the above mentioned resolution, by letter dated 29 January 2016, the Co-Chairs of the Ad...	2006	2007	Black Sea Drilling Funds

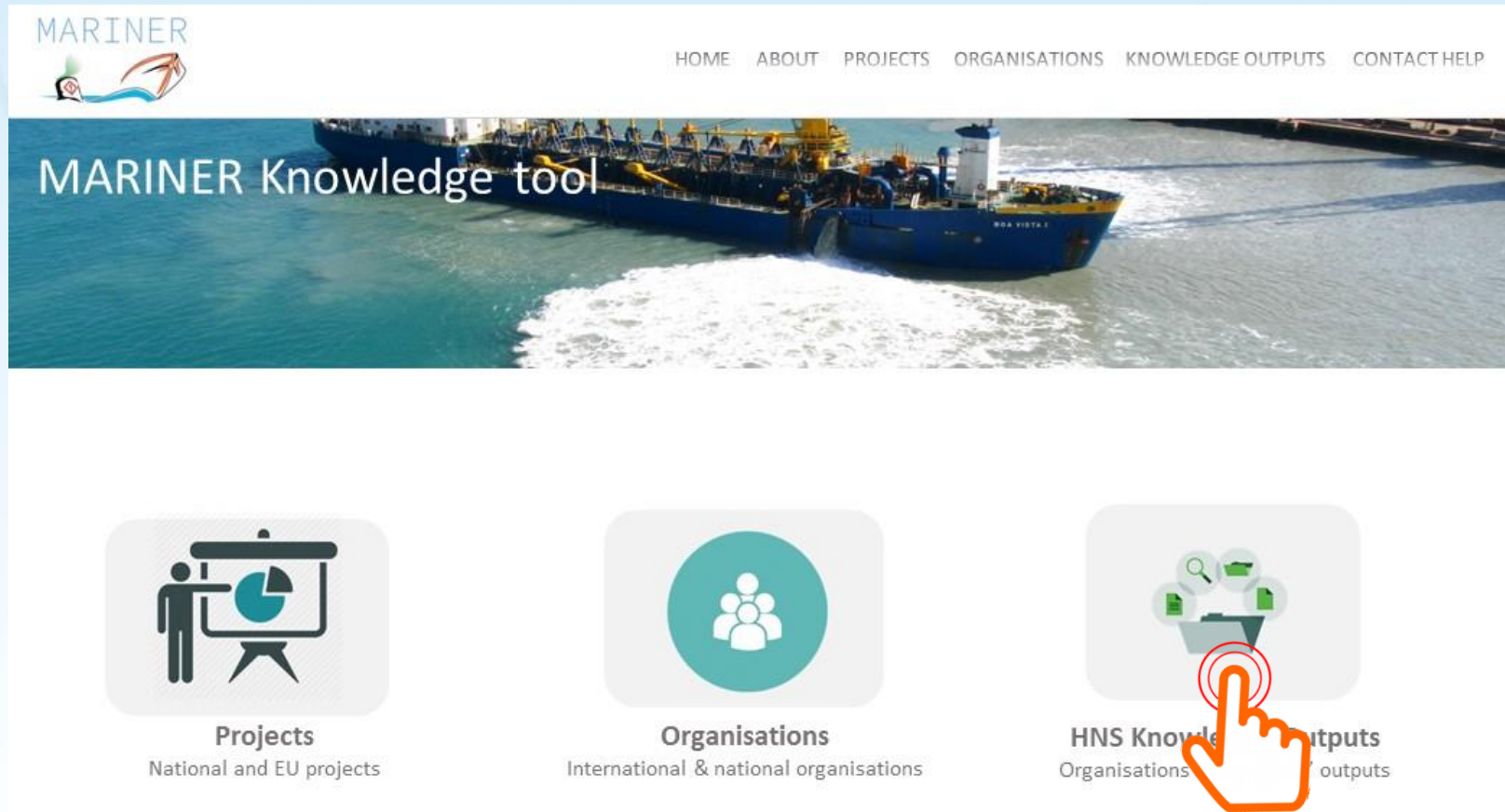
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Online knowledge tool



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



 HNS AREA OF KNOWLEDGE

GEOGRAPHICAL AREA 


 ADVANCED SEARCH

HNS knowledge compilation & facilitation

Online knowledge tool

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



HNS AREA OF KNOWLEDGE


GEOGRAPHICAL AREA

ADVANCED SEARCH

The image shows a screenshot of the MARINER website. At the top is the MARINER logo and a navigation menu with links: HOME, ABOUT, PROJECTS, ORGANISATIONS, KNOWLEDGE OUTPUTS (highlighted), and CONTACT HELP. Below the menu is a large banner image of a blue ship, the MSA VISTA 1, sailing on the water. Below the banner are three interactive buttons. The first button, labeled 'HNS AREA OF KNOWLEDGE', features an icon of two people with puzzle pieces and a hand cursor. The second button, labeled 'GEOGRAPHICAL AREA', features a globe icon. The third button, labeled 'ADVANCED SEARCH', features a magnifying glass icon over a document.


HNS knowledge compilation & facilitation

Online knowledge tool



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

Area of knowledgeGeographical scopeAdvanced search



Select All
Clear


ResultsStatisticsExport to Excel

Select fields Add new knowledge outputs

<input type="checkbox"/>	Title ▼	Summary ▼	Authors ▼	Link to KO ▼	HNS area of knowledge ▼	Resource type ▼
<input type="checkbox"/>	Regional Resource Database	A database of regional information on traffic, cargoes, maritime uses, future developments and ...read more	BE-AWARE project partners	http://www.bonnagreement.org/be-aware/i/what-will-we-achieve/regional-resource-database	Risk analysis/ Environmental impact and monitoring / Shipping offshore installations	Services / tools

HNS knowledge compilation & facilitation

Online knowledge tool




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

Area of knowledge

Geographical scope

Advanced search



Select All
Clear

Results (95)

Statistics

Export to Excel

Select fields Add new knowledge outputs


<input type="checkbox"/>	Title ▼	Summary ▼	Authors ▼	Link to KO ▼	HNS area of knowledge ▼	Resource type ▼
<input type="checkbox"/>	Regional Resource Database	A database of regional information on traffic, cargoes, maritime uses, future developments and ...read more	BE-AWARE project partners	http://www.bonnagreement.org/be-aware/i/what-will-we-achieve/regional-resource-database	Risk analysis/ Environmental impact and monitoring/ Shipping offshore installations	Services / tools


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Online knowledge tool


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



 HNS AREA OF KNOWLEDGE

GEOGRAPHICAL AREA

 ADVANCED SEARCH



HNS knowledge compilation & facilitation

Online knowledge tool

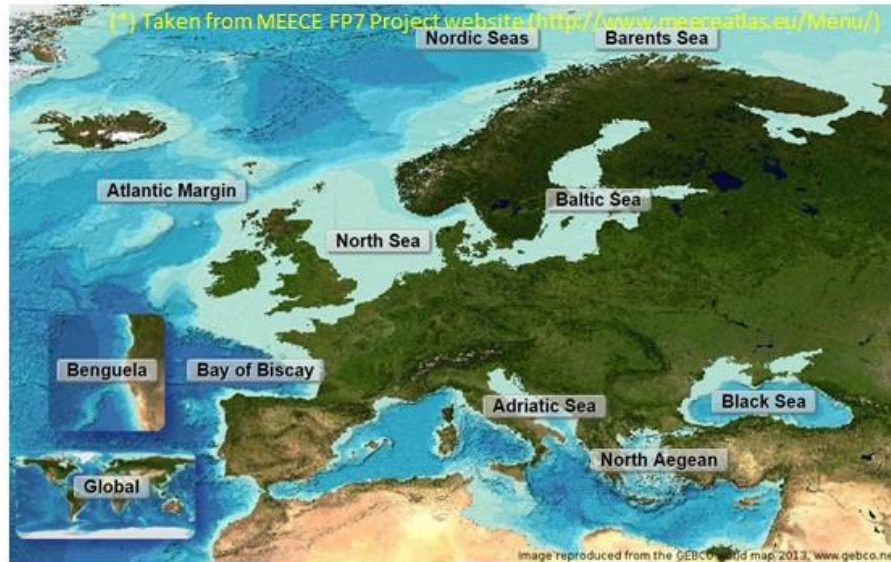


[HOME](#) [ABOUT](#) [PROJECTS](#) [ORGANISATIONS](#) **[KNOWLEDGE OUTPUTS](#)** [CONTACT HELP](#)

Area of knowledge

Geographical scope

Advanced search



[Select All](#)

[Clear](#)

Results (95)

Statistics

Export to Excel

Select fields [Add new knowledge outputs](#)


<input type="checkbox"/>	Title ▼ ▲	Summary ▼ ▲	Authors ▼ ▲	Link to KO ▼ ▲	HNS area of knowledge ▼ ▲	Resource type ▼ ▲
<input type="checkbox"/>	Regional Resource Database	A database of regional information on traffic, cargoes, maritime uses, future developments and ...read more	BE-AWARE project partners	http://www.bonnagreement.org/be-aware/i/what-will-we-achieve/regional-resource-database	Risk analysis / Environmental impact and monitoring / Shipping offshore installations	Services / tools


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




 HNS AREA OF KNOWLEDGE

GEOGRAPHICAL AREA 

 ADVANCED SEARCH

HNS knowledge compilation & facilitation

Online knowledge tool



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

Area of knowledge

Geographical scope

Advanced search

Free search

Search

Advanced

Target environment ?

HNS areas of knowledge ?

Type of resource

Year ?

Project

Language

Geographical area ?

Organisation

OR

Reset Form

Search

(Permanece oculto)

Results (95)

Statistics

Export to Excel

Select fields Add new knowledge outputs

<input type="checkbox"/>	Title ▼ ▲	Summary ▼ ▲	Authors ▼ ▲	Link to KO ▼ ▲	HNS area of knowledge ▼ ▲	Resource type ▼ ▲
<input type="checkbox"/>	Regional Resource Database	A database of regional information on traffic, cargoes, maritime uses, future developments and ...read more	BE-AWARE project partners	http://www.bonnagreement.org/be-aware/i/what-will-we-achieve/regional-resource-database	Risk analysis/ Environmental impact and monitoring/ Shipping offshore installations	Services / tools

Thank you!

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Patricia Pérez: pperez@cetmar.org



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