European Maritime Safety Agency

EMSA's work in support of Risk Assessment and ongoing discussions to make the PRS toolbox future proof

OpenRisk II Project Mid-Term Conference: "Maritime Risk Management and Piloting in the Baltic Sea Region"

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Unit 1.1. Sustainability / Dep.1 Sustainability and Technical Assistance

Tallinn / 26-27 March 2025

EMSA

EMSA in a nutshell

CHANGES TO EMSA'S FOUNDING REGULATION

2002
Regulation (EC) No 1406/2002
Regulation (EC) No 1644/2002
Administrative and budgetary provisions

2004
Regulation (EC) No 724/2004
Ship security
Technical/scientific assistance for oil pollution

2006
Regulation (EC) No 2038/2006
Funding for response to marine pollution by ships

2013
Regulation (EC) No 100/2013
Core/ancillary tasks
Oil/gas installations
Central role in maritime surveillance
Technical assistance ENP

2016
Regulation (EU) 2016/1625
Extended cooperation with Frontex & EFCA on coast guard functions
Use of RPAS
Enhanced capacity building activities

TECHNICAL BODY
ensuring
high, uniform & effective level of:

- maritime safety
- maritime security
- prevention & response to pollution from ships
- response to pollution from oil & gas installations

- ASSISTS: 27 EU Member States, 2 EFTA countries and the Commission
- STAFF: 324 people, 26 nationalities
- BUDGET: 101 million EUR EU subsidy
- HQ: Lisbon, Portugal

Snapshot of Pollution Response Services, March 2025

OIL SPILL RESPONSE VESSELS **9**

OIL SPILL RESPONSE VESSELS WITH DISPERSANTS **5**

INTERMEDIATE STORAGE VESSEL **1**

RPAS ON BOARD OIL SPILL RESPONSE VESSELS **12**

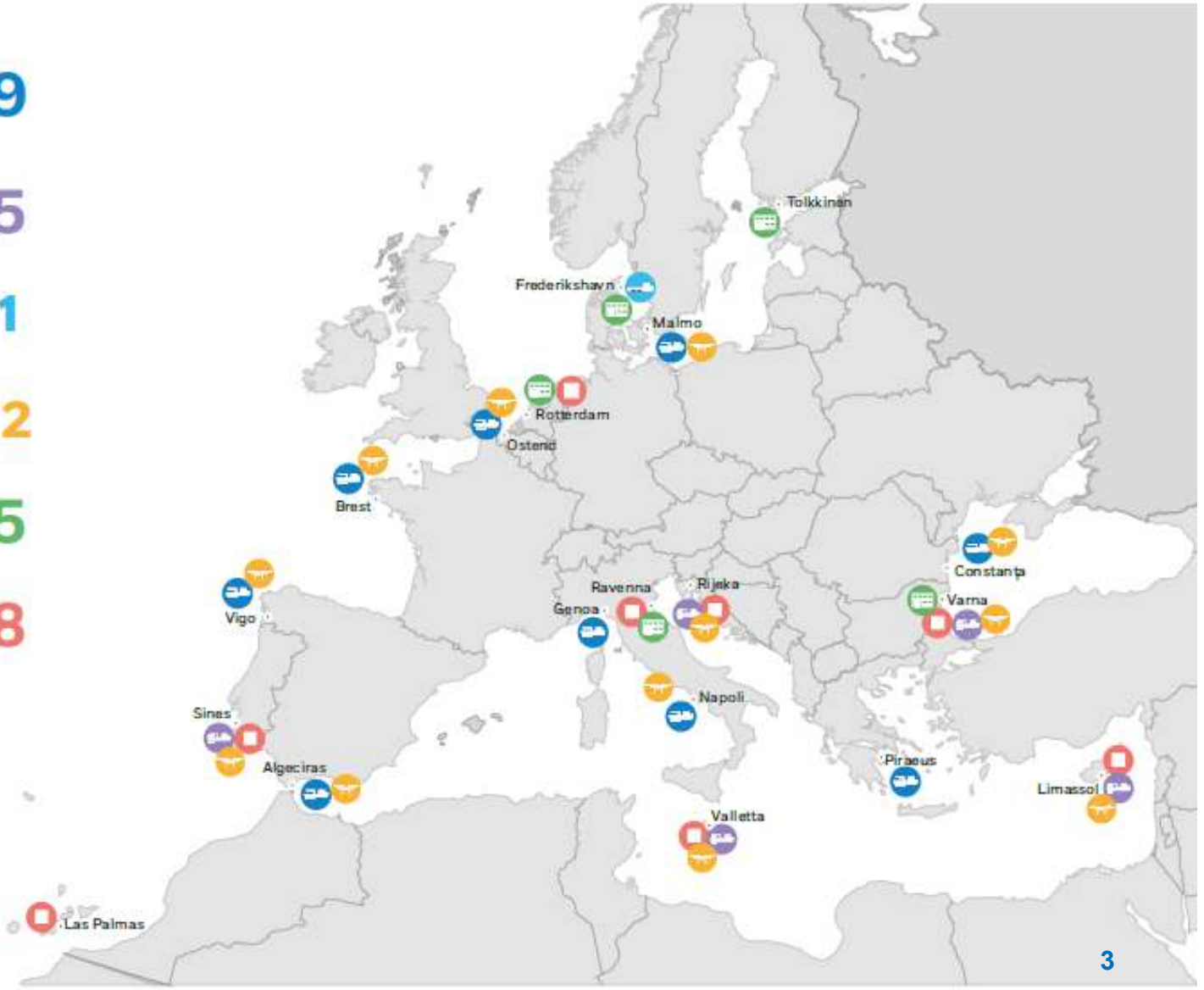
EQUIPMENT ASSISTANCE SERVICE (EAS) STOCKPILES **5**

DISPERSANT STOCKPILES **8**

CLEANSEANET IMAGES

INFORMATION SERVICE FOR CHEMICAL SPILLS

24/7 SERVICE AVAILABILITY



Overview – Risk Analysis National and Regional level

NATIONAL LEVEL

- ✓ Very **different time-scales** (…annually, ad-hoc, once in a decade….)
- ✓ **Not all countries DO /** have a clear / set methodology for risk analysis
- ✓ Varying **validity periods** of results (…1y – 10/15y)
- ✓ **Link** between risk analysis & MPPR assets planning
- ✓ Majority used **external** consultant
- ✓ (differences in) **Terminology** used

REGIONAL LEVEL

- ✓ Long-term / forward-looking / by external consultant / different scope
- ✓ **No set frequency** of such risk analysis
  - BE AWARE I (2012-2014), BE-AWARE II (2014-2015), + Trend Analysis for 2030 (2019)
  - BRISK (2009-2012), BRISK II ongoing
- ✓ BE-AWARE & BRISK used **similar methodology !**
- ✓ **Multi-model** approach used / models developed
- ✓ **Results / gaps follow-up** → Strategic Action Plans / Recommendations

Overview EU level

✓ **Risk assessment and mapping guidelines from 2010:**

- General multi-risk guidelines
- Under revision from JRC and ECHO to be updated
- Guidelines refer to marine pollution in the context of cross-border response activities

✓ **Article 6 of Decision 1313/2013 – reporting guidelines:**

- Guidelines to facilitate reporting from UCPM MS/PS on their risk assessment and risk management capability assessment every 3 years

UCPM funded projects on marine pollution risk assessment or with risk assessment elements

Correspondence Group on Data and Risk Assessment - CG DRA

Acknowledged that EMSA lacks the mandate or resources to perform full risk assessments but can provide a platform as a facilitator

- ✓ Established in January 2024
- ✓ Platform of experts from MS and RA, led by EMSA
- ✓ Timeline: 2024-2026

CG-DRA Tasks:

1. Map the data needs and gaps of the marine pollution preparedness and response' user community in support of risk assessment

2. Define a possible common ground (including a common terminology) that could be used by the Member States and Regional Agreements when performing risk assessment for marine pollution

Q1 Matrix - Traffic and vessel-related data needs

Data BLOCKS for Risk Assessment		Use in Risk Assessment			
		Yes	*NO / no answer*	Priority	*Nice to have / no answer*
1. Traffic data	• AIS-T data - terrestrial	100%	*0%*	67%	*33%*
	• AIS-S data - satellite	78%	*22%*	39%	*61%*
	• Other ship positioning information	83%	*17%*	33%	*67%*
	• Processed traffic data (e.g., traffic density maps, ABM, …)	94%	*6%*	56%	*44%*
	• Shipping routes and patterns	83%	*17%*	67%	*33%*
2. Ship traffic forecast (trends, future scenarios, prognosis)		89%	*11%*	50%	*50%*
3. Ship related data (age, size, type, rating-risk profile, PSC data)		100%	*0%*	61%	*39%*
4. Accidents and Incidents data	• Information about accidents or incidents (geographic location, date, time)	100%	*0%*	56%	*44%*
	• Consequences to people, ships, environment	89%	*11%*	61%	*39%*
5. Oil spills data		94%	*6%*	56%	*44%*
6. Vessel cargo data	• General information on cargo (containers, bulk, oil, etc.)	94%	*6%*	72%	*28%*
	• Detailed information on dangerous and polluting goods, including HNS	89%	*11%*	56%	*44%*
	• Detailed information on all cargo	61%	*39%*	11%	*89%*
7. Vessel bunkers data (including new fuels)		94%	*6%*	72%	*28%*
8. Forecast of use of fuels, including new fuels (trends, future scenarios, prognosis)		72%	*28%*	56%	*44%*
9. Environmental conditions: Meteorological & oceanographic data (e.g., metocean, currents, wind, wave, weather)		83%	*17%*	61%	*39%*

Q2 Matrix – Environmental and socioeconomic data needs

Data BLOCKS for Risk Assessment

Data blocks		Need	Priority
1. Uses of the maritime domain, marine special planning	Windfarms	89%	56%
	Offshore installations, Single Point Mooring (SPM) buoys, Pipelines	56%	56%
	Place of Refuge	78%	67%
	Pilot Boarding Area	56%	44%
2. Environmental conditions: **Meteorological & oceanographic data** (e.g. metocean, currents, wind, wave, weather)		78%	78%

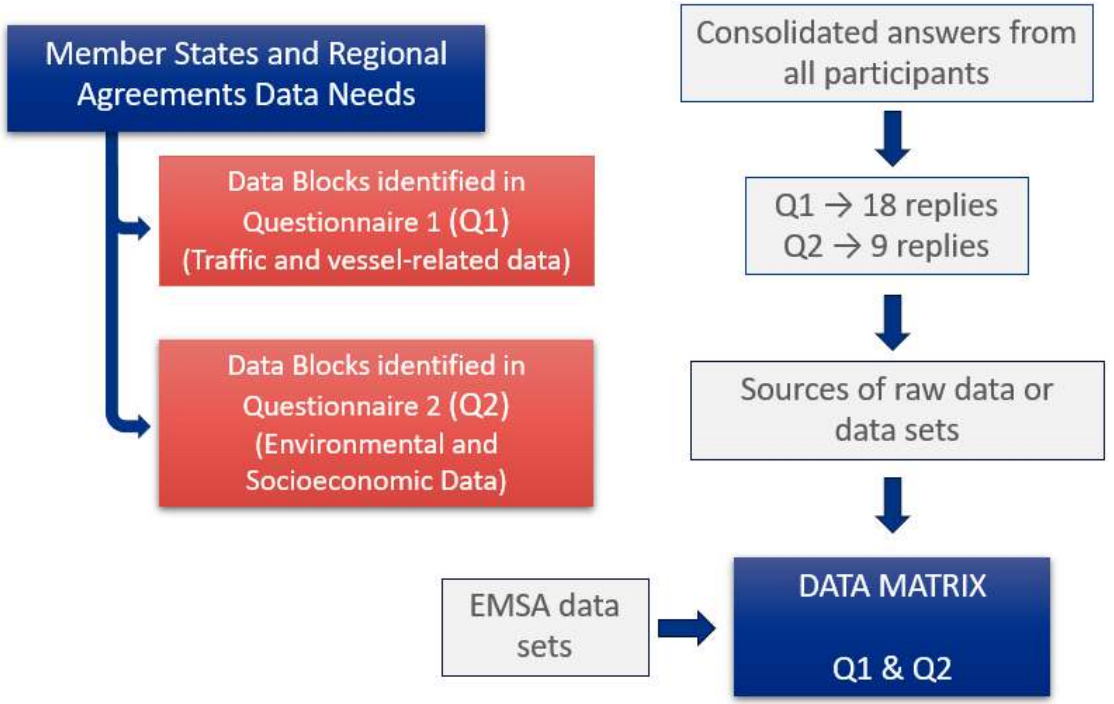
Data blocks		Need	Priority
3. Environmental vulnerability data	Protected areas, especial habitats, sensitivity maps (spring)	100%	89%
	Protected areas, especial habitats, sensitivity maps (summer)	100%	89%
	Protected areas, especial habitats, sensitivity maps (autumn)	100%	89%
	Protected areas, especial habitats, sensitivity maps (winter)	100%	89%
	Emission control areas	44%	44%

Data blocks		Need	Priority
4. Socioeconomic vulnerability data	Tourism	67%	67%
	Fishing	67%	67%
	Ports	78%	78%
	Aquaculture	78%	67%
	Water extraction points	89%	78%
5. Risk reducing measures	Pilotage	78%	67%
	Vessel Traffic Services (VTS)	89%	89%
	Traffic Separation Scheme (TSS)	78%	67%
	Emergency Towing Vessel (ETV) services	89%	67%
	Others, e.g., ice-class, lightering		

Q1 and Q2 MATRIX
Member States & Regional Agreements Data Needs

Deliverables 2024, Task 1:

- Mapping of Member States' data needs and available data sources (MS and EMSA)
- EMSA Maritime Data Catalogue providing access rights and conditions
- **Data Gap Matrix** developed to support risk assessment processes, e.g., Dangerous Goods



SSN Hazmat pilot project *by EMSA from 03.11.2023 to 25.01.2024*

Objective: To explore the use of SSN Hazmat data to obtain information on Dangerous and Polluting Goods transported in European waters Ships departing from an EU port with Hazmat on-board

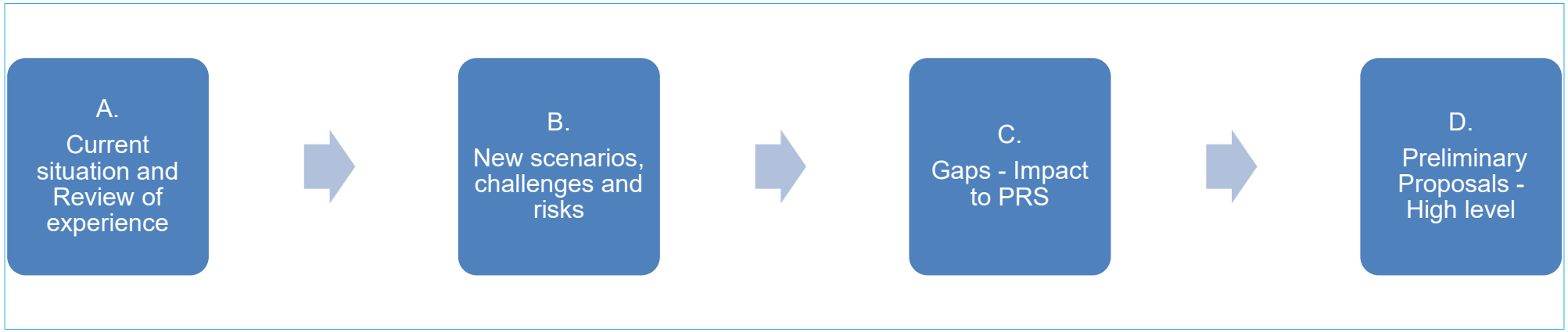
CG DRA Task 2: Common grounds Risk Assessment

Future work 2025-2026, Task 2:

- Defining common ground for marine pollution risk assessment
- Mapping national, regional, and EU risk assessment approaches
- Developing common terminology and building blocks for Risk Assessment

Ongoing discussions: EMSA Pollution Response Services (PRS) toolbox “future-proof”

CONCEPT PAPER 2024: Methodology

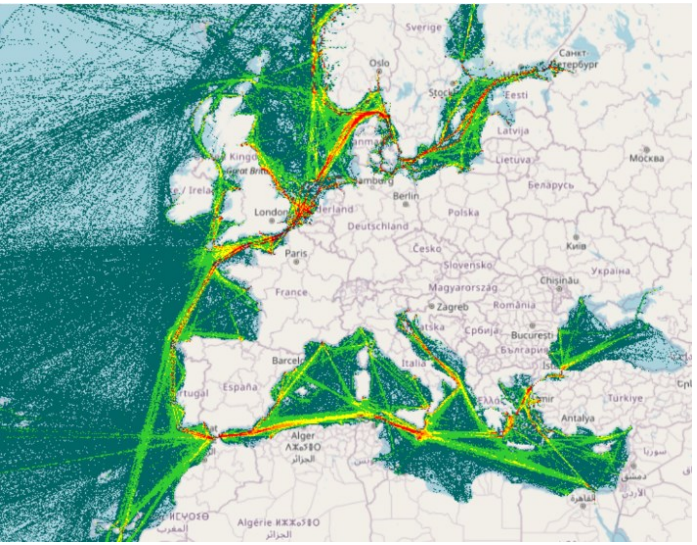


ROADMAP 2025

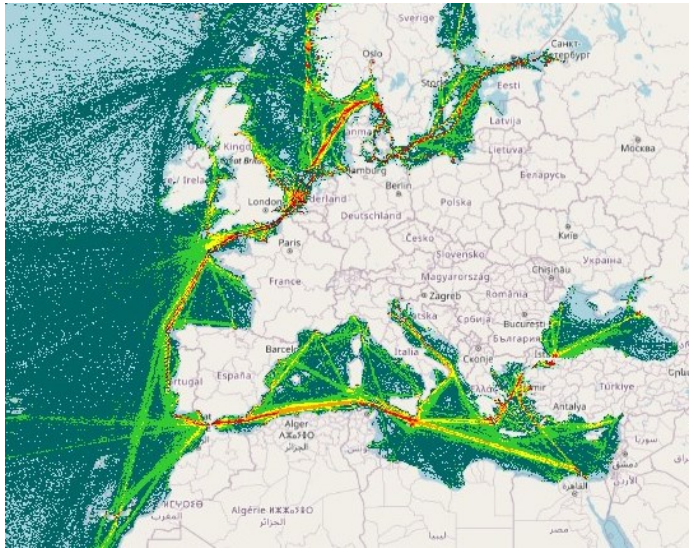
- Comprehensive consultation process with stakeholders
- Discussion of Results with MS experts and Administrative Board
- Report, for consideration by the EMSA’s Administrative Board

Concept paper: Risk scenarios driven by traditional fuels

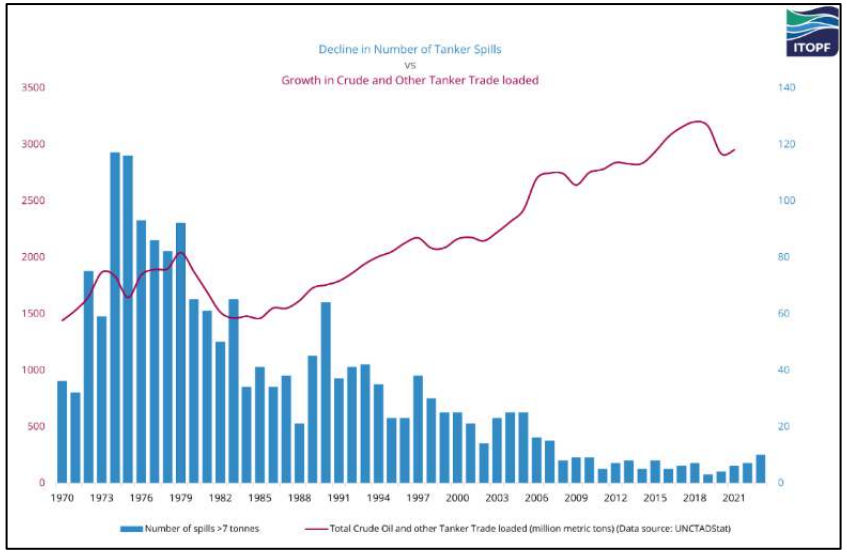
Tanker traffic 2019



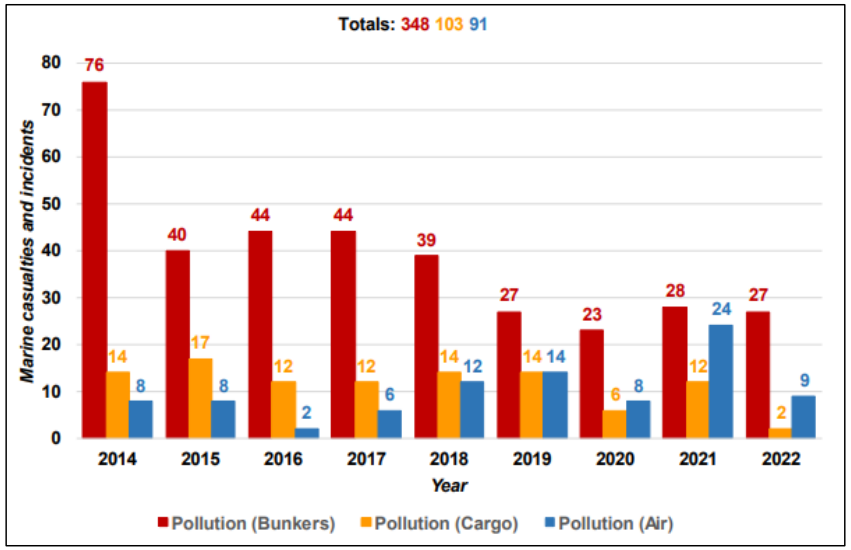
Tanker traffic 2023



Global tanker spills *Vs* seaborne oil trade



Evolution of pollution incidents in EU waters, by type of pollution, period 2014-2022



Hot-spots AIS Gaps

Hot-spots STS transfer of Russian oil

Other potential risks

- Offshore activities: New exploratory drilling
- Pollution from Shipwrecks: Emerging concern
- Capacity for the response to Low sulphur oils: New technology not available yet

Concept paper: New scenarios driven by the Energy transition and the use of alternative sources of power

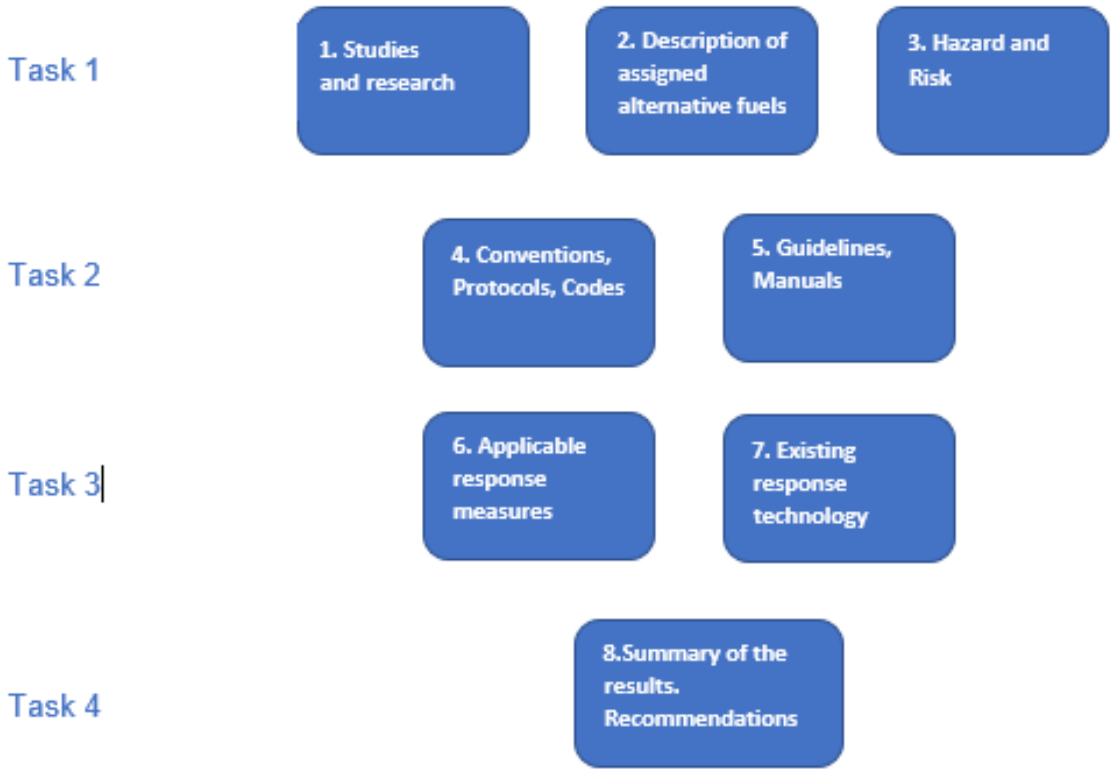
Shipping gradually, but slowly, shifting from fossil to alternative fuels, driven by the need to transition to cleaner energy sources:

- Slight increase in the use of alternative fuels in EU ports, but they represent only 5% of oil commodity discharges.
- Not yet available at scale and remain more costly than traditional options.
- However, marine sector's fossil fuel use is expected to decline by 10% over the next decade, as alternative fuels, are poised to replace traditional fuels.

Current clean-up strategies and techniques do not translate to most "clean" alternative fuels, e.g., LNG

Fill knowledge Gaps

Framework Contract end of 2024 for max. 5 STUDIES related to alternative fuels concerning responses to their accidental releases into the marine environment



Thank you! Any questions?

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