Mission OCEAN
Digital Twin OCEAN
OCEAN Observation

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IHO-European Commission 10 year anniversary

5 May 2022
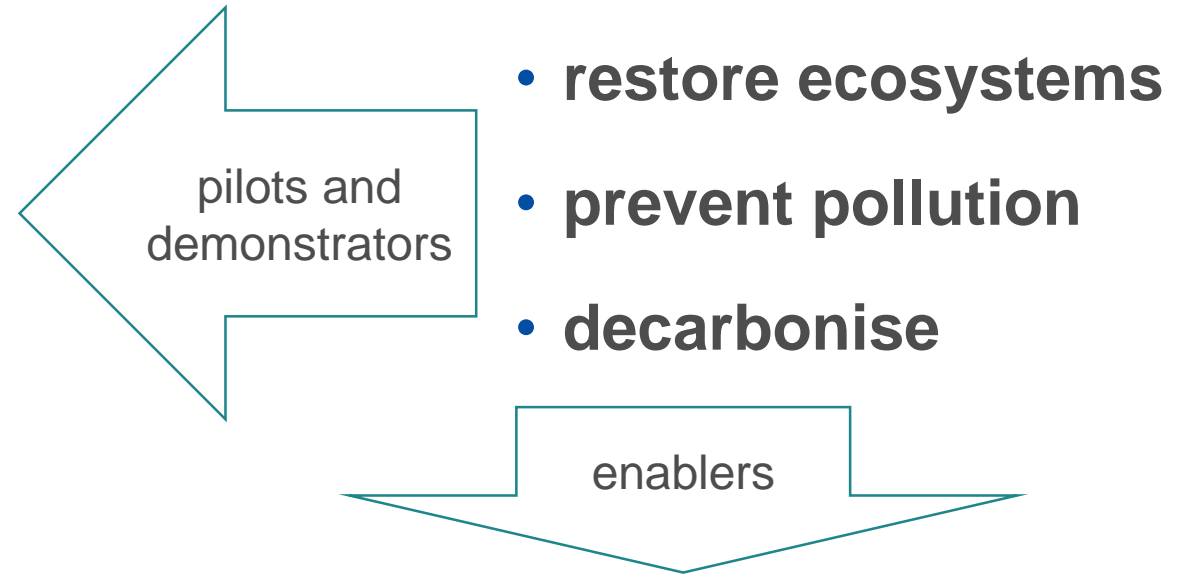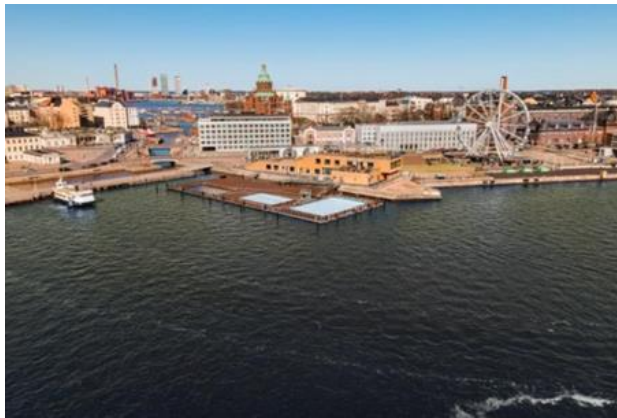
Mission Ocean

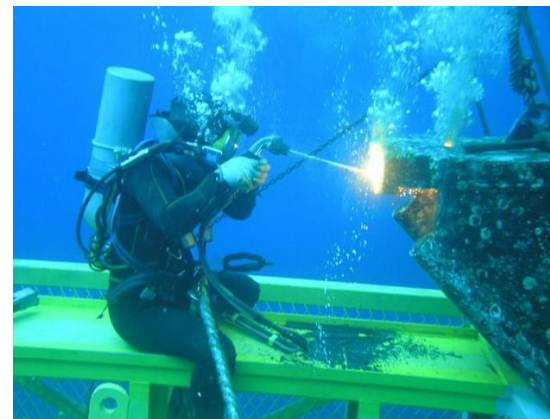## ≈ €100 million per year

Danube

Mediterranean

pilots and demonstrators

- **restore ecosystems**

- **prevent pollution**

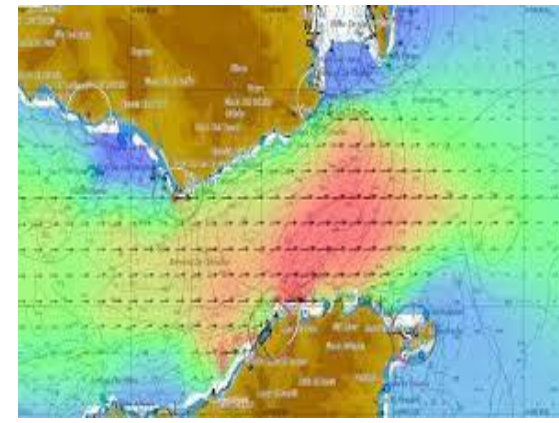- **decarbonise**

Atlantic and Arctic

Baltic and North Sea

enablers

skills

Digital Twin Ocean

focus on nature-based solutions and community involvement

Digital Twin Ocean

more data
more models
easier access
high performance computing
artificial intelligence

definitions

- Ocean observations"

  - all observations of the state and dynamics of oceans and of marine organisms made within and beyond the jurisdiction of EU Member States, with the exception of observations made from Earth-orbiting satellites

- "Ocean waters"

  - all salty and brackish waters as well as the underlying seabed and subsoil

problems

- inefficient planning
  - made for a specific purpose by a specific user community
- opaque planning
  - unaware of plans of neighbours
- insufficient sharing.
  - sharing of these assets could allow more observations for the same money
- insufficient innovation
  - take-up of new platforms and sensors slow;
- unsustainable observation –
  - precarious funding
- inequitable sharing of effort
  - for participation in international programmes
- lack of standards
  - inhibits citizen science

European Commission

	both		observing		monitoring
	(magenta)		(blue)		(green)

Country	Development and economy	Science and education	Agriculture and fisheries	Defence	Ocean	Foreign affairs	Energy	Environment	Transport	Other
Belgium	observing	monitoring	both	both				monitoring		observing
Bulgaria		monitoring	observing	monitoring				monitoring		
Croatia	monitoring	both	observing	monitoring				both		
Cyprus		monitoring	monitoring					monitoring		
Denmark		both	both				both	both		
Estonia	observing	both	observing	both				both		both
Finland		both	both	both				both	both	
France		both	both		both	both		monitoring	both	
Georgia	monitoring	monitoring						monitoring		
Germany	both	observing	both					observing	both	
Greece	both	both	observing					both		
Ireland	observing	observing	observing	observing		observing	observing			observing
Italy	observing	monitoring	observing	both	both			monitoring	observing	monitoring
Latvia		both	both	both				both		
Lithuania		both	observing	both				both		
Malta										
Netherlands			observing	both	both					both
Poland		monitoring	observing					monitoring		monitoring
Portugal		both	both	both	both	both				
Romania	observing	both	observing	both				both		
Slovenia		both	both					both		
Spain		monitoring	both	both			both	both		
Sweden		both						both		both

objectives

- aims for

  - a common EU approach for measuring once and using the data for many purpose

- proposes

  - joint planning of observation activities

  - a framework for collaboration on a national and EU scale.

European Commission

replies from those engaged in observing
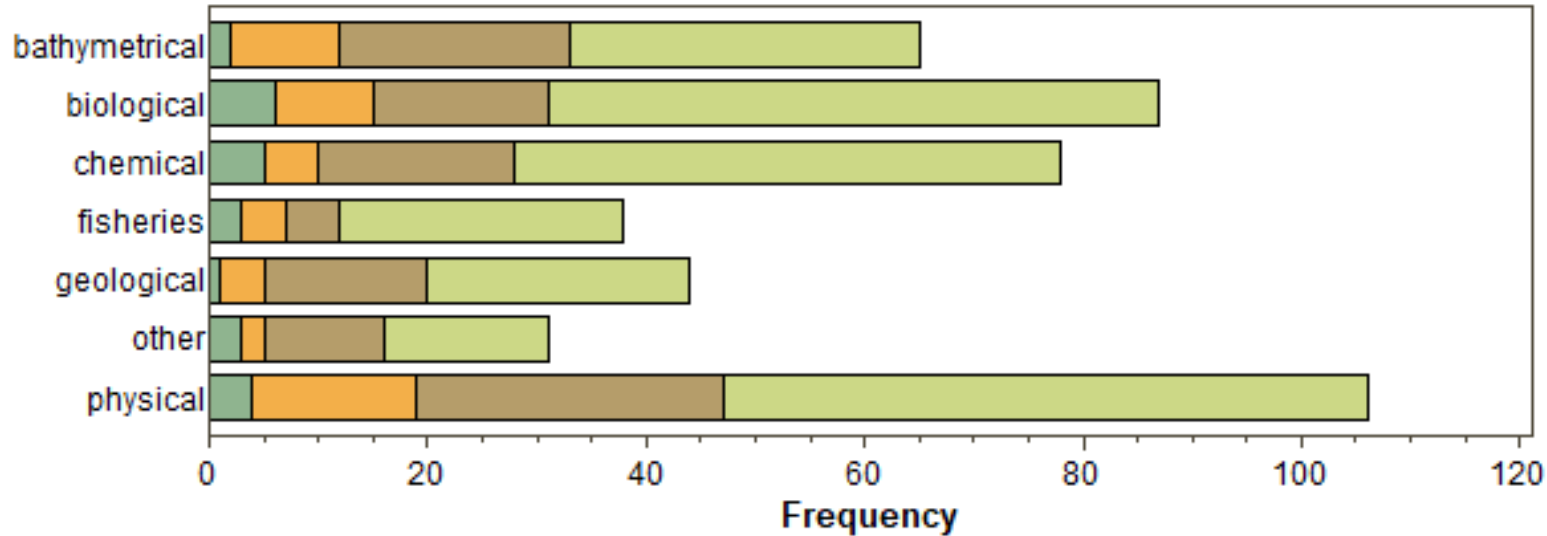
- what are you observing?

- and why are you observing?

  - coastal protection

  - environmental monitoring
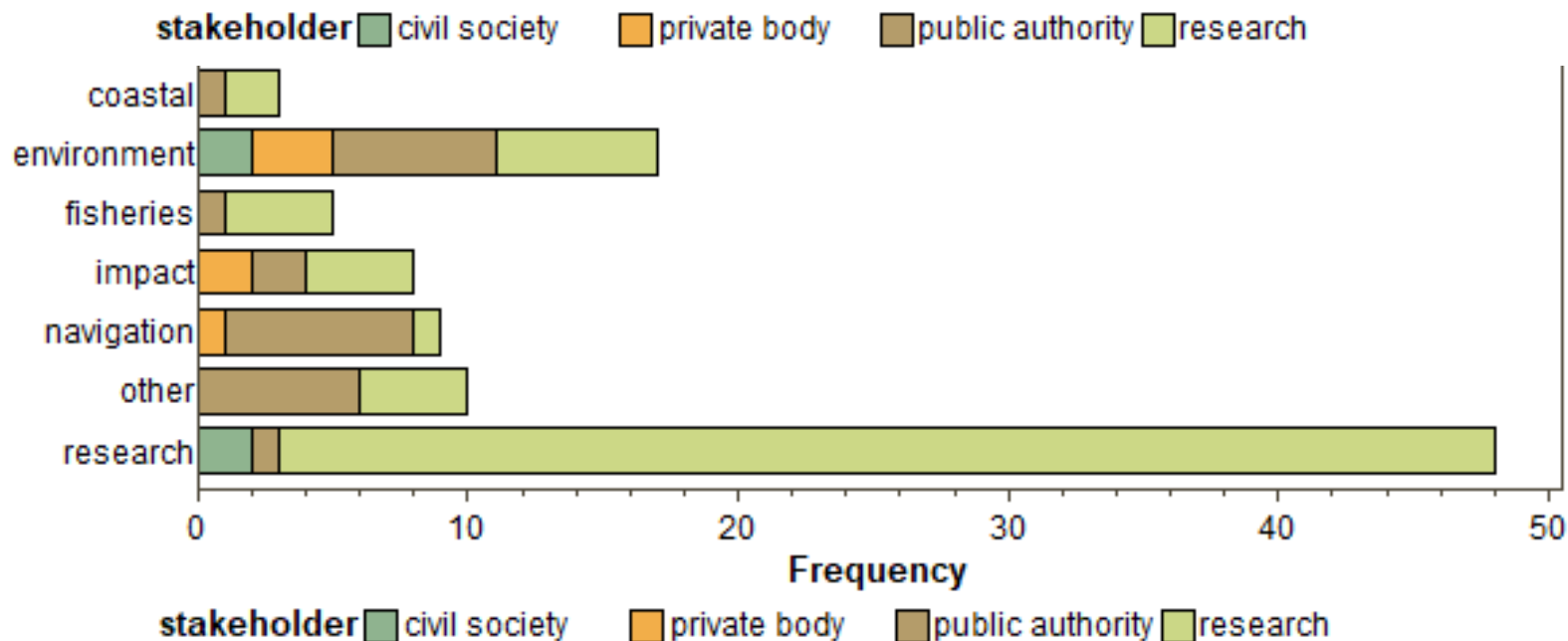
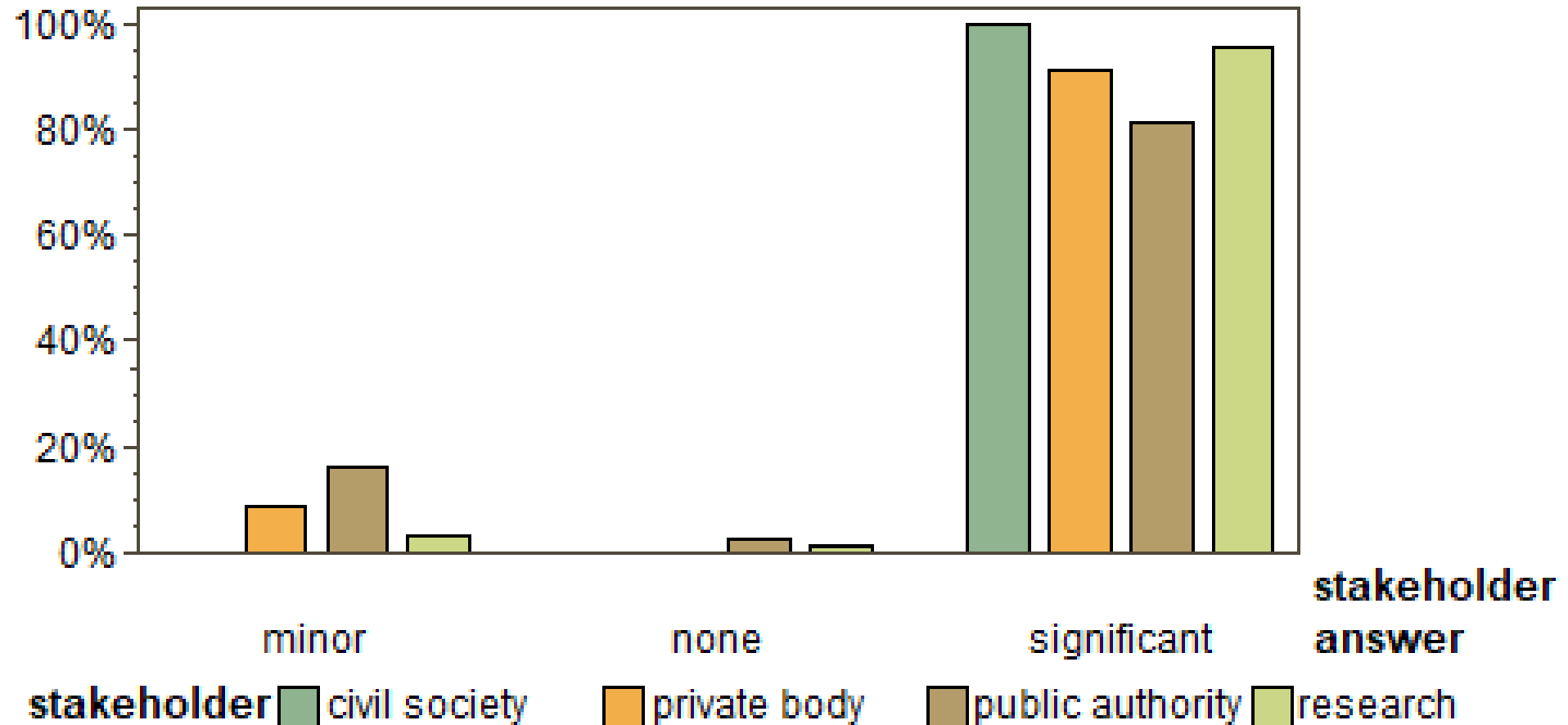 - fisheries management

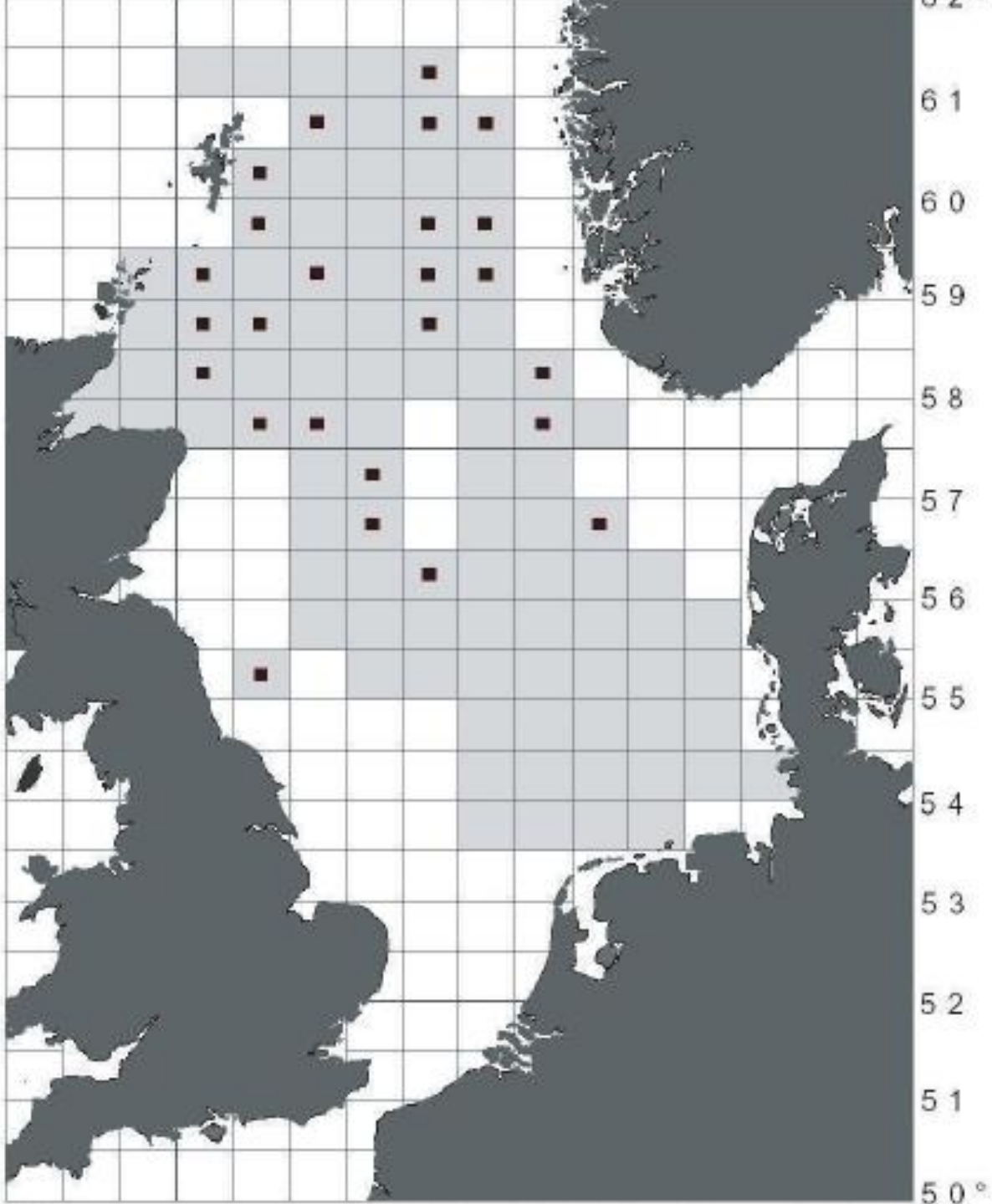 - environmental impact

  - safe navigation

  - research

  - etc

European Commission

what is EU role in improving matters?

European Commission

call for tender:
study for reporting obligations
for ocean observation

- opened

  - 4 February 2022

- closed

  - 24 March 2022

European Commission
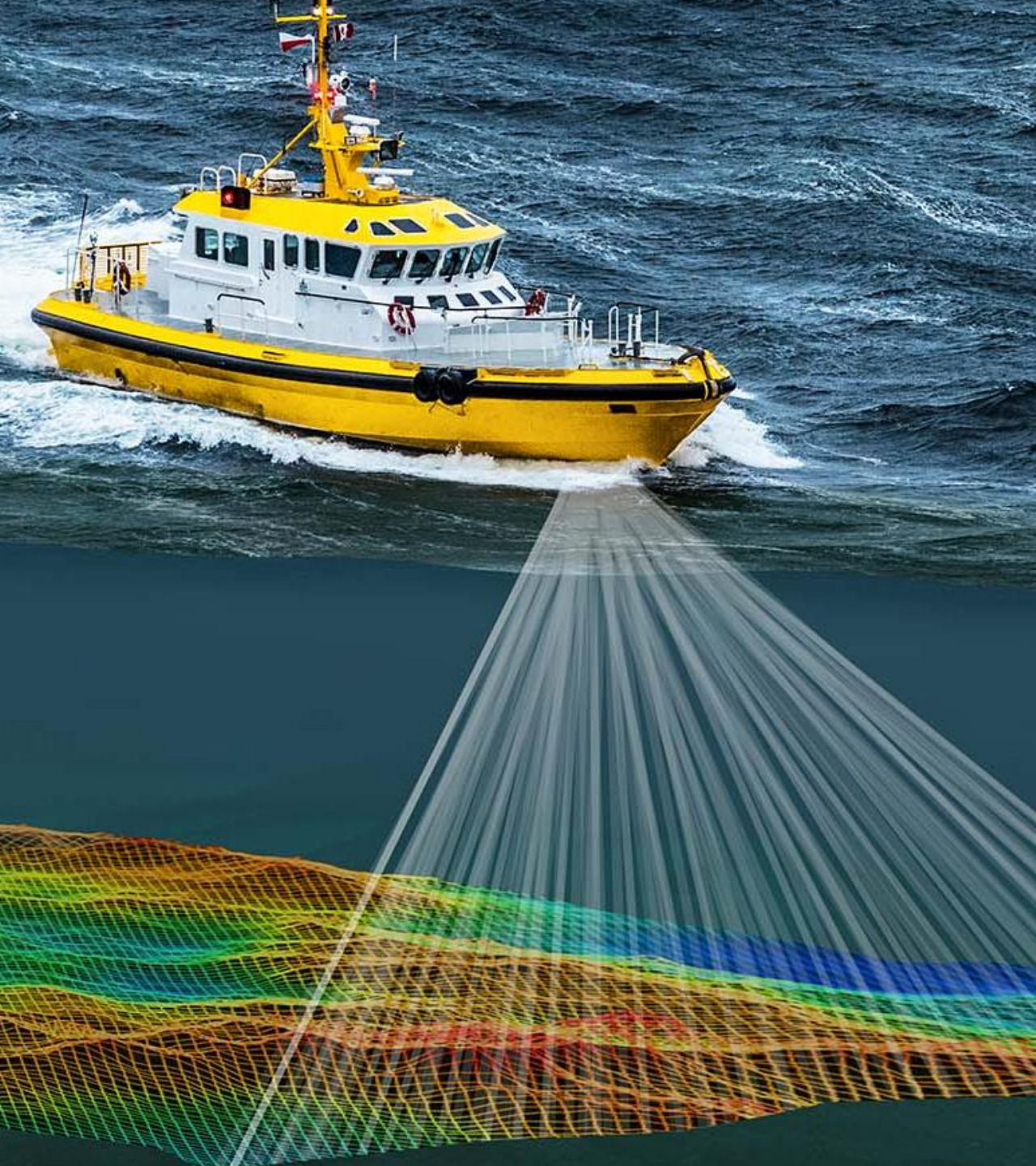
tasks

- current practice
  - includes those mandated by EU legislation
- standards
  - identify current practice
- reporting template
  - INSPIRE format
- data collection
  - test on two EU Member States
- examples of different purposes
  - prototype on map viewer
- workshop
  - present results

that's all we can say for now

we should be able to announce something in early summer

Thank you