



Simple project « SE.D.RI.PORT – Sediments, dredging and port risks – Axis 2



Se.D.Ri.Port.: Sand accumulation and management of dredging activities in port areas. An integrated multidisciplinary approach to planning and monitoring



Ports in Europe share a certain number of problems, such as sediments accumulation with depth reduction.

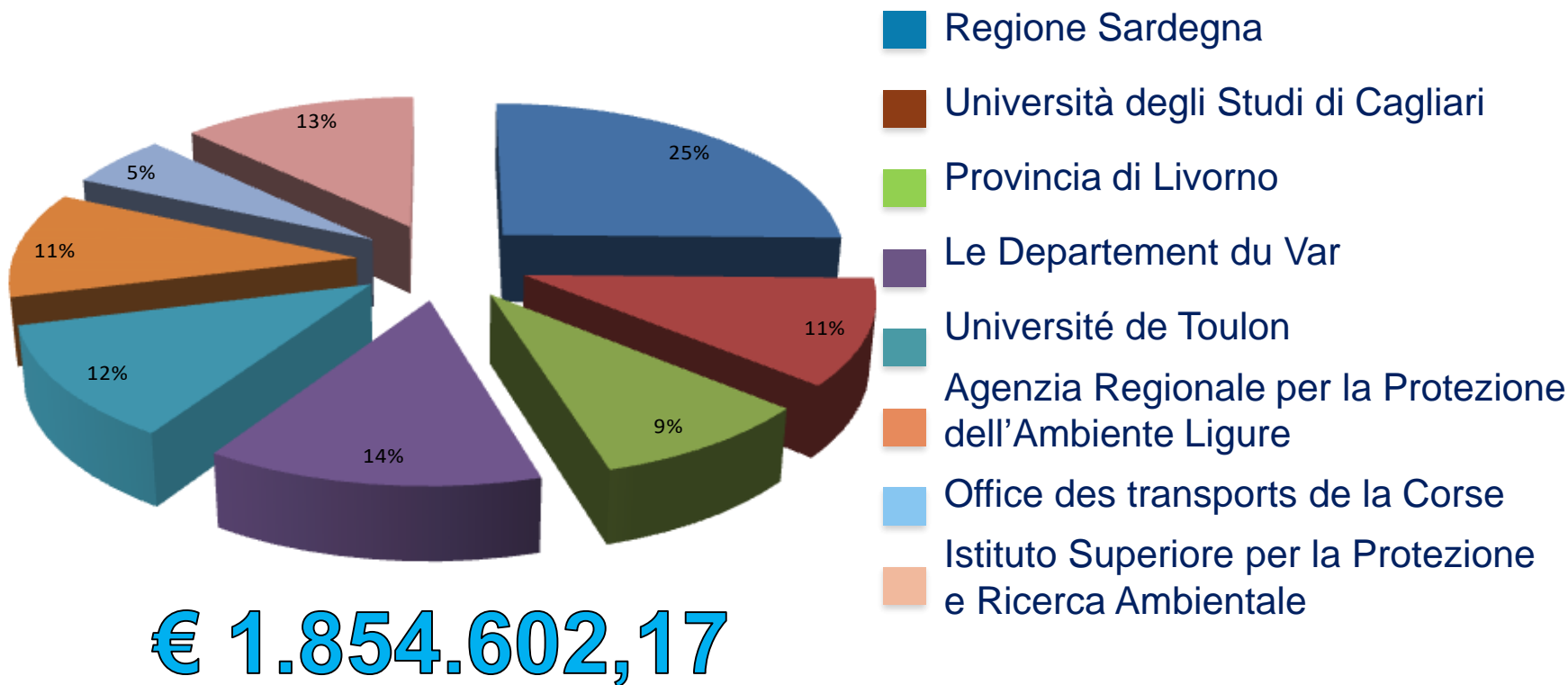
Ports need instruments for monitoring accumulation and for dredging operations planning.

Dredging techniques allow to recreate the necessary depth, but the management of the dredged materials is not the same in the different European countries.

It is important to share a common approach to environmental hazards associated with the management of dredged sediments.

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Partners and Budget allocation



Improve harbor prevention and risk management related to sediment dredging activities

Define Guidelines which will allow the institutions of the Cooperation Area to delineate possible solutions to the problem of sand accumulation

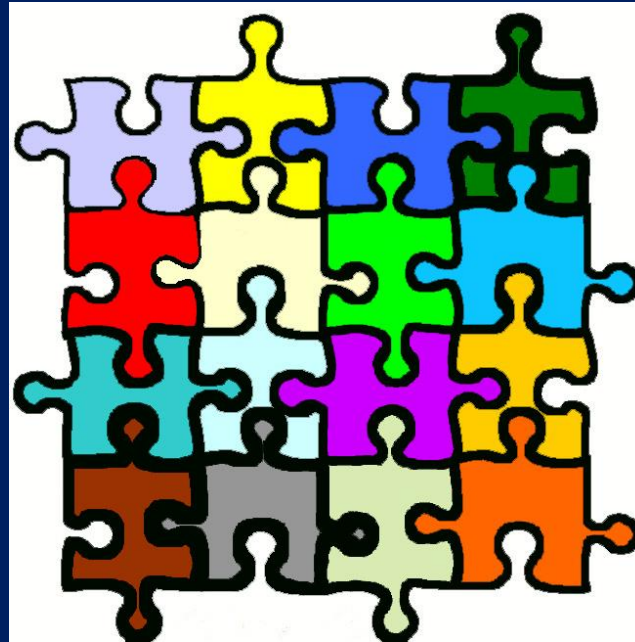
Improve port management in relation to sand accumulation and destination of dredged sediments

Implement a common monitoring system and innovative tools in order to prevent sand accumulation

Identify the environmental hazards associated with the management of dredged sediments and possible shared use and / or treatment solutions

Project management

Communication



**Diagnosis –
Monitoring - Modeling**

Risk management



Definition of a Communication Strategy in order to enhance and disseminate the results of the project

Organization of kick off meeting and final event



Organization of events, seminars, meetings in the cooperation area aimed to public and private stakeholders.





Capitalization of existing projects and bibliographic analysis



Comparison between the regulations in force in Italy and France

Identification of the critical issues (both environmental and technical/logistical) related to the management of the dredged sediments (aquatic management)



Identification of needs (dredging volumes in m³), potentialities and opportunities of the pilot ports

Creation of a synthetic guideline for the management of less polluted sediments



Diagnostic analysis



Analysis of sediment dynamics: qualitative and quantitative study of the origin of sedimentation phenomena (4 pilot sites)

Monitoring



Inventory of monitoring systems applied in the cooperation area, with focus on timing, methods, sampling methods (sediment, water and biological) and on environmental targets that may be affected by dredging activities

Sediment characterization and modelling

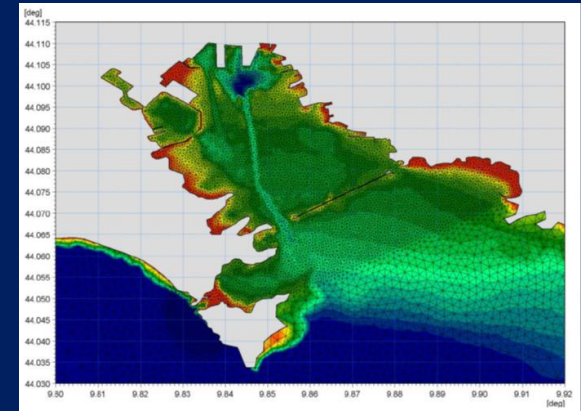


Simulation, scenarios, use of numerical modeling

Analysis of sediment suspension and deposition processes

Comparative evaluation of project alternatives on a pilot area

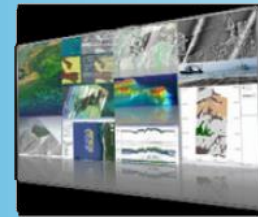
Guidelines for the application of numerical modeling to support the planning and the management of dredging works



Research and identification of innovative systems: Analysis of technological solutions available in order to carry out bathymetric surveys in different port areas



Testing of an innovative bathymetric detection and sediment classification system in two pilot ports



Android tablet with simplified GUI to monitor ongoing survey



GPS antenna

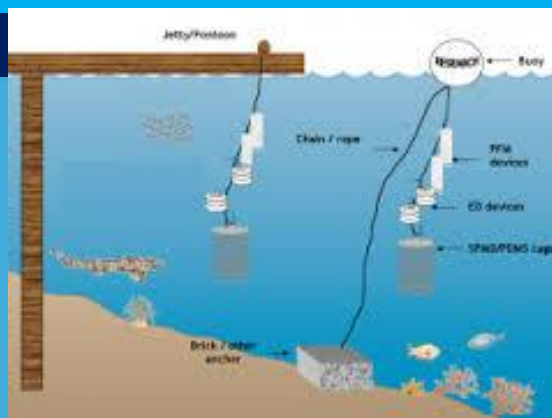


Innovative echosounding device



Tough case (with main processing unit, batteries, devices holders)

SE.D.RI.PORT Risk management

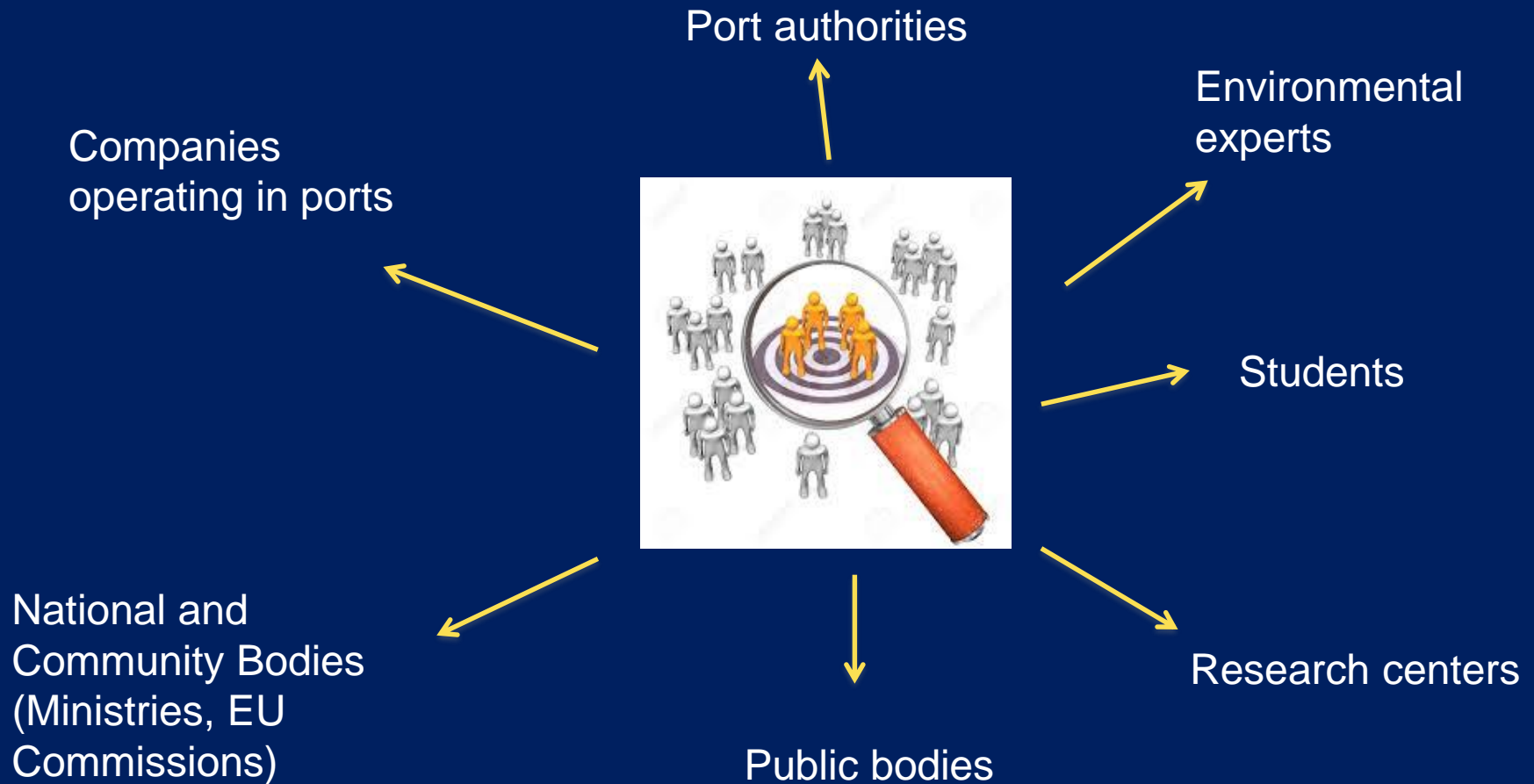


- Analysis of contaminants distribution in the different geochemical components
- Concentration in the water column of the substances released during the different dredging phases and evaluation of their bioavailability
- Passive samplers as an innovative monitoring tool for the time-integrated measurement of bioavailable contaminants in water and sediment

Which risks are posed by dredging?
Environmental risk assessment of dredging / clavage port operations
on coastal ecosystems (environmental monitoring and laboratory test
under controlled conditions)



- Summary of analytical results and of dredging effects in France
- Guidelines on sediment management to minimize risks to the coastal environment during dredging works



All partners will cooperate to implement the project output

"Guidelines for sediment management and risk assessment on coastal environment during dredging"



Common international legislation





Thank you

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