

THE MEDITERRANEAN AND THE ENVIRONMENT



The sustainable management of ecological port waste services

Utilities and Facilities: the system and the network
of Italian ports in the Mediterranean

Context

The Mediterranean coast: 46.000 km

- Average depth: **1.500** mt
- Surface total: **2,5km²**
- Water renewal: **90** years
- Flora: **25.000** specie
- Fauna: **1.000** species of seaweed
- Tourists/year: **200million**
- **30%** of world traffic is ships
- **50%** dangerous products
- **28%** hydrocarbons



Maritime traffic annual in the Mediterranean

- **200 thousand** ships in transit;
- **80.000** Adriatic;
- **360.000 million** transported hydrocarbons;
- **550.000 million** hydrocarbons in the coming years.



Return globalisation

- 50% of the goods produced in **Cindia** transits via the Suez canal;
- The **TEU** will increase tenfold;
- The **GDP PIL** in Italy will go up in value from **15%** to **20%** thanks to the logistics and transport;
- **Tourists** in the Mediterranean will grow to **300 million**.

TRANSEUROPEAN PASSAGES PROGRAMMED FOR THE ITALIAN TERRITORY

- LISBON - KIEV (Passage V)
- BARI - VARNA (Passage VIII)
- ROTTERDAM - GENOVA (Passage of the two seas)
- BERLIN - PALERMO (Passage I)

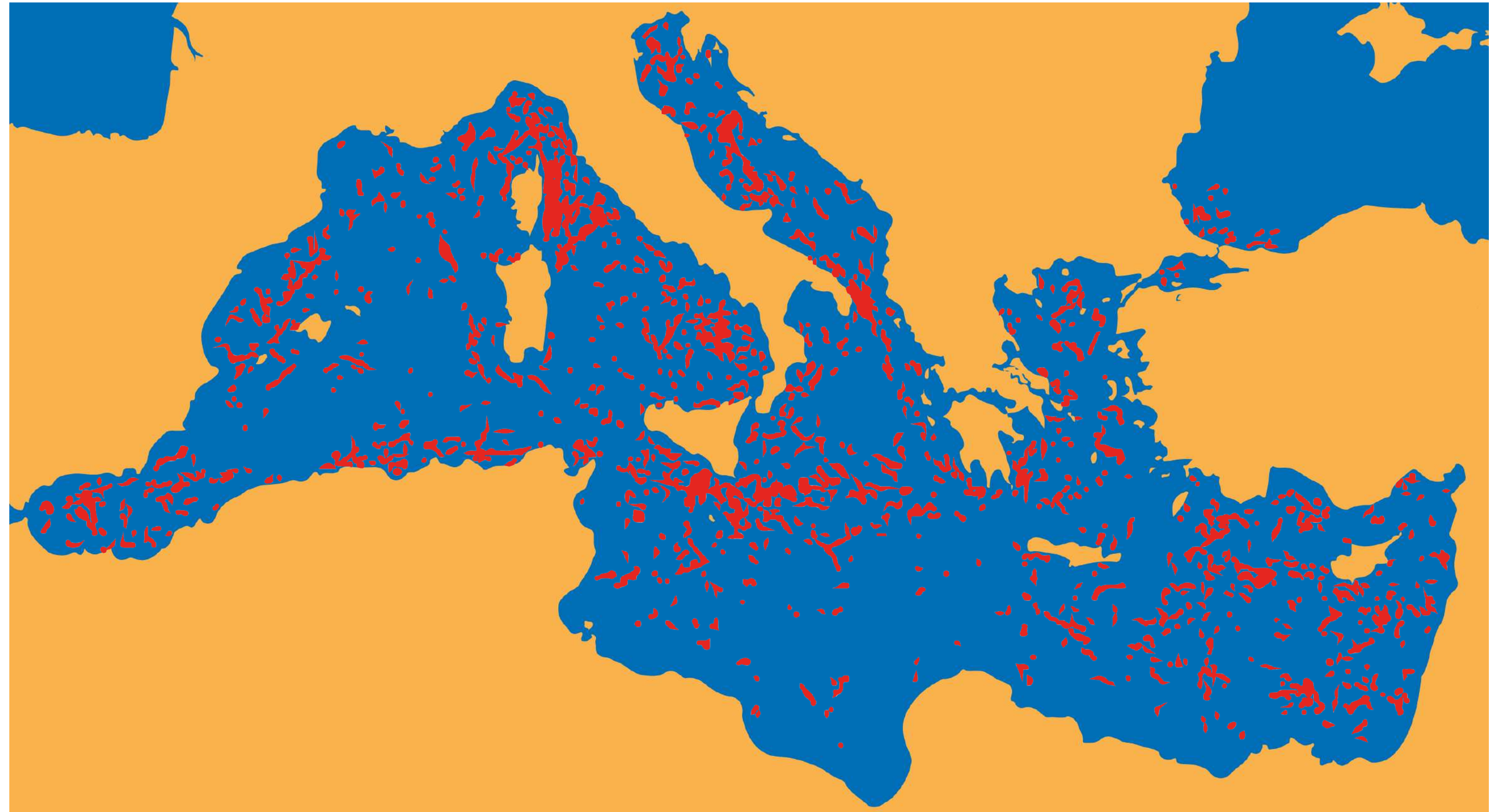
MOTORWAYS OF THE SOUTH EUROPEAN SEA



Spills in Mediterranean Sea 1999/2000

- Images: **1600**
- Observed spills: **1638**

- Images: **3500**
- Observed spills: **2350**



A satellite view of the Mediterranean region, showing the Mediterranean Sea, the Iberian Peninsula, the Balkans, and parts of North Africa. The sea is a deep blue, while the land is a mix of green, brown, and white (snow).

The Mediterranean covers 0,8% of the world's total water surface of the planet

ANTIPOLLUTION SYSTEM

ITALY

The numbers

- **2.000** workers;
- **500** means of transport by land and sea;
- Plants: **Incinerators - sterilisers - bilge water plants;**
- **Guaranteed operation** 365 days of the year, 24/7;
- **Bilge water treatment plants;**
- Treatment capacity: **335.000** tonnes/year;
- Treated water year 2004: **71.000** tonnes;
- = **22% fixed plant** capacity
- **4 incinerators;**
- **15 steriliser;**
- **Thousands of capacity** in m³ between cisterns and containers;
- **Lighters, land and nautical vehicles;**
- **50 storage areas** in the port.

The services

- **Collection, transport, treatment, recovery,** maritime waste disposal of every type of all kinds and types;
- **Anti-pollution and depollution** control at sea;
- **Cleaning of water mirrors;**
- **Cleaning of state-owned areas;**
- **Cleaning and reclamation of beaches and stretches of sand;**
- **Management of sea spillage emergencies;**
- **Environmental remediation.**

The plants



Equipment



Means



**PRODUCT DATASHEET
SCHEDA TECNICA**

- Length overall: 11 m
- Moulded beam: 2,48 m
- Draft: 1,17 m
- Displacement: 9,5 t
- Main engine: Volvo-Penta Kw132 hp180
- Maximum speed: 6 Kn
- Maximum capacity of liquids: 1,1 m³
- Construction material: Steel hull and aluminium superstructure
- Lunghezza fuori tutto: 11 m
- Larghezza al baglio: 2,48 m
- Immersione: 1,17 m
- Dislocamento: 9,5 t
- Motorizzazione: Volvo-Penta Kw132 hp180
- Velocità massima: 6 Kn
- Capacità massima dei liquidi: 1,1 m³
- Materiale di costruzione: Scafo in acciaio e sovrastruttura in alluminio



PELIKAN 1
Model / Modello

**PRODUCT DATASHEET
SCHEDA TECNICA**

- Overall length: 13,363 m
- Moulded beam: 3,42 m
- Draft: 1,39 m
- Displacement: 17,35 t
- Main Engine: Diesel hp230 a rpm2800
- Speed: 8 Kn
- Maximum capacity of liquids: 1,35 m³
- Construction material: Steel hull and aluminium superstructure
- Lunghezza fuori tutto: 13,363 m
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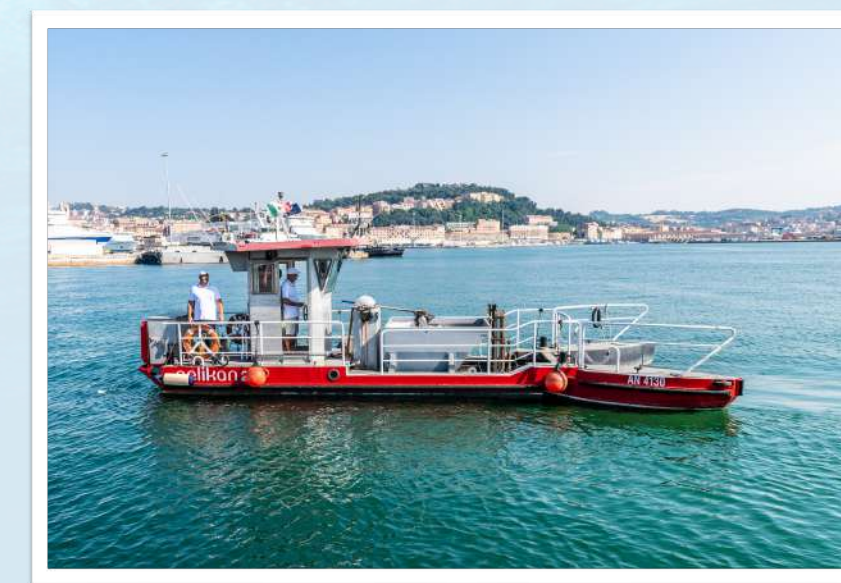
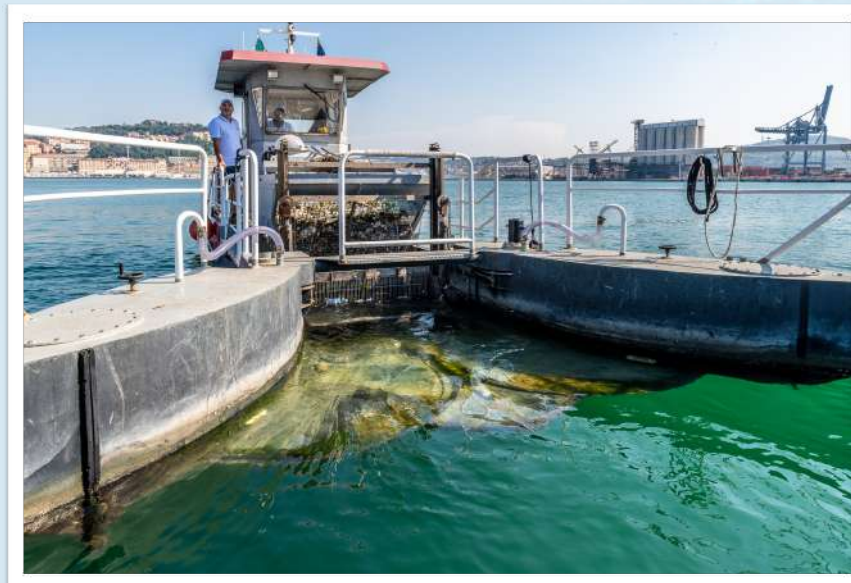
PELIKAN 2
Model / Modello

**PRODUCT DATASHEET
SCHEDA TECNICA**

- Length overall: 8,5 m
- Moulded beam: 2,48 m
- Hull length: 7,70 m
- Moulded depth: 1,2 m
- Frame spacing: 0,6 m
- Mean draft: 0,5 m
- Displacement: 3,5 t
- Main propulsion power: 88 kW
- Design speed: 12 Kn
- Main engine: FNM 20HPE 120 + BRAVO1, 120cv
- Hybrid auxiliary engine: electric Pod 2x4,5 kW
- Macro-pollutants Stock capacity: 2 m³
- Recovery oil stock capacity: 0,5 m³
- Construction material: Marine aluminium
- Lunghezza fuori tutto: 8,5 m
- Larghezza fuori fasciame: 2,48 m
- Lunghezza scafi: 7,70 m
- Altezza costruzione: 1,2 m
- Intervallo ossature: 0,6 m
- Immersione media: 0,5 m
- Dislocamento: 3,5 t
- Potenza propulsione principale: 88 kW
- Velocità di progetto: 12 Kn
- Mot. principale: FNM 20HPE 120 + BRAVO1, 120cv
- Mot. ausiliare ibrido: Pod elettrici 2x4,5 kW
- Capacità stoccaggio macroinquinanti: 2 m³
- Capacità stoccaggio oli recuperati: 0,5 m³
- Materiale di costruzione: Alluminio navale



ECOPELIKAN
Model / Modello



Utilities & Facilities

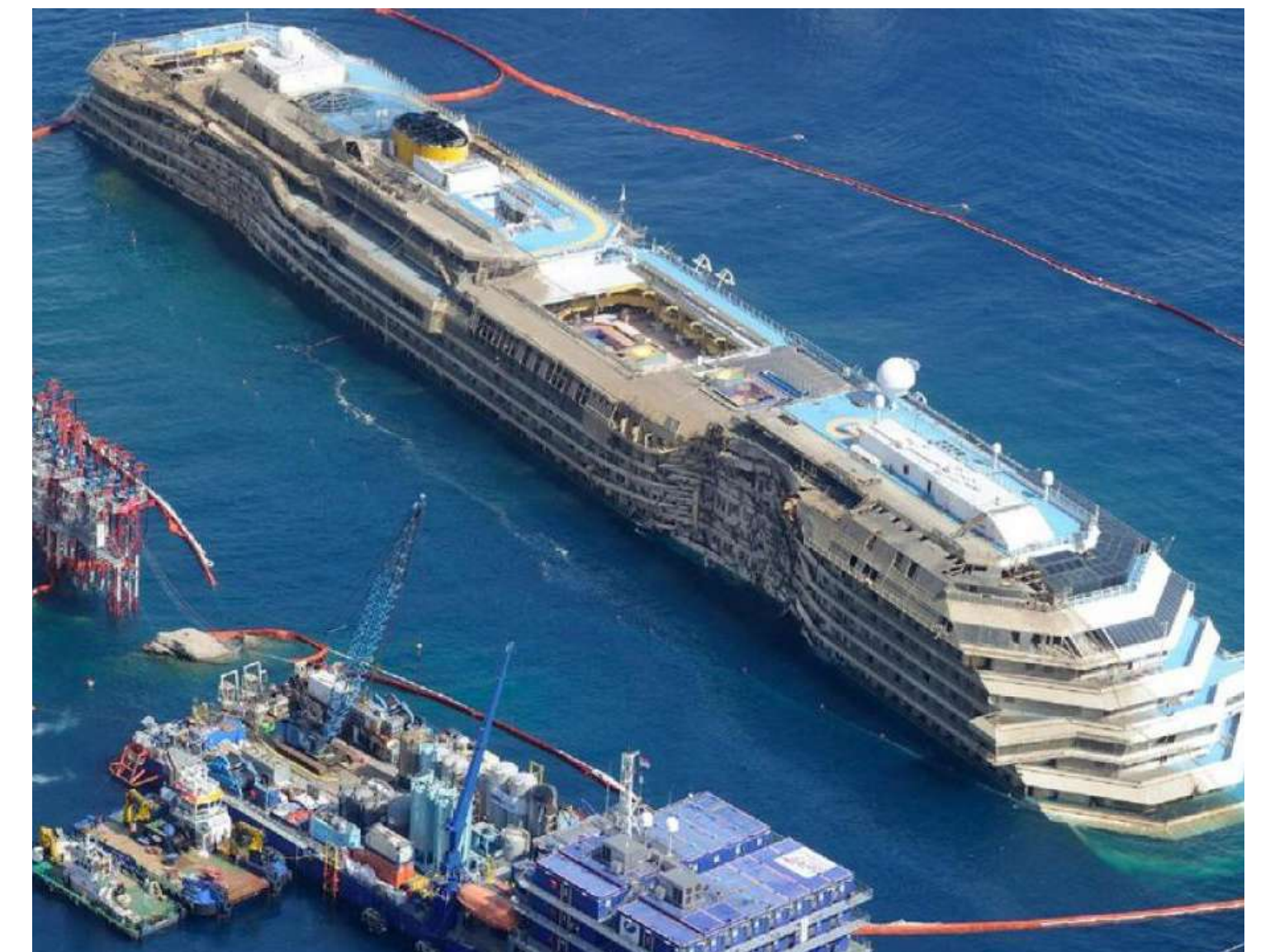
Adriatic - Ionian basin

Network



Accidental pollution

Costa Concordia, 2012



**A group serving the environment
and protecting the sea**

B.E.R.

B.E.R.
Blue Economy Research



The B.E.R. was born with the aim of creating a legal entity with a mixed public and private composition, capable of carrying out innovative and sustainable projects in the maritime and port world. European, national and regional programs are ready to channel important funds and financing towards technological poles capable of generating social, environmental and economic benefits.

On 29 July 2020 the project was presented to the press and authorities by Paolo Baldoni, CEO of the Garbage Group, main promoter of this hub, together with the scientific partners Politecnica delle Marche and CNR (National Research Center). In their interventions, the institutions highlighted their full support for the birth and development of this Consortium, considering it fundamental not only for the Anconetano port district but in general for the growth of models applicable to all port and maritime systems of the Mediterranean.

Research and development:

- Designers
- Technology for extending the Pelikan application field
- Increase and enhancement of the presence in foreign markets
- Development for Abroad



Projects under development:

- HYBRID PELIKAN
- MICROPLASTICS
- IRIDESCENCE
- DRONES and ROW
- HYDROGEN
- RADAR
- WATER MONITORING
- WATER OXYGENATION
- MATROL B and SAFEGUARDING THE FAUNA
- ENHANCEMENT ON THE GROUND
- REMOTE MAINTENANCE



Thanks for your attention