ECOMEDPORT WEBINAR

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A novel technology developed for sedimentation issues in Mediterranean

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THE EJECTOR

The ejector's operating principle is based on the combined effect of two different nozzles:

- Radial nozzles: they create a suspension of water and sediment;
- Central nozzle: thanks to the Venturi effect, the central nozzle sucks up a mixture of sediment and water and conveys it into a discharge pipe.

AIMS

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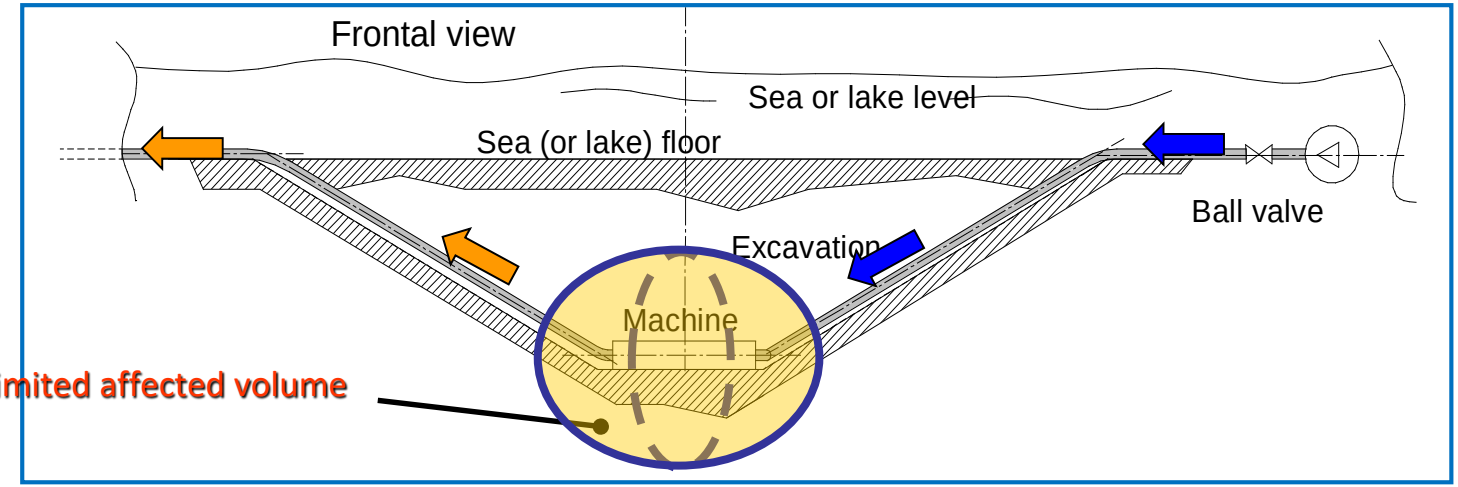
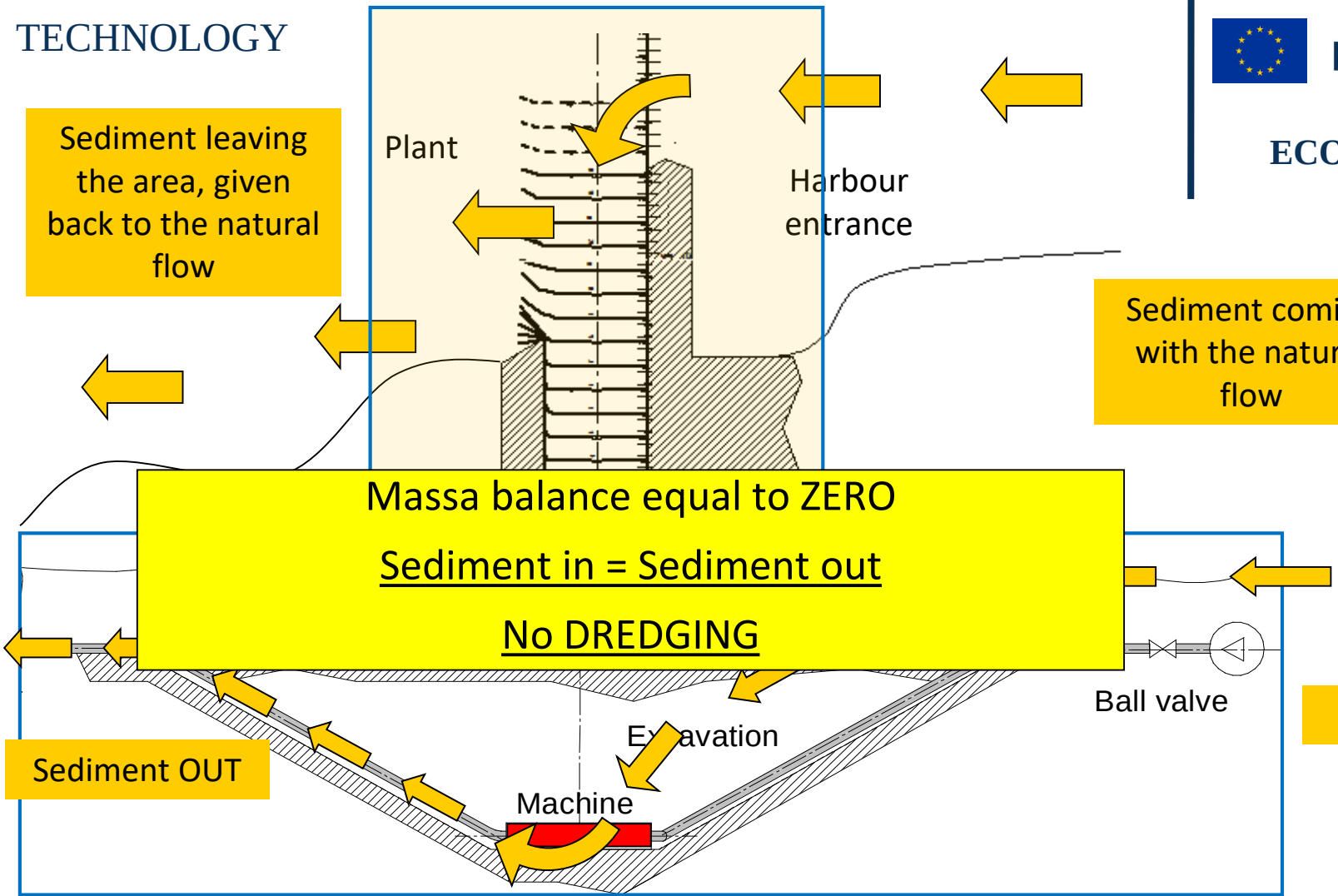
To realize a technology able to model and maintain the seabed at the entrance of the port at a certain depth and able to:

- minimize environmental impact,
- avoid the turbidity of sea water,
- not to be an obstacle during operation,
- Integration into the architecture and landscape of the port.

Ejectors work with sediment which arrives naturally in a certain area, so it does not add or remove sediment from that area. Once the system reaches regime operation (i.e. a few minutes), the marine ecosystem is no longer affected by the plant.




Sediment leaving the area, given back to the natural flow
Plant
Harbour entrance
Sediment coming with the natural flow
Massa balance equal to ZERO
Sediment in = Sediment out
No DREDGING
Ball valve
Sediment IN
Sediment OUT
Excavation
Machine

CUSTOMER SEGMENTS

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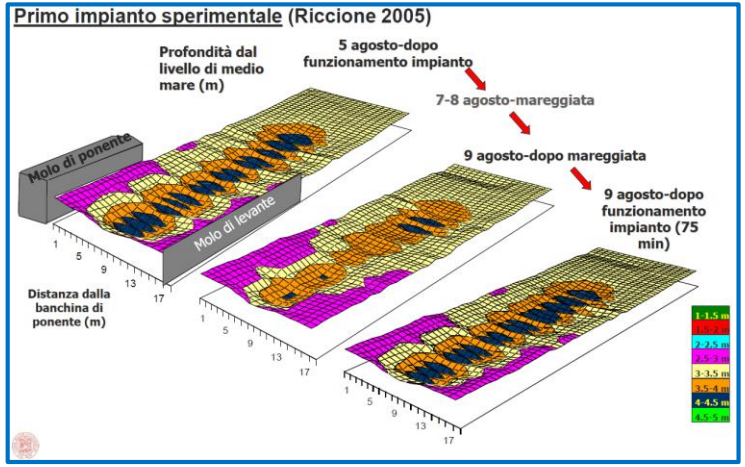
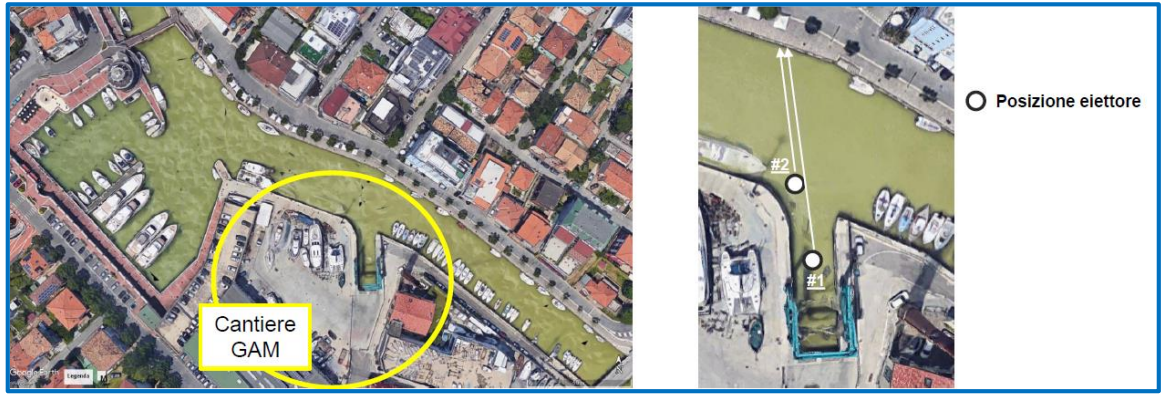
1. Port entrances/Marinas



2. Shipyards/Drydocks/slipways



CUSTOMER SEGMENTS

3. Seabed restoration at the foot of the docks

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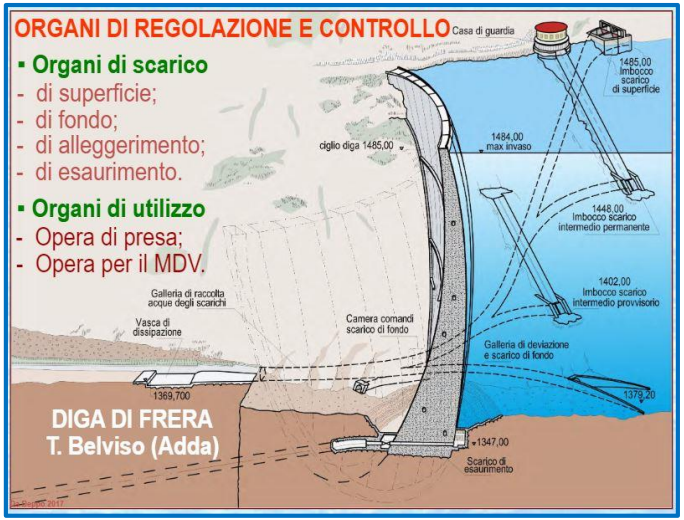
4. Protection of bottom discharges of dams / loading channels of turbines / hydraulic works



VALUE PROPOSITION

- Innovative and customized solution for sediment management.
- Lower management cost if compared to dredging.
- Navigation safety improvement.
- Extended and improved port performance.
- Environmental impact reduction (if compared to dredging).
- Simplification in budget planning.
- No authorization needed (if compared to dredging).
- Sediment management not dependent from dredging companies.

MARINA PLAN PLUS IN A GLANCE

8 main actions (technical, communication, management) are to be developed in the project. It includes:

- preliminary field test (completed in July 2017);
- design, construction (completed in June 2019) and management of a sediment management plant at the entrance of the Cervia port channel;
- The techno-economic and environmental assessment of technology.

Start: 3 October 2016
Duration: 39 months, extended to 51
EC funding: € 1,452,807 (57.7%)
Total cost of the project: € 2,519,245

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INSTM

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TREVI

ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

COMUNE DI CERVIA

ICOMIA
International Council of Marine Industry Associations

MarinaPlan

Life

TIMETABLE

Action		2016				2017				2018				2019				2020				2021			
Action numbe	Name of the action	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
A. Preparatory actions (if needed)																									
A.1	Preliminary on field tests				■	■	■																		
B. Implementation actions (obligatory)																									
B.1	Demo Plant design				■	■	■	■	■	■	■														
B.2	Demo plant realization, commissioning and management									■	■	■	■	■	■	■	■	■	■						
B.3	Design of seabed maintenance management plan															■	■	■	■	■					
C. Monitoring of the impact of the project actions (obligatory)																									
C.1	Monitoring the project's environmental and socio-economic impacts on Port of Cervia				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
D. Public awareness and dissemination of results (obligatory)																									
D.1	Dissemination Pack and Communication Plan				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
D.2	Dissemination planning and execution, Replicability				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
E. Project management (obligatory)																									
E.1	Project Management, Monitoring and After LIFE Plan.				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				

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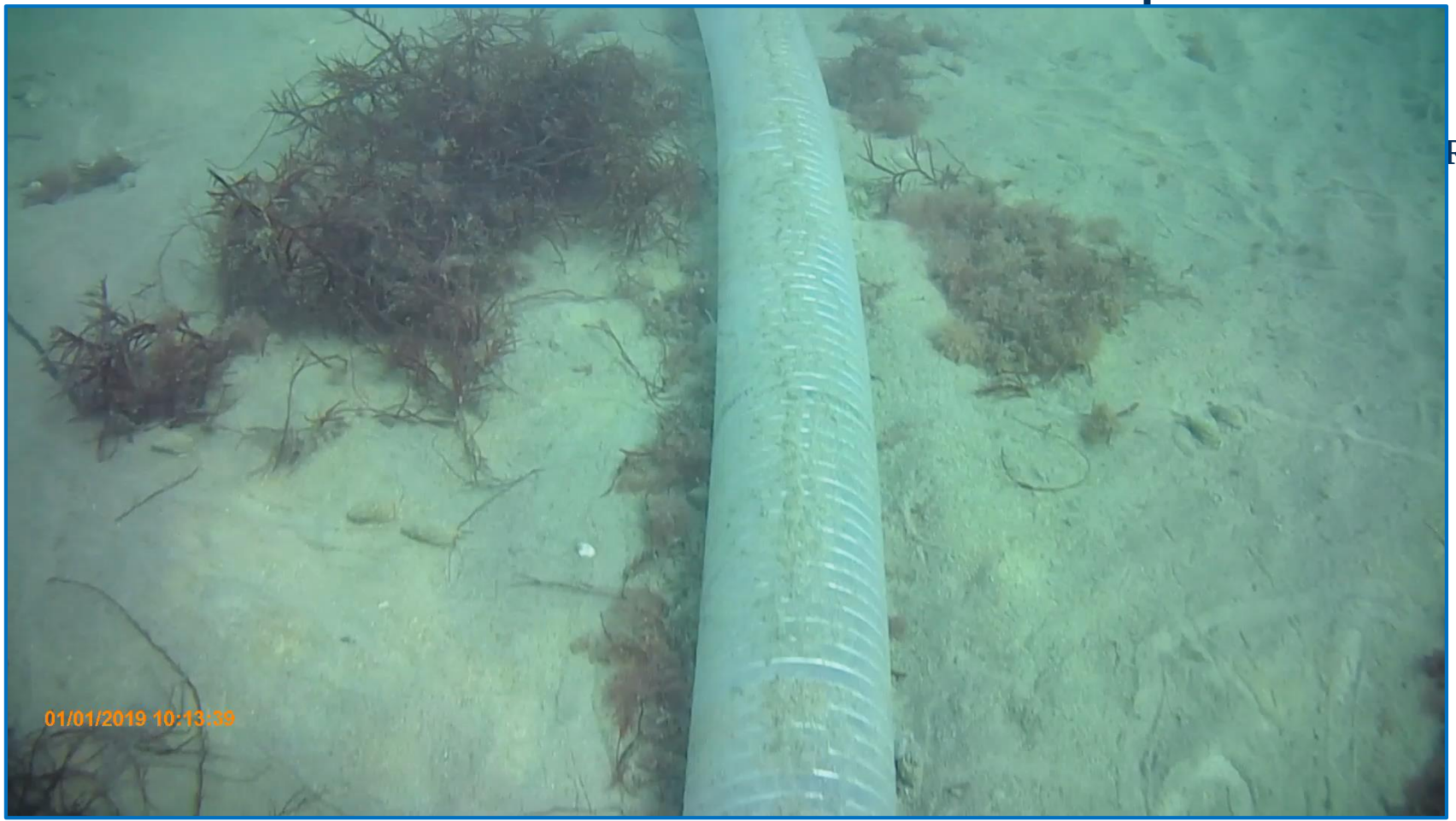

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Thank you for your attention