

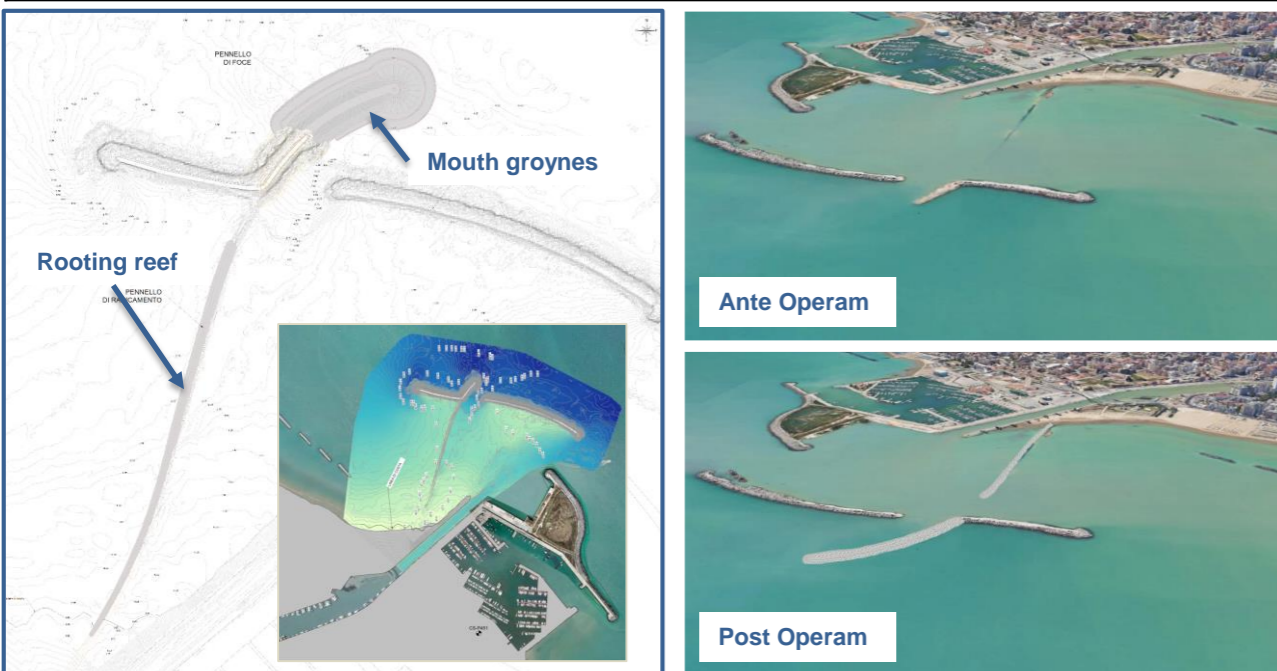
## FEATURE OF TECHNICAL SERVICE

<b>Subject</b>	Executive design for the completion of the mouth groynes and rooting reef of the Port of Pescara	
<b>Carried out by</b>	SGAI S.r.l. di E. Forlani & C.	
<b>Client</b>	Nuova CO.ED.MAR - ARPAM	
<b>Service length</b>	2021	
<b>Value of works</b>	€ 6'092'646,34	
<b>Categories value</b>	D.01	€ 6'092'646,34

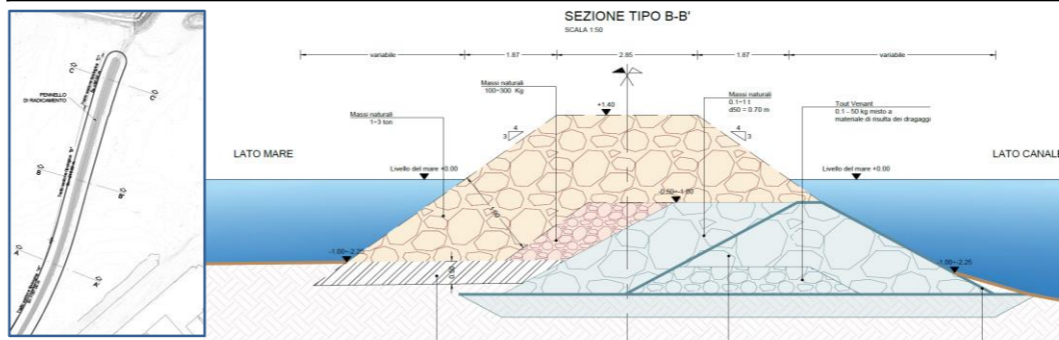
## PORT CHANNEL OF PESCARA – Project description

The Port Channel of Pescara located in the final reach of the river Pescara includes the Commercial Dock, the Port Channel and the Tourist Port. The Port Regulatory Plan [2008], of which the project is a first excerpt, aims to completely separate the port functions from the river course, strongly limit the current problems of sedimentation in the port areas, reduce the influence of the river groynes on the coasts West of the mouth of the river, avoid the silting up of the canal and the external operational basin and improve the flow of the Pescara river in the urban zone that is subject to flooding. The main works covered by this service concerning: the creation of the mouth groynes and the rooting reef. The **mouth groynes** is made with an overflowing cliff covered in tetrapods with an altitude of + 5.50 m a.s.l. on a seabed of -10 m a.s.l. The mouth groynes length is 120 m. The **rooting reef** will raise the overgrown barrier up to a level of +1.40 m a.s.l. and will extend for 500 m from the shoreline to the opening of the breakwater, maintaining the trace of the definitive dockside. The work will be in loose materials and will incorporate the existing one. The main design issues covered were: the updating of sea levels following the in-depth hydrodynamic study after the realization of the final design, the verification of the works according to the variation of bathymetric heights, the response to the prescriptions collected in the Conference of Services, the evaluation of liquefaction and the subsidence of the works.

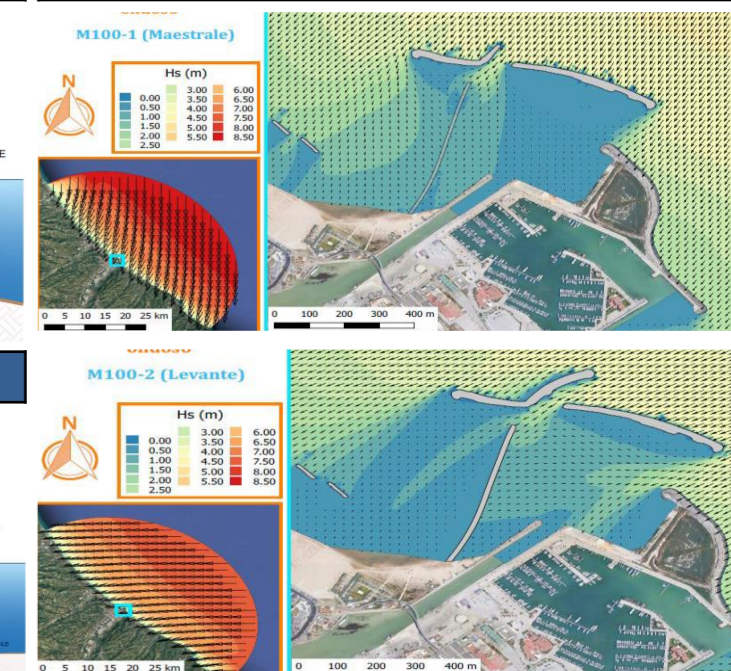
### Project plan



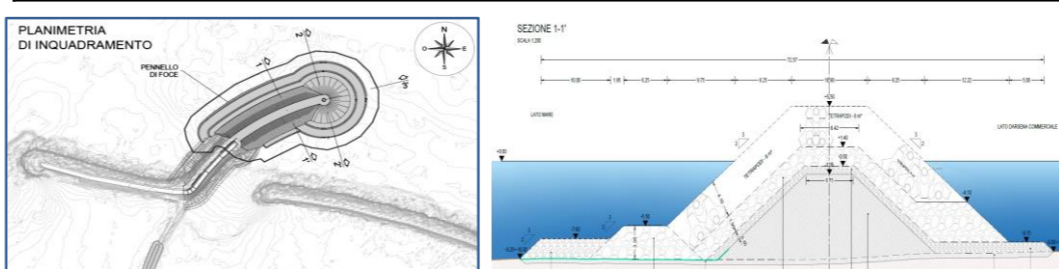
### Mouth groynes



### Hydrodynamic model

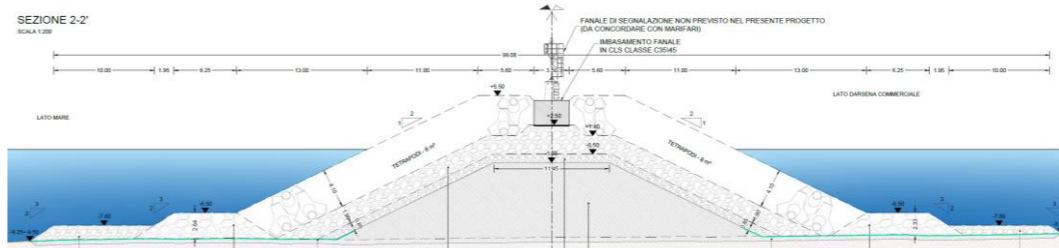


### Rooting reef

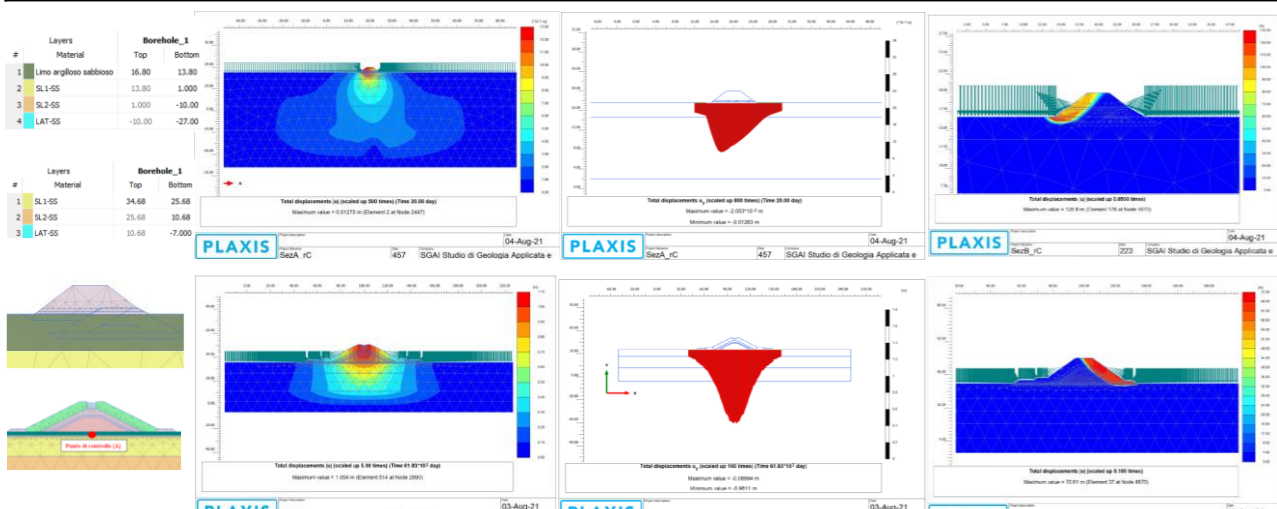
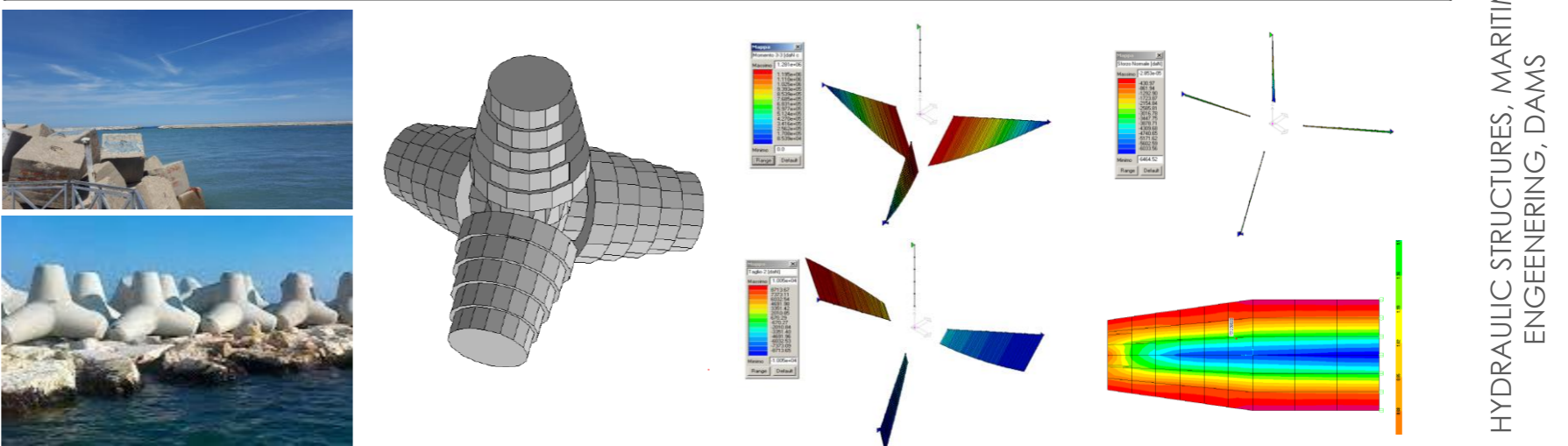


## Geological and geotechnical characterization

The results of the survey campaigns carried out were used for the detailed reconstruction of the local lithostratigraphy, the determination of the geotechnical parameters and the determination of the subsoil category. The planned works cover recent deposits, due to the overlapping of coastal and river dynamics. Recent deposits cover the oldest soils which are followed by the formation of blue-gray clays. The main geotechnical problems mainly concern: the **possible liquefaction of superficial sandy-loamy soils**, the estimation of **subsidence under the project works** and their course over time, as well as the relative stability both in static conditions and in seismic conditions. The main tests performed concerned vertical settlements (Mohr-Coulomb; soft soil) and global stability.



### Tetrapods



HYDRAULIC STRUCTURES, MARITIME ENGINEERING, DAMS