

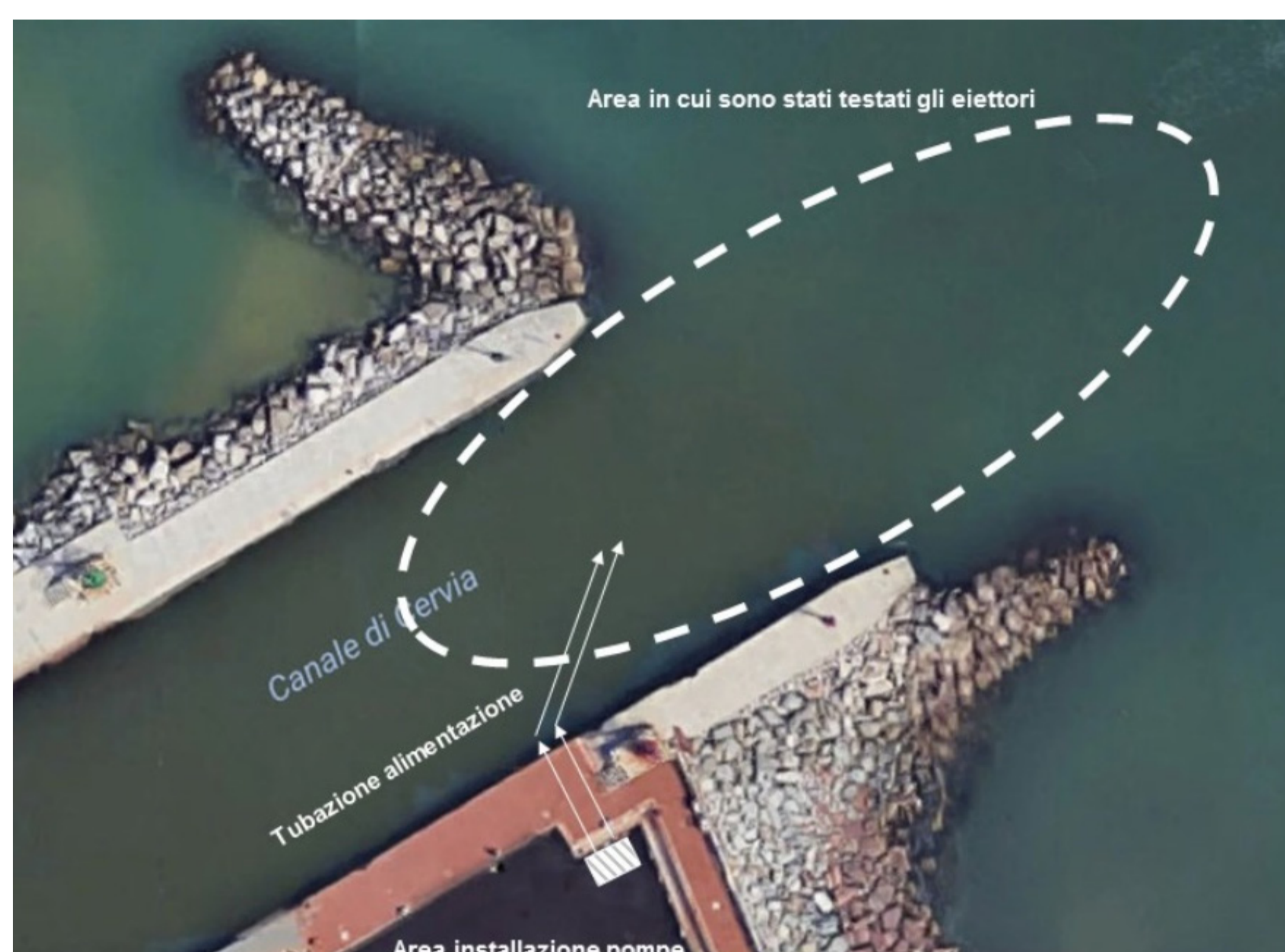


Test Field

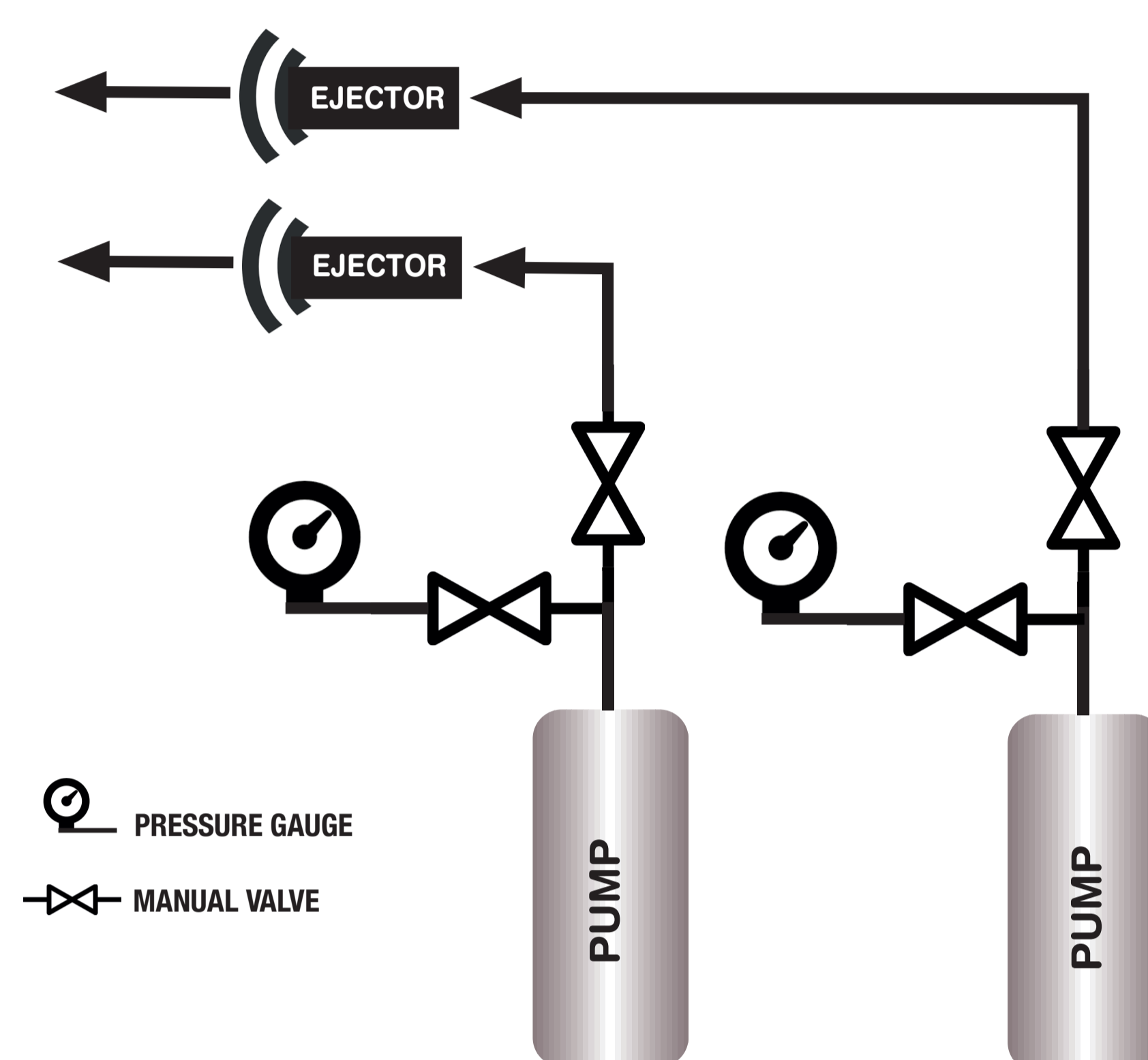
Life 15 | Marina Plan Plus

Reliable and innovative technology for the realization of a sustainable **MARINE** And coastal seabed management **PLAN**

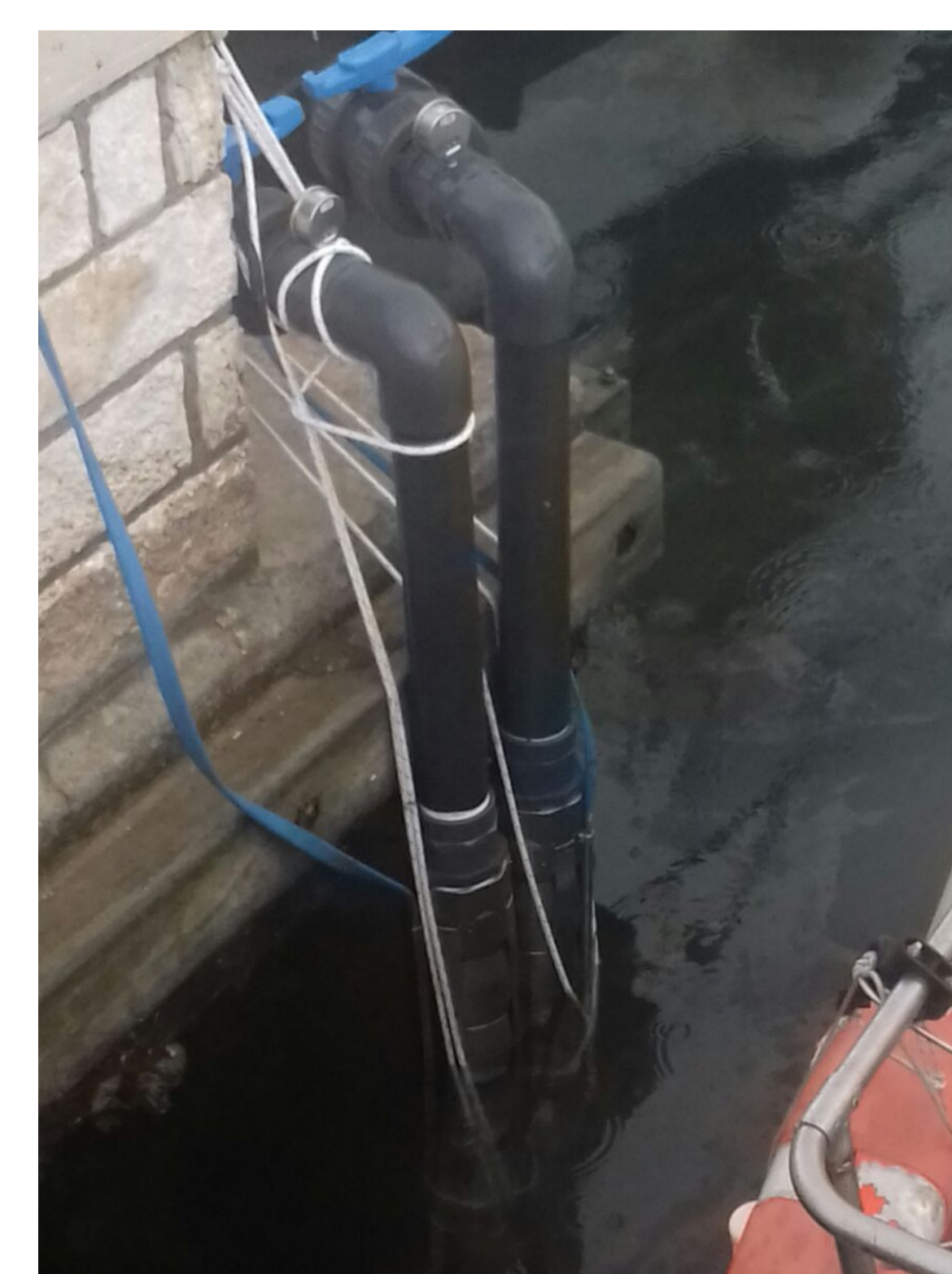
At the end of June 2017, a test field was set up at Cervia Harbour with the aim of checking how ejectors operated under specific conditions such as those at Cervia outer harbour. The test field's installation needed the go-ahead from the Port Authority as far as compliance with safe navigation requirements was concerned., after receiving a favourable opinion from ARPAE and Cervia Municipality with regard to the environmental impact and to the plant's temporary installation in a publicly-owned area. A test plant was designed and subsequently installed; said plant was made up of 2 submersible pumps and each of them was used to feed one ejector. Pumps were installed within Marina di Cervia. The test field allowed to simultaneously test up to two ejectors – with discharge pipelines having different lengths - in order to determine the best flow rates for the demonstration plant's design, whose installation is due by the end of 2017.



TEST FIELD AERIAL VIEW



PILOT PLANT P&I



SUPPLY PUMPS



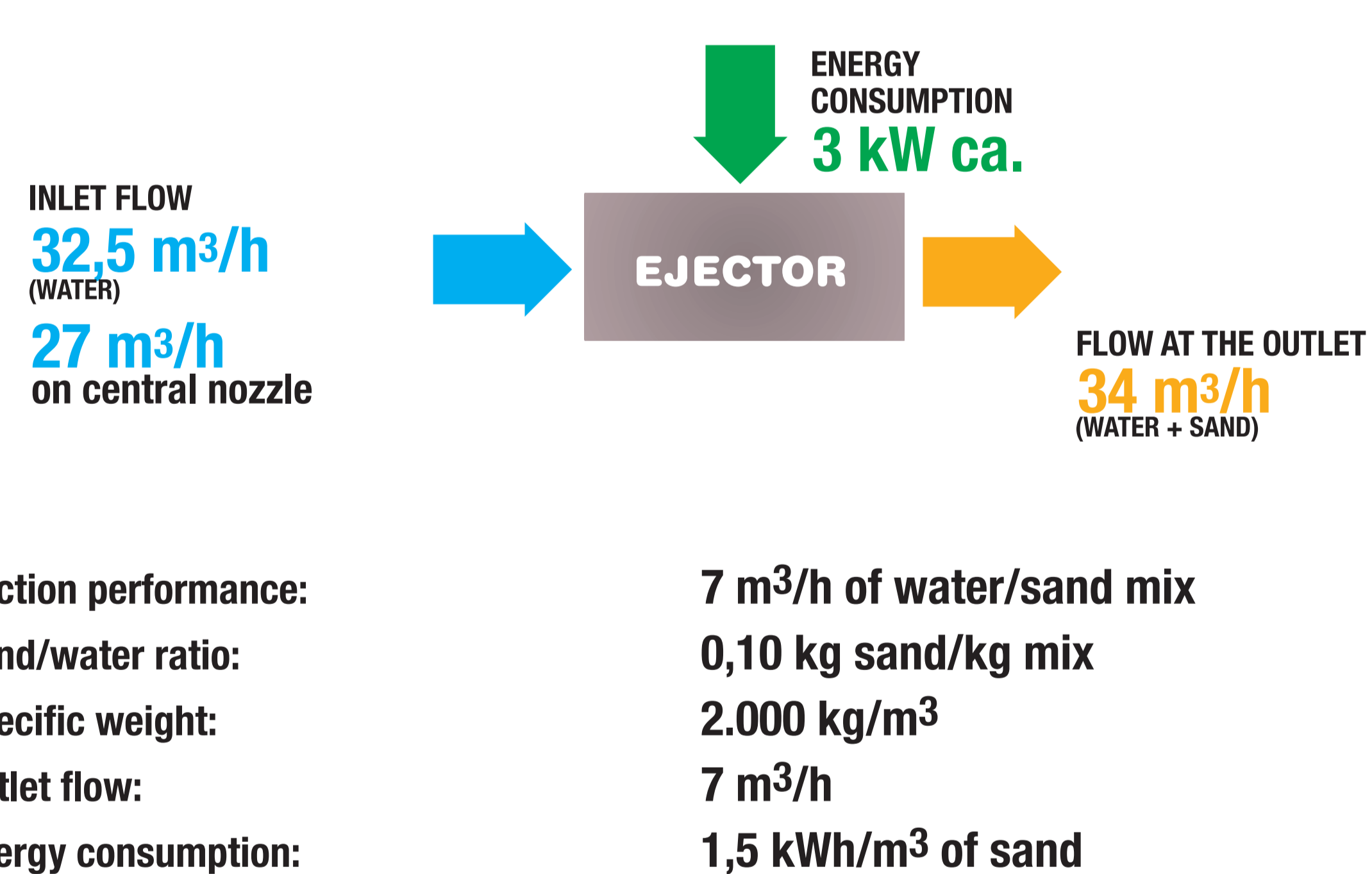
WATER SUPPLY PIPES



EJECTOR STATE AT THE END OF THE TEST

APPLICATION HYPOTHESIS

Sand removal system, 60 meters discharge pipe length



MAX PERFORMANCE AND CONSUMPTION

In particular, the test field allowed to identify two different flow rate values according to variation in the discharge pipeline's length:

- The **"flushing"** flow rate , i.e. the ejector's feed rate reflecting an operating condition whose main objective is to prevent sediments from flushing into the ejectors and into the feed and discharge pipelines
- The **"full load"** flow rate; i.e the ejector's feed rate allowing transportation of solid materials whose weight is 10% of the total weight

