

#1

newsletter



INTRODUCTION

The vulnerability of the Adriatic area to the climate changes, in particular of the Italian territory but also Croatian, and its natural resources, is very high. Massive rainy events are causing floods of rivers and streams with relevant consequences on environment. These events significantly affect the quality of bathing and coastal water.

WATERCARE aims to improve the quality of the microbial and environment and resource efficiency in bathing and coastal waters reducing the microbial contamination by using innovative tools in waste management and treatment. WATERCARE will: develop an innovative Water Quality Integrated System (WQIS) composed by a real-time hydro-meteorological monitoring network; realize an ad-hoc infrastructure for bathing waters management in a pilot site through a forecast operational model; realize feasibility studies in other 4 target sites to improve planning and management of environmental problems of the marine system; develop a real-time alert system able to preventively identify the potential ecological risk from focal contamination of bathing waters and to support governance decision and processes in bathing water management.

PARTNERSHIP

- CNR IRBIM
- Aset Spa
- Marche Region
- Abruzzo Region
- University of Urbino
- Split-Dalmatia County
- Dubrovnik-Neretva Region
- University of Split
- Metris, Istria
- Croatian Water Agency

BUDGET

2.833.019,40 EUR

PROJECT DURATION

january 2019 - 30. june 2021.



KICK OFF MEETING IN FANO

Kick-off meeting of WATERCARE project was held in the Italian city of Fano. Project partners discussed the plan and programme of the activities that will be done during the WATERCARE project. In Italy, Croatia and Europe, the state of quality of the bathing waters and their classification is presented primarily with a class of excellent quality; only near rivers and streams can be found classifications of bathing water with lower quality. The anomalous rainy episodes, as possible negative effect of the climate change, caused by important events induce flood and relevant consequences. During these events, the microbial contamination significantly affects the quality of bathing water with a negative impact on tourism and related activities of coastal towns, which base their economy on summer tourism.

WATERCARE aims to improve the quality of the microbial and environment and resource efficiency in bathing and coastal waters reducing the microbial contamination by using innovative tools in waste management and treatment. Fano will be pilot area for this project's realization of monitoring and prevention of water contamination', as said from the project's lead partner Dr. Mauro Marini (CNR-IRBIM, Ancona). "This will be possible through an accurate and continuous environmental data collection to realize a prevision model for alert in case of contamination of the waters", explained Prof. Antonella Penna (University of Urbino). Fano will be also the pilot site for the realization of a detention reservoir by ASET to reduce combined sewer overflow in the Arzilla river during intense rainfalls. "Arzilla river flows along the seafont area and beach subjected every year to a high environmental vulnerability. The detention reservoir will improve the water quality parameters in the Arzilla river mouth through the reduction of the frequency of overflow events from the drainage network", said Paolo Reglinelli (President of ASET).

This project will requify the entire coastal area of Fano Municipality and it will serve as example for the other Croatian study sites involved into the project. This project is funded from the INTERREG Italy - Croatia Crossborder Cooperation Program.

SECOND MEETING IN PULA

Second project partners meeting was held in Pula on 26th and 27th of June. After the meeting, participants discussed the equipment needed to carry out the project and current and future activities and deadlines. Partners also visited the Istrian pilot area of Blaž Bay in the Municipality of Barban along with its Mayor Dalibor Paus.



FIRST SAMPLING ACTIVITY

CNR-IRBIM of Ancona and the University of Urbino, in collaboration with ASET Fano, performed the first sampling activity for the Interreg project WATERCARE along the Arzilla river (Fano, Italy) the pilot study area of the project. Twelve water samples, for microbiological analyses (E. coli and Enterococchi contamination) and environmental parameters (e.g. pH; dissolved oxygen, salinity, redox, chlorophyll-a) were taken thanks to the automatic water sampler system Isco Avalanche Transportable Sampler directly connected with the water of the river. To compare pathogens concentration into the river with concentration into the sea, sea water samples are collected from the area in front of the river outlet.





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SECOND SAMPLING ACTIVITY

CNR-IRBIM of Ancona and the University of Urbino, performed the second sampling activity for the Interreg project WATERCARE along the Arzillo river (Fano, Italy) immediately after a meteorological event characterized by a strong rainfall and massive land inputs by the Arzillo river into the sea. Water samples, for microbiological analyses and environmental parameters were taken from Arzillo river and from the sea along the coastal area in front the river outlet. The water samples from the sea were collected following a sampling strategy of 12 stations at increasing distance from the coast and river outlet.



PROJECT PARTNER METRIS - RAŠA RIVER

Pumping station Štalije, located at the mouth of river Raša, has been selected as the new location for a real-time predicting and alerting system and sea quality sensing system during rainy season and high water levels. This pumping station is under jurisdiction of Croatian Waters – also partners in WATERCARE project.

METRIS experts are collecting different measurements for developing the right technical specifications of the equipment that will be designed specifically for that pilot location. In addition to detecting fecal and chemical pollution in Blaž Bay in Barban Municipality METRIS plans to install an oil-based pollution sensor as well.

