

**PROJECT**

Operational bathing water quality prediction in Constanta, Romania (Action Beach)

**LOCATION & COUNTRY**

Constanta, Romania

**CLIENT**

National Institute for Marine Research and Development  
Blvd Mamaia no. 300  
Constanta 3, RO-900581  
Romania

**PARTNER**

**DATES**

Jan 2016 - March 2016

**ACTION MODULERS' MAIN TASKS**

Implementation, installation, configuration, training and maintenance of Action Beach in Constanta, Romania.

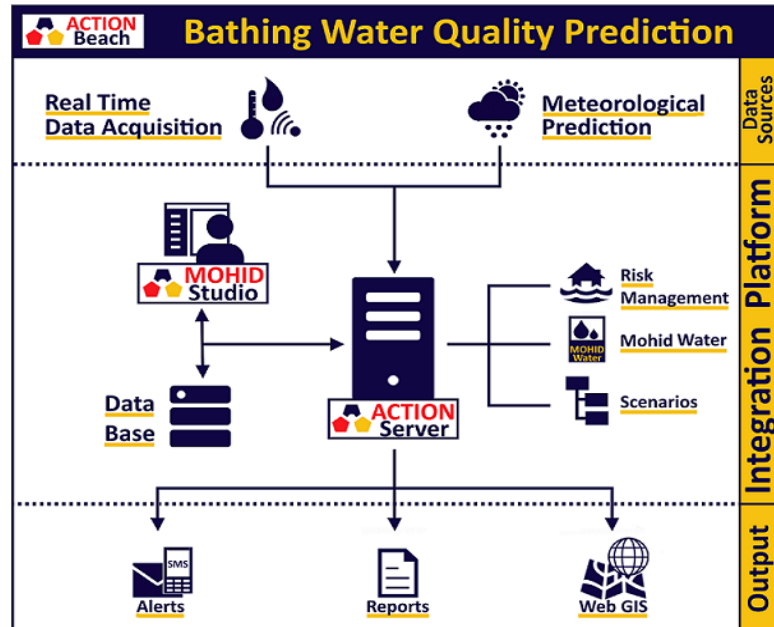
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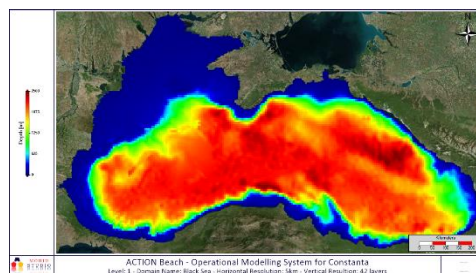
# Operational bathing water quality prediction in Constanta, Romania



An operational bathing water quality prediction system was implemented in Constanta, Romania.

The core of the system is a 3D high resolution numerical model **MOHID Water** which is operated daily through **ACTION Beach**.

**MOHID Water** was implemented using a nested approach, using three nested levels: (i) Black Sea, (ii) Romanian Coast and (iii) Constanta Coast.



**MOHID Water** uses as initial condition temperature and salinity data sets from CMEMS and as boundary conditions meteorological conditions from GFS,

river discharges from Danube, Dnieper and the Strait of Kerch (Don and Kuban). At the Bosphorus strait, boundary conditions take into consideration the surface/bottom inflow/outflow. The nested models (Romanian Coast and Constanta Coast) use the correspondent upper level solution as open boundary condition. Currently the model produces daily 3 day forecasts.

**ACTION Beach** is used to manage, store and publish the entire workflow. GFS solution is downloaded daily and stored on the server and **MOHID Water** models are run as soon as new boundary conditions are available.

All data is stored on a server and will be published soon in a mobile friendly web page.