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Seminar

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11:00 - 30 Sep 2020 - Webex platform

Title

An investigation into the role of a thermal creek in the spatial distribution of Arsenic in the Bagnoli Bay marine sediments

Abstract

The Bagnoli Bay (Napoli, Southern Italy) has been long subjected to environmental contamination, due to a large steel plant, which occupied a significant part of its territory for nearly one century. However, it is also part of a wide volcanic area, where an active caldera exists. An environmental survey of nearshore and offshore marine sediments carried out in 2017, revealed concentrations of Arsenic nearly seven times higher than those permitted by law. These concentrations showed not necessarily correlated with the anthropogenic sources, thereby requiring supplementary analyses. Via multidisciplinary numerical tests conducted with the software package Delft-3D, this paper investigates the role of a creek that has been long used to convey thermal water from the upstream volcanic area to the coast. The model results compares reasonably well with marine sediments survey.