



Repeated multibeam surveys and direct observations for the characterization of fluid-related features off Scoglio d'Affrica islet (Northern Tyrrhenian Sea)

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Scoglio d'Affrica islet lies in the southern part of the Elba-Pianosa Ridge, a north-south elongated morpho-structural between the Tuscany shelf and the Corsica Basin. A violent gas outburst occurred in 2017 offshore Scoglio d'Affrica islet, with the formation of columns of dirty water rising up to 10 m above the sea surface as reported by local fishermen. Since then, the collection of multibeam bathymetries coupled with seafloor observations realized through remotely operated vehicles and scuba dives showed the occurrence of widespread fluid-related morphological features, including mud volcanoes of variable size and morphology as well as hundreds of pockmarks. In this work, we present the preliminary results of this integrated analysis, providing insights on the small-scale morphological evolution of these features in the last 5 years linked to fluid seepage processes. This is a particularly relevant issue considering the few studies on shallow-water mud volcanoes as well as the potential hazard associated with these processes.