Cold seeps are a widespread phenomenon in the Black Sea ranging from seeps in water depths located from 100 to 600 m. Cold seeps are characterized by unique communities of biogenic and non-biogenic sediments and seeps associated with gas hydrides in deeper waters. An international team of scientists investigated the distribution of cold seeps as well as the pathways of the fluids in the subbottom by a combination of seismic data and hydroacoustic methods. seabed photography, reflection seismic and refraction experiments. Two seep sites have been targeted in particular: the Sorokin Trough southeast of the Crimea coast, and the continental slope of the Danube subsea margin facing the Black Sea Further to the West. The Sorokin Trough is characterized by numerous gas emissions situated in water depths of less than 200 m. At the seep sites, we found several areas with irregular patches of high backscatter intensity. These seep locations are frequently associated with a low acoustic backscatter, which might be a consequence of the gas hydrates released from the sediments into the water. However, the intensity of the gas hydrate release is very low, which allows to estimate the volume of gas hydrates released to the water column. A series of single-channel seismic reflection surveys have been undertaken over the last 15 years by the University of Malte to record gas hydrates in the sediments. The cold seep on the shelf of the shallow water Gas hydrates have been found at this margin. Submarine volcanoes in the Hikurangi and Hikurangi have been found at this margin. Two of these seismic lines image the bench-like feature and the head of the seeps associated with tube worms, sponges and clams. In addition, the seeps are related to the nature of groundwater flow within the shelf and how it is affected by Pleistocene to recent sea level variations. Two of these seismic lines image the bench-like feature and the head of the chimneys and the heads of the seeps associated with tube worms, sponges and clams. In addition, the seeps are related to the nature of groundwater flow within the shelf and how it is affected by Pleistocene to recent sea level variations. Two of these seismic lines image the bench-like feature and the head of the seeps associated with tube worms, sponges and clams. In addition, the seeps are related to the nature of groundwater flow within the shelf and how it is affected by Pleistocene to recent sea level variations.

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Acoustic detection of gas emissions within the submersed section of the North Anatolian Fault Zone in the Sea of Marmara
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Methane seeps and mud volcanoes in the Western Black Sea: First results of RV Meteor cruise M72-4
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