Tomasz Figiel et al., Oceanography 2016, 4:1(Suppl)
http://dx.doi.org/10.4172/2332-2632.C1.003

Mass magnetic susceptibility contaminated surface layer of sediments in the area of defaulting wrecks as a parameter to assess the state of the marine environment, at the example of ORP Wicher

Tomasz Figiel, Żaneta Kłostowska, Paweł Wysocki, Grzegorz Kusza, Leszek Łęczyński, IwonaPomian, Tadeusz Ossowski, Dorota Zarzeczańska, Mateusz Figurski and **Marceli Makaruk**
University of Gdansk, Institute of Oceanography, Poland

In the last century, in the Baltic Sea region located many wrecks defaulting at the bottom of the basin - remnants of World War II. Sunk with a cargo of both warfare agents, ammunition or fuel, represent a real threat to the marine ecosystem. Systematically releasing substances from defaulting construction, are significant point sources of pollution in the Baltic Sea region. In 2015 and 2016, samples of bottom sediments were taken in the area of the wreck ORP Wicher. They were subjected to grain size analysis , content of organic matter, as well as examined the content of petroleum substances and the massive magnetic susceptibility. The samples were preserved by freezing, until analysis. All tests were performed in accordance with the standards for marine sediments (US EPA), and with at least 3 repetitions. To fluctuations in studied parameters primarily affects the location of the wreck –area of strong currents activity and the depth of 5-17m. The value of measured parameters in the samples primarily depended on the deposits grain sorting. Analysis of magnetic susceptibility showed that higher values were recorded with an increase in the share of the fine fraction <0,063mm [%] and organic matter LOI [%]. In the samples was measured the content of petroleum substances. Based on the results of concentrations of the test substances, the magnetic susceptibility and the coefficient fd [%], it can be estimated that the wreck is a point source of pollution in the Gulf of Puck, which with time can be transported for longer distances.

Biography

Tomasz Figiel has completed his BSc at the age of 22 years from University of Gdansk and currently he is doing his MSc degree at University of Gdansk. His research areas are oceanography, marine geology, geochemistry, marine pollution and the transformation of the marine environment. He is co-author of several scientific publications, presented at international conferences.

s213339@stud.ug.edu.pl

Notes: