Geophysical Research Abstracts Vol. 21, EGU2019-11857, 2019 EGU General Assembly 2019 © Author(s) 2019. CC Attribution 4.0 license.



A polluted site revisited a quarter century after the largest oil spill in human history in the Arabian Gulf

Abduljamiu Amao and Michael Kaminski

King Fahd University of Petroleum and Minerals (KFUPM), Geosciences Department, Dhahran, 31261, Saudi Arabia (amao@kfupm.edu.sa)

Pollutants are introduced into the Arabian Gulf through multiple sources such as coastal reclamation and dredging, sewage and industrial effluents, brine discharges from desalination plants and oil pollution via exploration and transport. To date, the largest oil spill on record all over the world occurred in Kuwait during the Gulf War in 1991 when an estimated 10.8 million barrels (mbbls) crude oil and 8 mbbls of oil fallout from the smoke plumes of the 727 oil-well blowouts entered the Gulf marine environment through the deliberate acts of the departing Iraqi army. This paper revisits sites described as moderately polluted areas affected by the 1991 Gulf war oil slick by Massoud, et al (1996) and investigates the diversities of living benthic foraminifera and total petroleum hydrocarbon (TPH) concentrations in 30 bottom sediment samples collected in 2015 from the Arabian Gulf. Remarkably, high species diversities and low dominance were documented throughout the sampled area except at two stations close to the shore. This study is a testament to the flourishing benthic foraminiferal community that has been re-established a quarter-century after the devastating oil spill. This study will serve as baseline dataset for future assessment studies in the near-shore area of the Gulf.