

## A study of Persian gulf pollution by PAH Compounds and heavy metals in Bandar Abbas

**Authors:**

**Mohammad Mehdi Esmaili,  
Yadollah Nikpour  
Ghanavati and  
Kamal Ghanemi.**

**Institution:**

Department of Marine  
Chemistry, Marine Science  
and Technology University,  
Khorramshahr, Iran.

**Corresponding author:**

**Mohammad Mehdi Esmaili**

**ABSTRACT:**

The purpose of this study was to examine Persian Gulf pollution by PAH compounds and heavy metals in Bandar Abbas. In this project, after identifying polluting sources in upstream and downstream of the Bandar Abbas refinery, eight sampling stations were selected to examine physical, chemical, oil, microbial and biological pollution. Sampling water, deposits and aquatics were taken during different seasons. The results indicated that in the stations studied, the annual mean values of wastewater output from the refinery, water in the Haghani Pier and wastewater output from the Power Plants are more polluted than those in other stations in terms of oil and grease; in general, they are higher than the national standards of oil grease in wastewater to discharge into surface waters. According to the results from PAH compounds in different stations like oil grease, they are the highest in fall; and the amount of PAH in the dewatering station is higher than those in other stations. Also, the annual mean values of nickel and lead in deposits in all stations are higher than their world values; values of copper are lower than its world value. The highest diversity, density and distribution of phytoplankton are observed in the stations 1, 2, 7 and 8, and lowest in the stations 3, 4, 5 and 6. According to the results, the highest diversity, density and distribution of zooplankton are observed in the stations 1, 2, 7 and 8, and lowest in the stations 3, 4, 5 and 6.

**Keywords:**

Persian gulf, pollution, PAH, heavy metals, Bandar Abbas