

## Polycyclic Aromatic Hydrocarbons in Intertidal Surface Sediments of North Pars Special Economic Energy Zone, Bushehr

Abedi, Ehsan<sup>1\*</sup>; Saleh, Abolfazl<sup>2</sup>; Mehdinia, Ali<sup>3</sup>; Rahmanpoor, Shirin<sup>4</sup>; Arebi, Iman<sup>5</sup>; Mirza, Roozbeh<sup>6</sup>; Fooladi, Hassan<sup>7</sup>; Ahmadpour, Fatemeh<sup>8</sup>

1- Iranian National Institute for Oceanography and Atmospheric Science, Bushehr, Iran. Email: ehsan\_abedi@inio.ac.ir

2- Iranian National Institute for Oceanography and Atmospheric Science, Tehran, Iran. Email: saleh@inio.ac.ir

3- Iranian National Institute for Oceanography and Atmospheric Science, Tehran, Iran. Email: mehdinia@inio.ac.ir

4- Iranian National Institute for Oceanography and Atmospheric Science, Tehran, Iran. Email: rahmanpour@inio.ac.ir

5- Iranian National Institute for Oceanography and Atmospheric Science, Bushehr, Iran. Email: eiman\_arebi@inio.ac.ir

6- Persian Gulf University, Bushehr, Iran. Email: roozbeh\_mirza@yahoo.com

7- South Pars Special Economic Energy Zone, Bushehr. Email: fooladi.h@gmail.com

8- Pars Special Economic Energy Zone, PSEEZ, National Iranian Oil Co., NIOC, Iran. Email: fatima.ahmadpour@gmail.com

Received Date: July 14, 2012

\*Corresponding Author

Accepted Date: February 2, 2014

---

© 2014 Oceanography. All rights reserved.

### Abstract

In this study, concentrations and origins of 15 PAHs in intertidal sediments of North Pars Special Economic Energy Zone were investigated. Samples were collected from 20 stations (during low tide and randomly) before establishment and running in June 2011. Samples were analyzed by HPLC. Fluoranthene in Melgonze 2 showed the highest levels of PAHs and Dibenzo[ah]anthracene in Chahpahn 1, Chahpahn 2, Zirahak 1, Kabgan1, Kabgan 2, Kabgan 4, Bordekhon 3, Bordekhon 4, Demeigez 1 and Demeigez 2 were the lowest ones in the study area. Results revealed that there were relatively low levels of ΣPAHs in the sediments. Sediment in the study area is being subjected to a combination of pyrogenic and petrogenic with pyrogenic prevalence origin. It could be concluded that in the study area, pollution amounts were much lower than the compared standards and the potential hazard for benthic assemblages seemed to be low.

Keywords: PAHs, Pyrogenic, Peterogenic, Benthic, Intertidal Sediments.

---