

Assessment and Prioritization of Environmental Risks in Gaz and Hara Rivers Estuary International Wetland

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(Received: Sept. 8-2016; Accepted: Nov. 7-2017)

Abstract

Wetland ecosystems have many economic and ecological functions and values, but today their security and existence have been heavily influenced by various natural and human factors. Therefore, the present study was conducted to identify, rank and assess environmental risks threatening Khur-e Azini International wetland located in Hormozgan province. In order to identify risk factors, the Delphi method and the multi-criteria decision-making methods, AHP and TOPSIS were used for prioritizing risks. According to the results of the technique AHP, fuel smuggling, marine transportation and oil pollution were respectively ranked first to third. The results of TOPSIS technique based on the relative proximity (C_j^+) indicate that the oil pollution (1) and the fuel smuggling (0.9154) are ranked first to second. In general, based on the ranking of risks, 8.6 percent of risks were placed in the unbearable category, 8.6 percent of risks were placed in the significant category, 26.08 percent of risks were placed in the average category, and 30.43 percent of risks were placed in the category of tolerable risks. According to the results, management priorities and planning should be considered seriously to minimize the risks and consequences that have irreversible effects on the environment and wetlands function.

Keywords: Gaz and Hara Rivers Estuary, International wetlands, Multi-criteria decision, Risk assessment.

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