

Abstract

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A Study of the Behavior of Oil Spill from an offshore Rig in Red Sea Region

Oil spills due to various industries including commercial shipping and offshore platforms damage the near coastal zones, ecological life, and tourism areas. Hence, it is required in many countries to develop oil spill contingency plans in compliance with the Oil Pollution Act of 1990 (OPA) and/or the Offshore Continental Shelf Lands Act (OCSLA). Implementation of the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) Convention and related issues are important elements of the IMO's Integrated Technical Co-operation Programme. The risk assessment/management, development of national contingency plans, environmental sensitivity index mapping, establishment of regional and sub-regional preparedness and response systems (agreements, plans and centers) and advice on dealing with marine pollution incidents are requested. This paper presents simulation results using a simulation model for studying the behavior of oil spill from an offshore rig. The model possesses a general structure that can accommodate most of the remaining weathering processes and a number of hypothetical scenarios are simulated for Red Sea region. The results show that using simulation can improve the oil spill contingency plans to support a risk-based decision which prevents future fatal accidents.