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Negative human impact on rabigh-mangrove swamps on the western red sea coast of Saudi Arabia

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Abstract

A large lagoon is present within Rabigh-mangrove swamps (between 22°49´N and 22°54´N) on the western Red Sea coast of Saudi Arabia. For almost two decays, a personal decision to partially close the mouth connecting this lagoon to the open sea to make a passageway resulted in a hug negative impact on the lagoon ecosystem. Absence of a previous environmental impact assessment was the main reason for such outcome. General descriptive study was preformed to evaluate the status of the lagoon ecosystem and its characteristics; including physical, chemical and biological parameters of the lagoon as well as biota conditions and biodiversity. Water quality and sediment conditions were also investigated. Satellite pictures, remote sensing technique and GIS data corresponding to the lagoon area through the years 1987 -2013 were analyzed. The preliminary results showed extreme negative impact on the ecosystem and the lagoon is now at risk. The rapid response of the governmental authority is highly appreciated and resulted in removing that passageway and liberates the area to allow circulation and exchange resources between the lagoon and the open sea. Finally, a comprehensive large scale study was suggested to determine the exact risk and to start the process for reconciliation and restoration of the lagoon and the mangrove trees.

Biography

Mohammed O. Al-Jahdali is the Professor of Ecological Physiology at King Abdulaziz University, Dean of Science & Art College – Rabigh campus, Saudi Arabia. He did his PhD from the University of Alabama 2003 and trained at Dauphin Island Sea Lab, Dauphin Island, AL USA. His Research interests is manipulations of environmental parameters on physiological and ecological functions of biota at Rabigh lagoon at the Red Sea, Saudi Arabia.