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Physico-chemical and microbiological parameters monitoring of industrialization and urbanizationbehavior on richest marine biodiversity of Gulf of Mannar regions, Tuticorin

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The rapid human populations and industrialization activities discharging wastewaters is major threading factors of the marine biodiversity and human health. The aim of this study focuses on anthropogenic activities of shorelineurbanization and industrialization pollution issues areas seawater qualities analyzed in Gulf of Mannar regions, Tuticorin. The seawater samples were collected at five different points ofthe shoreline locations in Tuticorin coast pre-monsoon seasons of 2014, and water quality parameters were analyzed on the standard methods. Physico-chemical parameters; pH, temperature, Electrical conductivity, salinity and dissolved oxygen and microbiological indicators; total heterotrophic bacteria (THB), total *coliform* bacteria (TCB), fecal *coliform* bacteria (FCB), total *Enterococcus* bacteria (TEB) and *E.coli*. Results were denoted that microbiological indicators highly exceeded in Indian primary seawater quality standards limits and physico-chemical parameters fluctuation was neglected. The average level of microbiological indicators population densities (THB 79 cfu/ml^{-2}, TCB 27 cfu/ml^{-1}, FCB 14 cfu/ml^{-1}, TEB 3 cfu/ml^{-1}, *E.coli* 8 cfu/ml^{-1}) recorded in seawater. This kind of study has immensely supporting to control of the seawater quality declining sources, protection ofmarine biodiversity and preventing action of marine borne diseases coastal organisms and human health. To frequent effective seawater quality monitoring work is required for the possible anthropogenic activities pollution sources in coastline industries and urban areas and ecological richest marine biodiversity sensitive zones.

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Estuarine Management as part of Integrated Coastal Zone Management in north-western Germany – Achievements and Challenges

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Three German estuaries are located in the southern North Sea. Each of them host an important seaport within a distance of 60 to 120 km from the river mouth. Increasing oversea trade and demanding logistics are asking for appropriate vessel sizes and, thus, fairway dimensions. This process of mutual adaptation enables economic development, but causes multifaceted challenges and problems in the respective estuaries. Deeper and straightened fairways led to a changed current velocity and, thus, to inapproppriate erosion and sedimentation process. Furthremore, salt water intrusion emerges as problem for both fesrh water abstraction and ground water bodies adjacent to the rivers. Alteration of flow velocity and direction affected the accessibility of smaller harbours in the river mouth and the natural environment (e.g. migration of fishes, wetlands) of the river is deteriorating. Integrated policies such as the European Water Framework Directive aims at improving the ecological and chemical status of water bodies. Recently approved legislation tackling the water quantity (e.g. flood risk management) issues or the marine environment poses further challenges on the management of estuaries as transition zone between land and sea. This presentation provides an overview of the development in estuarine management in the Weser estuary. Referring to the pending planning approval for the recent fairway adaptation in the Weser further stresses are expected on the natural as well as the human environment. The presentation will compile the existing investigation results of several (sectoral) research projects and propose a framework for an integrated participatory management approach.

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