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GEOLOGICAL CONTROLS ON SALINE WATER INTRUSION IN THE COASTAL AQUIFERS OF THE EAST COAST OF INDIA

A.K. Bhattacharya

S. Basak

P. Maity

L.K. Paira

Department of Applied Mechanics, Bengal Engineering College (Deemed University), Howrah, India.

ABSTRACT

Hydrogeology and the rate at which freshwater is taken from coastal aquifers controls the intrusion of saline water. The phenomenon is common in the extensive coastal sedimentary deposits and the deltas of major rivers of the east coast of India. Extensive work on saline water intrusion and hydrogeology has been carried out on the Indian coast and several other places. These have guided the theoretical and practical assumptions that were used for studying and analyzing the data collected from boreholes in the area. The east coast of India was divided into five geological regions from which three hydrogeochemical provinces were created. Methods of controlling saline water intrusion and managing groundwater exploitation in the coastal areas are suggested. The paper also suggests further studies and research work that can lead to sustainable use and management of groundwater resources in coastal areas.

Reference: *Bhattacharya, A.K., S. Basak, P. Maity and L.K. Paira; Geological Controls on Saline Water Intrusion in the Coastal Aquifers of the East Coast of India, Journal of Environmental Hydrology, Vol. 12, Paper 21, November 2004.*

CONTACT:

Dr. A.K.Bhattacharya

Department of Applied Mechanics

Bengal Engineering and Science University

Howrah - 711103, India

E-mail: amartya_67@rediffmail.com

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