

## **INFLUENCE OF SUBMARINE GROUNDWATER DISCHARGE ON COASTAL SEDIMENTATION AND OTHER OCEANOGRAPHIC PROCESSES**

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Recognition of the importance of groundwater flow into surface waters as a pathway for dissolved constituents has increased dramatically in the last few years. As one specific example, the Russian Academy of Sciences together with the "Land-Ocean Interactions in the Coastal Zone" (LOICZ) Project of the International Geosphere Biosphere Program convened an international workshop in Moscow entitled "Groundwater Discharge in the Coastal Zone." The initial impetus for convening the symposium stemmed from the recognition that an understanding of the dynamics of the coastal zone required knowledge of all inputs, and that in some locations the contribution of groundwater discharge, although not as easily recognized as oceanic exchange or surface flow, could be important. Our intention is to pick up where the LOICZ symposium left off and focus on the key problems. Submarine groundwater discharge (SGD) has been documented to be significant for nutrient input in some regions, and could be of importance for issues relating to pathways of pollutants to the ocean as well as various naval operations (acoustic interference, etc.). The direct discharge of groundwater into standing bodies of water may also have significant environmental consequences. Since the concentration of dissolved solids is typically much higher in groundwaters than surface waters, the impact of SGD on coastal chemistry and ecology may be considerably greater than one would estimate based on discharge assessments alone. In our paper we review and identify deficiencies in our knowledge concerning the influence of SGD on coastal sedimentation and other oceanographic processes.