



## **Estimation of gassy sediment parameters using acoustical methods, Lake Kinneret, North of Israel.**

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Shallow gassy aquatic sediments, abundantly found in Israel and worldwide, are a source of major concern for their contribution to destabilization of coastal and marine infrastructure, ecological balance, air pollutions, and global warming. The purpose of current research is to characterize gassy sediments in the Lake Kinneret using acoustical methods. Method of measurements uses connection between properties of the sound signal passing through or scattered from the bubble aggregation in bottom layer and parameters of sediment. This non-invasive, cost-effective method of acoustic characterization of gassy sediment will allow a rapid remote scanning over large areas of bottom sediments. This, in turn, will permit a better understanding of methane gas distribution in upper sediment layer that can be used in monitoring of ecological balance of the region. Preliminary analysis of acoustical data shows a good correlation with filed measurements of organic matter concentration in shallow sediments of Lake Kinneret.