2.3. THE USE OF SATELLITE DATA IN OCEANOGRAPHY: APPLICATIONS IN THE EASTERN MEDITERRANEAN AND THE BLACK SEA

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ABSTRACT

Satellite data, when combined with insitu oceanographic measurements, can fill important gaps in our knowledge of the ocean environment.

Oceanographic measurements are costly and time-consuming mainly because man inhabits the land more than the sea, and because these measurements require specialized equipment (including ships and other platforms), methodology and manpower. In an age when global ocean observations are expanding, this mode of data collection remains the best method for obtaining comprehensive information on ocean domains. Yet the severe sampling requirements limit the coverage, resolution and the frequency of the measurements. On the other hand, satellite data represent a large number of measurements of high sampling resolution in space, obtained at frequent intervals over large areas of the global ocean. Yet, these measurements are limited by their representativeness of a minute fraction of the ocean depth (i.e. the surface), by atmospheric aberrations and reflectance factors, etc.

Different types of ocean observations yield information on different scales of the dynamics. Only a judicious combination of satellite and insitu data can help us observe the ocean in as much detail as it is possible, to yield a better understanding through synthesis.

Process studies in the Levantine Sea, the Marmara and Aegean Seas, and the Black Sea are given as examples.

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