

## **Tidal Variation in the Red Sea Implications in Law 4/94**

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### **Abstract**

After the law for the environment -known as law 4/94- and its executive regulations had been issued in 1994, environmental concerns had increased in Egypt. A respected setback line had become an important factor for tourist developments in the Red-Sea area. According to the law for the environment, the setback line or the coastal building front line (CBFL) is determined according to the highest high tides water line. This research deals with the definition of the shoreline as stated by the law. Particular attention is directed towards the Hurghada area and vicinity. It presents three case studies covering the Hurghada area to estimate the highest high water line or the shoreline in a scientific way.

The conducted surveys and studies for the three developments were mainly; bathymetric survey, water level measurements and setting of the chart datum for the area. A satellite altimetry data was utilised to enhance the collected data. Altimetry data had proven to be useful in providing a regional solution for the Mean Sea level determination in remote areas, and hence the determination of the shoreline and the setback line in accordance with the Egyptian law for the environment.