



## **Sea level trends along the western coasts of anatolia from tide gauge, satellite altimetry, gps and levelling data**

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Monthly sea level data of Antalya-I tide gauge (1935-1977) and four other Turkish tide gauges located along the Mediterranean, Aegean, the Sea of Marmara coasts of Anatolia having observations for more than 20 years in conjunction with corresponding sea level anomaly (SLA) data in the Mediterranean and Black seas obtained from satellite altimetry missions are adopted to investigate the sea level (SL) trends. Data sets of atmospheric pressure, air and sea-water temperature during the same time span are used to determine the possible link between the SL trends with the local meteorological variations. Moreover, the vertical land movements (VLM) at tide gauges estimated by using episodic GPS, Continuous GPS and precise levelling data are both compared with the Glacial Isostatic Adjustment (GIA) model results and VLM obtained from differences between the tide gauge SL and the altimetry SLA time series at grid points close to the tide gauges. Rising SL trends at tide gauges during the study period are linked to the rising sea-water temperature during 1990's.