



## **Study of the relationship of wave and wind data, from offshore buoys in the Aegean and Ionian Seas**

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The scope of the present contribution is to investigate the relationship between offshore wave characteristics (i.e. significant wave height, period and wave direction) and meteorological parameters (i.e. wind speed and wind direction). The appropriate data sets were gathered from buoys in deep water locations at the Aegean and Ionian Seas (POSEIDON Project - Hellenic Centre of Marine Research). Wave data were sampled every three hours, for duration of 17 minutes, while the sampling rate of wind data was that of three hours. The raw datasets were filtered, according to pre-specified thresholds for each parameter, in order to avoid erroneous values and biases. Subsequently, they were subjected to statistical analysis using specific modules that already existed or were constructed. The results of this analysis show correlation of 0.3 to 0.6 between wind speed and wave height, and for wind direction and wave direction of about 0.2 to 0.5, which is considered satisfactory for this type of data sets. It is also found that winds and waves in the Aegean Sea have primarily a northerly direction and, secondarily, a north-easterly direction. In the Ionian Sea, the directions are mainly north and northwest. Future work will include seasonal analysis and investigation of the correlation between wave and wind data with local wind systems, such as the Etesians (Aegean Sea) and Sirocco (North-East Ionian).