



Comparisons of surface freshwater budget terms from reanalyses, hindcasts and observational data over the Mediterranean

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The knowledge of the Mediterranean basin hydrological cycle constitutes an issue with important implications in such sensitive area. Lack of suitable offshore in-situ observations makes the use of model-derived products a useful, and almost unique, tool to make estimations of long-term freshwater budget terms and their variability over sea.

This study identifies existing similarities and discrepancies between five Mediterranean monthly precipitation data sets derived from global reanalyses (NCEP and ERA40), regional hindcasts (HIPOCAS and ARPERA) and satellite-derived products (GPCP version 2). Several spatial statistics and a time analysis based on wavelets exhibit noticeable resemblances between simulated and observational precipitation data sets.

Preliminary comparisons have also been performed for the surface freshwater budget (E-P) over offshore areas. In this case, a combination of evaporation data from the Southampton Oceanography Centre (SOC) global air-sea heat flux climatology and precipitation from GPCPv2 is used as reference to compare the aforementioned reanalyses and hindcasts data with.