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Thermohaline properties and categorization of the Adriatic Sea ASELF-2 domain

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Abstract

In the middle Adriatic area strong temporal variability of the thermohaline structure has been observed, caused manly by the air-sea interaction, river discharges, mixing and seasonally dependent circulation. In the middle Adriatic coastal zone fresh water provides a strong buoyancy source, while in the wider shelf-sea, fresh water influence is dispersed.

The ADRICOSM research area is pointed as a region where freshwater input from the eastern Adriatic coast is influenced especially from Cetina and Neretva rivers, whereas in the offshore waters influence of the northern Adriatic rivers during the period of stratification might be significant.

CTD measurements were performed at 14 stations in the frame of the ADRICOSM project, weekly in warm period and biweekly in the cold period. These intensive measurements allowed the thermohaline properties and heat flux components to be analyzed in details. In the ASHELF-2 domain the three areas were distinguished with characteristic waters: Neretva estuary waters, channel waters and waters similar to open sea. This categorization can be useful for the future climatological and objective analysis of the ASELF-2 domain.