

**“CSi eMed - Carbon Sinks investigation in the eastern Mediterranean Sea:
Implications of biogeochemical processes and physical dynamics on the cycling
of natural and anthropogenic hydrocarbons”**

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Abstract:

The biogeochemical functioning of the ocean is mediated by complex physical, biological and chemical interactions, that are characterized by large spatial and temporal variability. The export of organic matter is of fundamental importance to the biological and chemical functioning of the ocean, as well as to the vertical and horizontal segregation of elements. The Eastern Mediterranean Sea (EMS) is one of the most oligotrophic areas of the world ocean - an “oceanic desert”. In addition, it has been subjected to intense anthropogenic pressure in recent decades as a result of rapid demographic growth and economic development of its surrounding countries. What are the key biogeochemical processes shaping the distribution and fate of natural and anthropogenic hydrocarbons in the water column and their accumulation in sediments of the region? What is the current state of knowledge regarding the anthropogenic imprint by legacy and emerging contaminants in coastal and deep EMS waters and sediments?