



Persistent and recurrent pathway of the Black Sea: A resource for oil spill analysis

Accidental oil spills occur monthly in the Black Sea during the transport of crude oil. These events occur mainly during strong storms. In addition to these events, the advance in the sale of new areas for oil exploration represents a risk to the marine ecosystem. Next context, we computed the monthly climatological Lagrangian Coherent Structures (cLCS) maps utilizing 18 years (2003–2020) of Black Sea Reanalysis currents, distributed by Copernicus Marine Service to show the persistent and recurrent pathway of ocean flow during a hipotetic oil spill trajectories. We also use a real oil spill to elucidate how the cLCS acts as barrier transport during an accident. Our results show that the cLCS can be ally in the future emergency to oil spills.

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