



IDENTIFICATION OF WATER CHARACTERISTIC SIMILARITIES IN NE MEDITERRANEAN

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Eastern Mediterranean is known as the most nutrient impoverished basins among the world seas. However, river inputs, atmospheric loads, winter convectional mixing, summer upwelling and the degree of exchange of coastal waters with offshore ones, all, contribute in spatial and temporal heterogeneity in receiving surface waters in the northeastern part of the eastern Mediterranean. This study is conducted to understand similarities in surface waters (inshore (low salinity-high nutrient), transition and offshore waters (high salinity-low nutrient)) based on their dissolved nutrient (PO_4 , $NO_2 + NO_3$, Si) contents and their physical (temperature, salinity, density) properties. For this purpose, data collected during 8 basin wide seasonal cruises (November 2005 to September 2007) at 78 different stations are examined using cluster analysis in northeastern Mediterranean. Results have shown 3:3:4 cluster groups based on their nutrient contents, physical properties and both, respectively. River inputs all concentrated in a certain region and the nature of the prevailing surface currents in the area seemed to determine such surface waters. Except river discharge area and some transition surface waters, the northeastern part of the eastern Mediterranean showed completely oligotrophic properties (low nutrient-high salinity). The transition waters with limited territoriality had two-sided (between inshore and offshore waters) interaction in the area.

Keywords: Cilician Basin, nutrient salts, cluster analysis, physical oceanography