

Nutrient Availability in River Ecosystems Follows Human Activities More than Climate Warming

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Abstract : To face the water crisis, understanding the role of human activities on nutrient concentrations in aquatic ecosystems needs more investigations compare to extensively studies, which have been carried out to understand these impacts on water quality of different aquatic ecosystems. We hypothesized human activates on the catchments of Tigris river may change nutrient concentrations in water along the river. The results showed that phosphate concentration differed significantly among the studied sites due to distributed human activities, while nitrate concentration did not. Phosphate and nitrate concentrations were not affected by water temperature. We concluded that human activities on the surrounding landscapes could be more essential sources for nutrients of aquatic ecosystems than role of ongoing climate warming. Despite the role of warming in driving nutrients availability in aquatic ecosystems, our findings suggest to take the different activities on the surrounding catchments into account in the studies caring about trophic status classification of aquatic ecosystems.

Keywords : phosphate, nitrate, Anthropogenic, warming

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