



Remote sensing data as a proxy of the anthropogenic-induced pollution of river basins

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The increasing human presence in river watersheds over the past decades can alter ecohydrological processes and in particular nitrogen and phosphorus inputs into river basins. Moving from the recent progress on remote sensing techniques, we analyse several remote sensed databases on the anthropogenic presence across the globe (e.g. Modis Land Cover, Night-time lights, Global Human Settlement Layer, Gridded Population of the World) by focusing on several major rivers of the world. We investigate the temporal evolution of human presence from each dataset, examine their comparability, and finally test for a correlation between the aforementioned human presence and water pollution levels as derived from grey water footprints for several major rivers in the world. Our preliminary results suggest that increasing human presence can effectively enhance water pollution, thus showing how innovative combinations of different data sources can provide useful information on ecohydrological processes.