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Results of a long-term project in a medium size basin: the Paraíba do Sul case

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The understanding of the transport, accumulation, cycling and bioavailability of organic matter and trace metals in the land-ocean interface will be achieved under the fluvial-estuarine-ocean continuum The use of environmental geochemical tracers, including both organic and inorganic, natural isotopes and radioisotopes has been applied in our researches. The main topics will be addressed in my presentation: i) On the environmental geochemistry framework, to evaluate the changes in sediment, organic matter, and Hg from the continent downriver to the estuarine and ocean; ii) Describe of the major biogeochemical processes from continent to the breaking of the continental shelf; iii) On the human dimensions, evaluate social-economic impacts in mangrove ecosystem.

Beginning in the 1990s and more recently, several studies began to consider the temporal and spatial effects of land use in watershed on riverine water until the ocean. However, long-term changes, particularly associated with global climate changes, have received limited study. The Paraíba do Sul watershed is an important hydrological resource for southeastern Brazil, that has undergone extensive land use changes related to industrial, agricultural and urban activities. Over two decades, we have developed a long-term study conducting estimations of annual fluxes and identification the controlling factors. Therefore, my presentation will be centered in some results published by my research group in Aquatic Biogeochemistry.

Friday– February 1, 2019

FCUL (Building C2), 12h00-13h00, room 2.2.14