Abstract Details

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Title: Nutrient Fluxes in Tropical Rivers of India

Abstract:

Rivers play a major role in the transport of nutrients from the land a atmosphere to the ocean and frequently serve as reservoirs for nume elements. The biogeochemical cycling of elements is significantly affe human activities. Spatial variations of dissolved inorganic nitrogen (N NO2-, NH4+) and phosphorus (PO42-) and its fluxes from different es of tropical rivers of South India to the Bay of Bengal were measured wet and dry seasons. The results show a strong spatial variability in r distribution and highlights the effects of anthropogenic land based inp polluted river of Adyar showed high flux of NH4+ and PO42- by virtue additional nutrient loading through sewage and industrial effluent disc There was a consistent decline in nutrient concentration from freshwa estuarine and Bay of Bengal displaying a strong negative correlation v salinity. Other factors that probably influence nutrient distribution in t estuaries include: phytoplankton primary productivity, nutrient utiliza phytoplankton (N:P ratio) and dissolved oxygen (O2). Comparisons o temporal and spatial variations in the N:P ratio and the effects of dep O2 availability on nutrient over enrichment have been discussed. In o calculate fluxes, the LOICZ nutrient budgets (as a minimum, dissolve inorganic phosphorus and dissolved inorganic nitrogen) were used. Th model is a departure of the nutrient budgets from conservative behav measure the net system biogeochemical fluxes. Nonconservative flux dissolved inorganic phosphorus, scaled by an estimate of the carbon: phosphorus ratio of the reacting material was used to estimate prima production minus respiration (p-r). The discrepancy between the obse non-conservative flux of dissolved nitrogen, scaled by the N:P ratio of reacting organic matter, was used as an estimate of nitrogen fixation denitrification (nfix-denit). While this is clearly a great simplification c details of processes and reaction pathways in ecosystems, it provides insight into possible net reactions accounting for nutrient uptake and from riverine and coastal ecosystems.

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