Characteristics of water quality in the river of the Philippines

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Terrestrial inputs is one of the key factors for degradation of coastal habitats these days, whose effect is greatly increasing by development of its drainage basin through e.g. change of the land use and population increase, causing local eutrophication and suspendation. Coastal areas are also threatened by various human activities, such as mariculture, and environmental changes caused by global warming. However, those water qualities of rivers are not well investigated especially in coral triangle areas, which are the center of marine biodiversity. In this study, samples were collected both in the wet and dry seasons along the rivers to compare the site-specific characteristics of Luzon, Panay, Negros, Mindoro, and Mindanao islands of the Philippines. We analyzed nutrients, dissolved/particulated inorganic/organic carbon and nitrogen, isotopic composition such as δD/δ^{18}O-H_2O, δ^{15}N/δ^{18}O-NO_3, δ^{13}C-DIC and δ^{13}C/δ^{15}N-POM. Especially dissolved parameters seem to be well reflected local characteristics. Relationships between each component also allow us to estimate carbon and nitrogen dynamics.

Keywords: river discharge, terrestrial inputs, stable isotopic composition of C, N, O and H, tropical coastal area

