ABSTRACT

Land-based nutrient loadings in Haizhou Bay of Jiangsu Province

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Land-based nutrient loads are a major source of nutrients for coastal eco-systems of Yellow Sea, either from natural background discharge or from human activities-related discharge. Based on the understanding of human-induced hydrological change characteristics in the study area, the export coefficient model was used for the nutrient loading in the river drainage area of Haizhou Bay. For the nutrient production and discharge estimation, a series of data was collected, including the information of the river network, the data of DEM, land use, river water flow, amount and type of livestock farming, urban and rural population, industry wastewater discharge, fertilizer use, etc., and ArcGIS software was employed for export coefficient model building. The result showed that Linhong River is the major nutrient pollutant source to Haizhou Bay, and although the contribution of pollution sources showed an almost equal identical on TN and TP loading, the potential loading from the fertilizer use should not be ignored, especially in the wet year or in the flood season, nutrient loading may dramatically increase.

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