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## **Influences of point source and non-point source pollution of the Pearl River Basin on the Pearl River Estuary**

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Coastal waters around Hong Kong are affected by persistent and increasing eutrophication which to a certain extent is caused by the ecosystem's responses to the nutrient discharge from the Pearl River basin in South China. Large agricultural lands and high density of population contribute to both non-point source and point source pollution over the whole basin. It is important to identify dominant factors of water pollution in different watersheds and the major nutrient outputs to the estuary. In this study, SWAT (Soil and Water Assessment Tool) is selected to simulate the terrestrial processes in the Pearl River basin. Both point source (PS) and non-point source (NPS) pollution are considered and various forms of nitrogen (N) and phosphorus (P) are selected as pollution loads. The study would help to assess the primary source and type of water pollution in different watersheds and contribute to provide suggestions for local land use management and trends of eutrophication in the Pearl River estuary.