

Impacts of Land Use Changes on Water Quality of Anzali International Wetland

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Abstract

In the recent years, International Anzali wetland has been exposed to changes by dumping sewage water, land uses changes and sediment deposition that caused the reduction of the wetland depth and the aquatic growing up. In this study, the effects of land uses changes on wetland's water quality was investigated from 1985 to 2014 by determining the land uses on wetland using GIS and measuring the water quality parameters. The results showed that most part of the forest was replaced with agricultural fields and urban areas respectively. Based on Principal Component Analysis (PCA), urban and agricultural area were the most related with the first principal component (PC1). Nitrate, total alkalinity, BOD₅, COD and conductivity were less related respectively. The result showed that during these years, forest lands changed to agricultural fields and urban area.

Keywords: *Anzali wetland, Principle components analysis (PCA), Land use, Water quality.*
