

EVOLUTION OF WATER QUALITY IN THE FRESHWATER ZEESCHELDE (96-00): A REASON FOR OPTIMISM?

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The evolution of water quality in the freshwater part of the Zeeschelde was monitored since 1996. Until now, most research in the Schelde estuary has focused on the marine and brackish part of the Zeeschelde. Often, concentration trends are used to evaluate the success or absence of success of pollution control measures. The total discharge of nutrients to the brackish and marine part of the estuary from the freshwater upper estuary is a function of both the concentration of these nutrients in the freshwater and the total volume of water discharged. It is important to realize that a change in nutrient concentration does not automatically implicate a change in nutrient loading. Assessing the success of restoration programs by concentration trends only is therefore not sufficient. Discharge influence on nutrient and oxygen concentration was compared seasonally between winter and summer period. It is clearly shown that observed amelioration of water quality must almost certainly be attributed to the strongly increasing discharges during the same period. If we measure water quality by nutrient loads exported to the lower estuary, the same increasing discharge results in heavily increasing loads of nutrients.