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CONCENTRATION AND PATTERNS OF PAHS ALONG THE SALINITY GRADIENT OF THE SCHELDT ESTUARY

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At MUMM a method was recently developed to determine Polycyclic Aromatic Hydrocarbons (PAHs) in surface waters, even with high particulate matter concentrations, as is the case for the Scheldt Estuary. The method is based on a solid phase extraction with Bakerbond Speedisk C18 cartridges (Baker Inc, Phillipsburg, NJ). After testing this method during a one-year international OSPAR pilot study, the same method was applied for water samples collected for the ENDIS-RISKS program during 2003. Total water concentrations varied between 10 ng/L and 1200 ng/L. Concentrations are tight linked to sources. Fluoranthene was found in the highest concentrations near Antwerp, while in Doel acenaphthylene seemed to be the most dominant compound. The patterns were generally dominated by the lower molecule weight PAHs. There is a clear gradient from Antwerp to the mouth of the estuary near Flushing. Concentrations and PAH patterns were further compared to previous results.