

# **Book of abstracts**

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## **HABITAT VALUE OF A DEVELOPING ESTUARINE BRACKISH MARSH FOR FISH AND MACROCRUSTACEANS**

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Marsh creation receives worldwide attention in mitigating loss of coastal wetlands and in management retreat of estuaries. In the Westerschelde, the former Selena Polder, south from the marsh of Saeftinghe, developed into the Sieperda marsh after several dyke breaches. Soon after the tides regained access to the polder, a tidal creek was formed. After ten years, a developing marsh system was found adjacent to a mature marsh system. This situation offered the opportunity to compare the utilisation by nekton species of a natural mature marsh with a recently created developing marsh under similar circumstances.

Between April and October 1999, both the mature Saeftinghe marsh and the developing Sieperda marsh were sampled every six weeks on two consecutive days. Each sampling occasion covered the whole tidal cycle.

The most important environmental parameters (water height, temperature, salinity, turbidity and dissolved oxygen) were similar in both marsh creeks. A distinct difference in nekton community structure between the two marshes was observed. The total biomass and densities of nekton species were higher in Saeftinghe.

In Saeftinghe, a density peak occurred in July and was mainly due to large numbers of the mysid, *Neomysis integer*. In Sieperda, maximum abundance of the mysid, *Mesopodopsis slabberi*, caused the peak density in September. This difference in species dominance was observed in all samples.

Biomass peaked in July in the mature marsh and in October in the developing marsh. Mysid shrimp (*Neomysis integer*) and fish (mainly *Pomatoschistus microps*) were the main contributors to the biomass in the natural marsh. Herring, sprat (Clupeidae) and shore crab (*Carcinus maenas*) were more important in Sieperda. For *Pomatoschistus microps*, distinct differences in length-frequency distributions were noted between both marshes.

While creek morphology influences the abundance and species composition of visiting nekton, the age of a marsh and its maturity is believed to be a prime factor in determining the habitat function of creek systems of developing and mature marshes.