

## **Importance of a marsh and marsh characteristics for storm surge attenuation along an estuary.**

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Marshes are worldwide appreciated for their ecological value and their capability to reduce wave heights of storm surges. In our study we show that marshes can also play a very important role in storm surge attenuation inside an estuary. With a 2D hydrodynamic model of the Scheldt estuary (The Netherlands and Belgium) we demonstrate for different storm surges, the effect of the presence and its morphological characteristics (like platform elevation, width and length) of the largest remaining natural marsh in Western Europe, the Drowned land of Saeftinghe. The presence of this large marsh inside the estuary attenuated the storm surge along and inside the estuary, keeping water levels lower upstream in the estuary.