

The historical development of creeks and sedimentation patterns in the low lying areas along the Schelde located North of Antwerp: past and future

Gessese A., Peeters P., Claeys S., De Schutter J.

Flanders Hydraulics Research, Antwerp, Belgium

In the 16th and 17th century, widely spread and important inundations occurred in the low lying areas along the Schelde located north of Antwerp. These inundations were organised during the 80 Years' War for strategic reasons. Following the strategic importance of the inundated land (food production for the city of Antwerp) together with the strategic importance of the inundations itself, breach formation as well as the development of creeks was well documented. Detailed information can be found in historical archives, eg. Felix-archief Antwerpen and at Flanders Hydraulics Research. In addition to cartographical data indicating how flow channels evolved with time, data regarding creek depths and sedimentation within the low lying areas can be found from core penetration tests and drilling reports.

In order to better understand the mechanisms of channel formation and sedimentation in (flood) inundation areas (ie. low lying areas), in perspective of water management today, especially along the Schelde where numerous flood control areas of which some will experience a controlled reduced tide will be installed, an analysis of the available historical data is very important. The available dataset would make it possible to follow the evolutions over an era of 100 years, which is quite unique.

Major issues to cover are:

- Linking historical tide data with breach formations
- Hydraulic aspects of creek formation
- Sedimentation in inundation areas over long time
- Comparing actual with historical sedimentation rates, and linking with sediment loads

With this presentation, interested parties are invited to work on this (historical) data.