

CABLE COVERAGE MIDDELPLAAT

MORPHOLOGICAL DEVELOPMENT CHANNEL-SHOAL SYSTEM WESTERN SCHELDT

TenneT TSO is the owner of two 150 kV cable connections, crossing the highly dynamic Western Scheldt estuary at Middelplaat. The two cable connections are managed by DNWG, as commissioned by TenneT. Due to strong morphological developments, these cables are exposed regularly. Cable coverages are regularly maintained by deepening the cable or covering it with sediment. To identify coverage shortages in time, the cable crossing is surveyed regularly. Based on these surveys, morphological trend analyses are performed, and maintenance forecasts are provided.

Two 150 kV cable connections between Ellewoutdijk and Terneuzen cross the morphologically active Western Scheldt at Middelplaat. This morphological activity is mapped by surveying the cable crossing every year, and by performing morphological trend analyses based on these surveys and Rijkswaterstaat surveys of the area. These analysis show that migration of the northern channel (called Everingen) in southern direction is the main reason of the cable coverage reduction.

By extrapolating the trends found, forecasts of the future bed level along the cable route can be provided. In combination with the

position of the cables, this bed level prediction is translated into a cable coverage forecast and therewith a forecast for cable coverage maintenance for the coming decade.

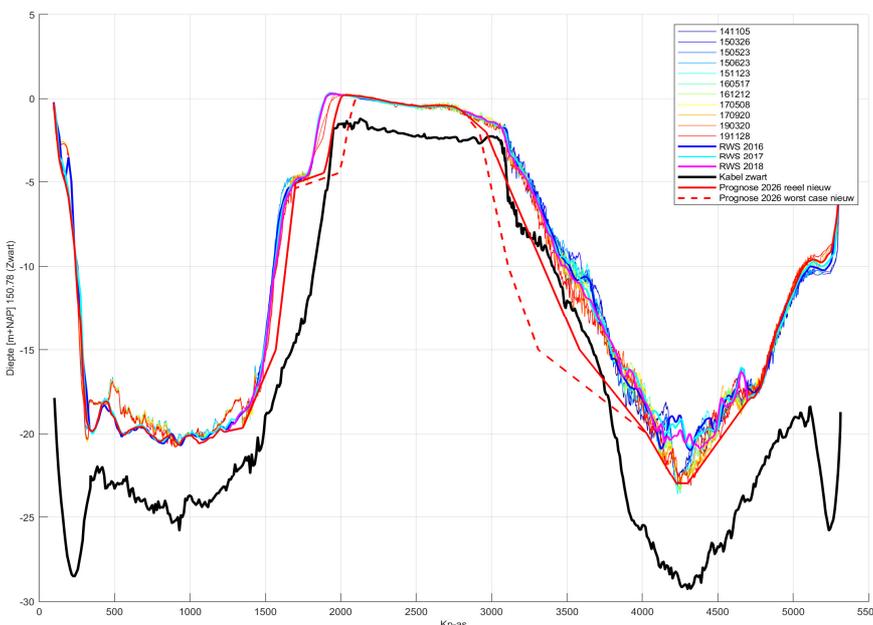
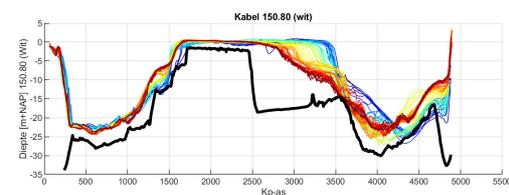
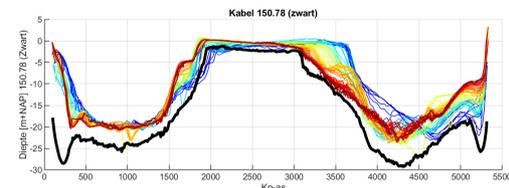
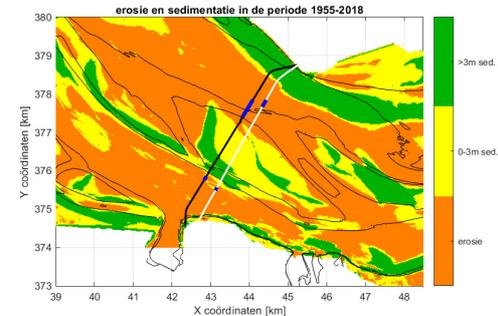
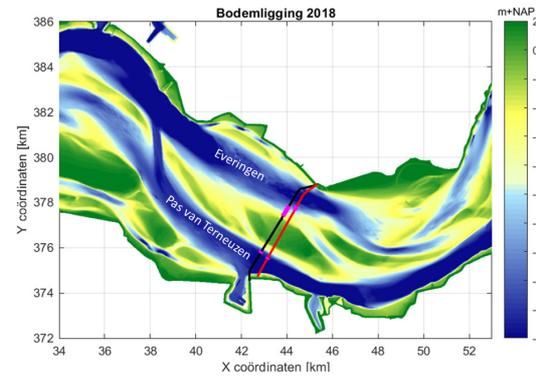
Results of above analysis are used for preparations of a cable deepening, that is performed on part of the cable routes in 2020. As a result of this deepening, the cable coverage is guaranteed for the coming years.

CLIENT
DNWG

LOCATION
The Netherlands

DATE
2017-2021

SERVICES
Morphological trend analysis
Provide maintenance forecasts



SVASEK HYDRAULICS

COASTAL, HARBOUR AND RIVER CONSULTANTS

Svašek Hydraulics
Kratonkade 23
3024 ES Rotterdam
The Netherlands

Phone +31 10 467 13 61
Internet www.svasek.com
E-mail info@svasek.com