

Presented at the FIG e-Working Week 2021,
21-25 June 2021 in Virtually in the Netherlands

SMART SURVEYORS FOR LAND AND WATER MANAGEMENT CHALLENGES IN A NEW REALITY



eWORKING WEEK 2021
20-25 JUNE

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11010

**The BfG-GNSS monitoring network
Delivering a continuous georeferencing service for waterway management tasks**

22 June, 10:30-12:00

ORGANISED BY



PLATINUM SPONSORS





BfG-GNSS monitoring network

- officially operational since July 2020
- 38 stations on the North Sea coast
- 5 stations in the inland
- expansion to the Baltic Sea planned this year with 6 more stations



georeferencing of tide gauges

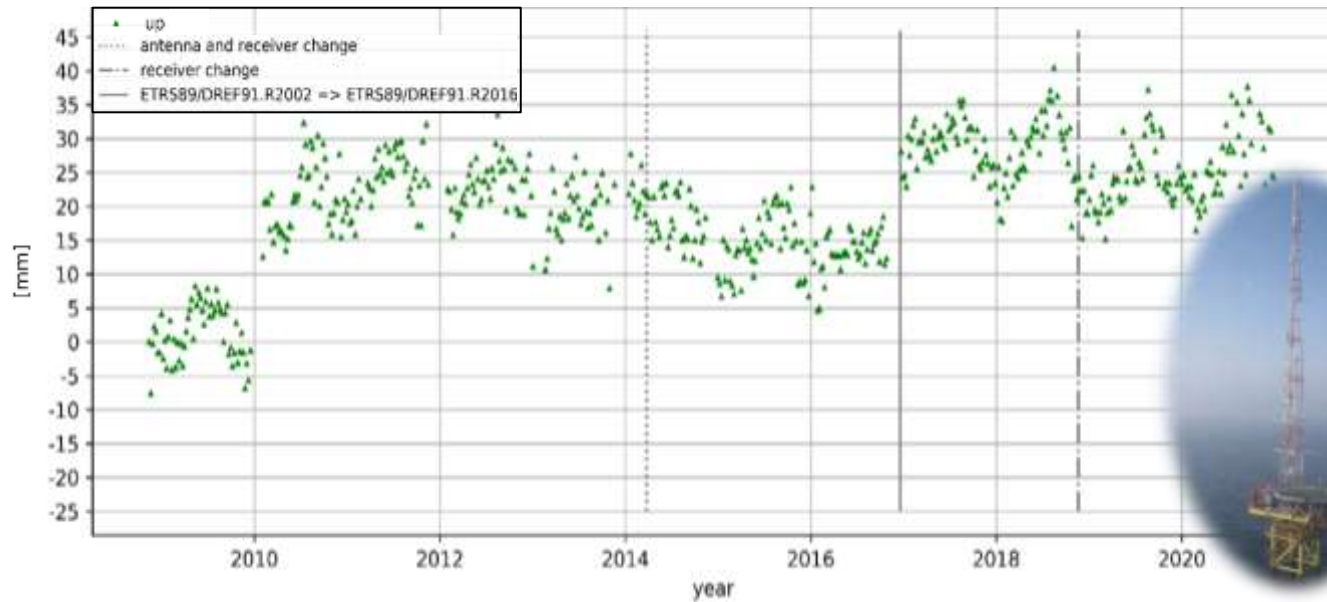
monitoring of hydraulic structures

reference network for density measurements

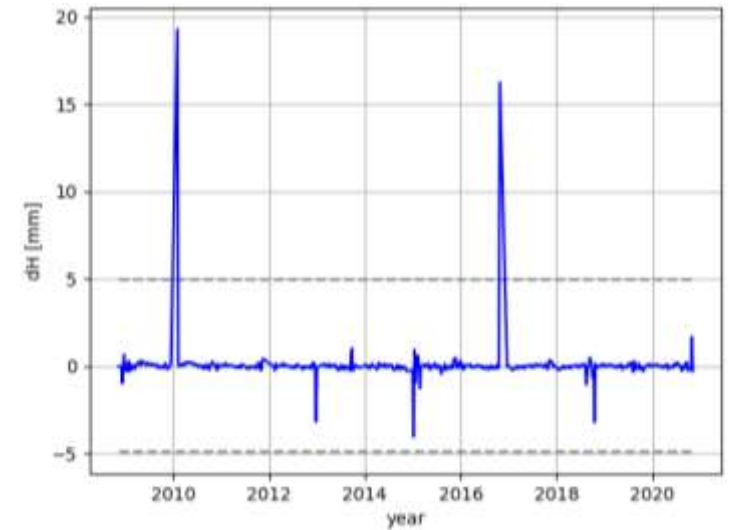
German Strategy for Adaptation to Climate Change (DAS)



Time series analysis



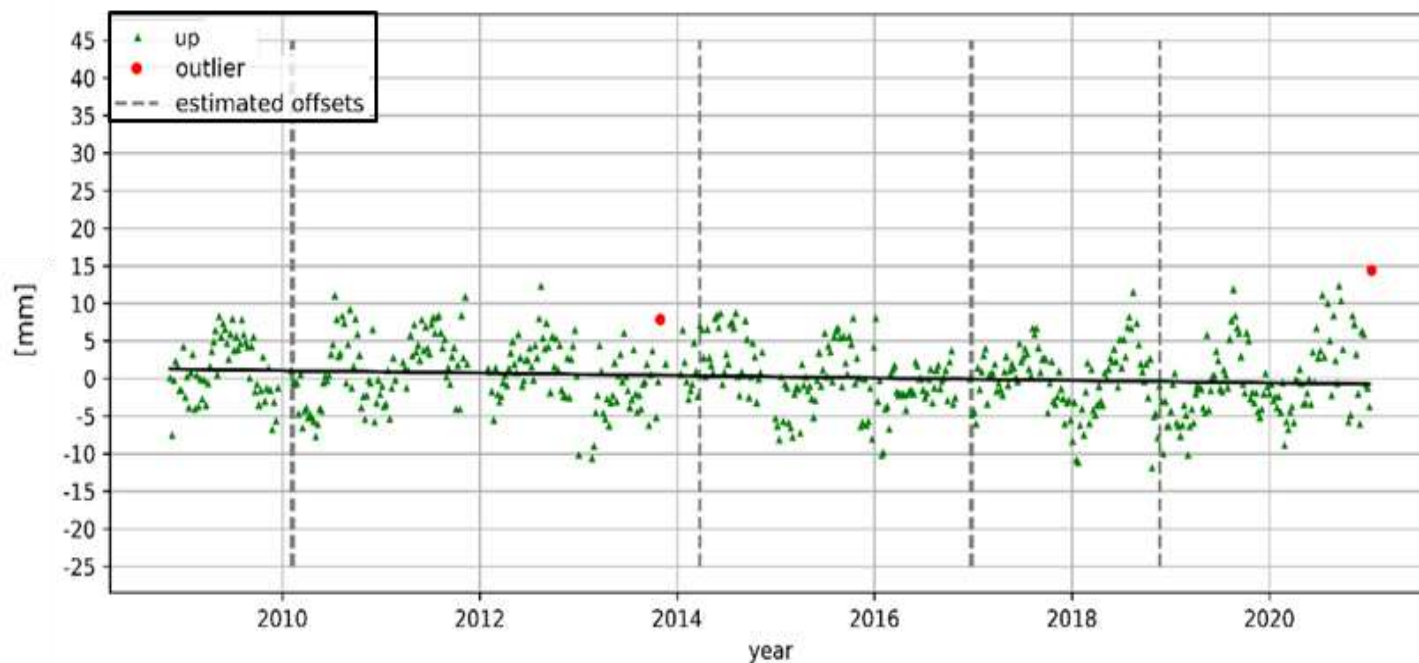
original height time series at the FINO1 research platform



shape of smoothed time series



processed time series after outlier test (Grubbs test) and discontinuity detection (switching edge detection algorithm + a priori information)



no significant change in
height