

Stakeholder Workshop

TrilaWatt

Pitch by
Federal Institute of Hydrology

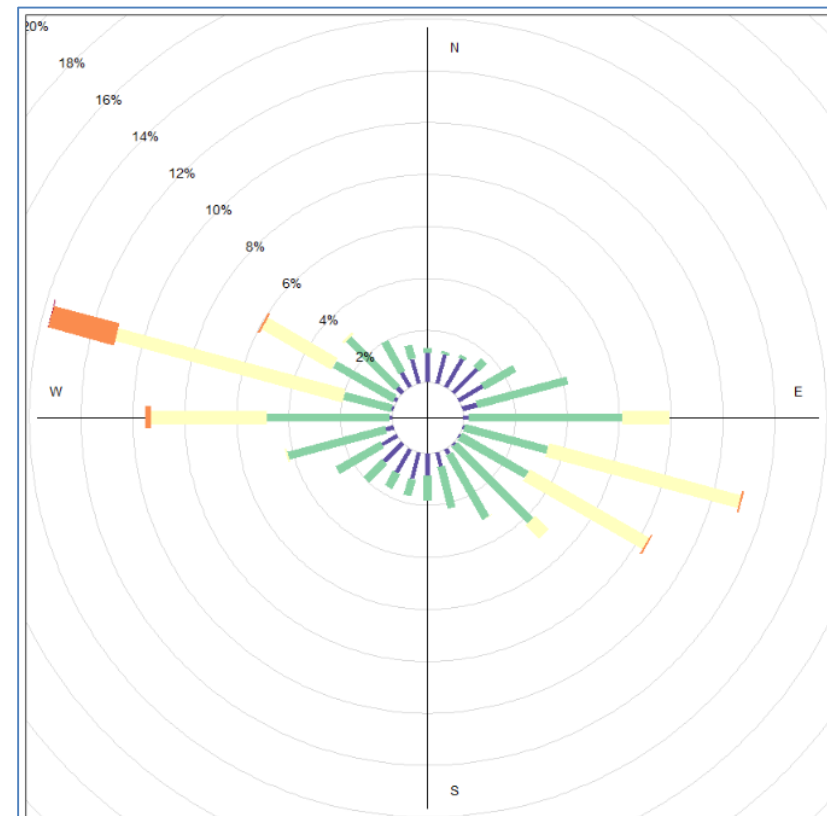
Authors: Peer Helmke (M1), Axel Winterscheid, Monika
Donner (M3), Federal Institute of Hydrology (BfG)

TrilaWatt Stakeholder Workshop
Hamburg, 16.02.2023

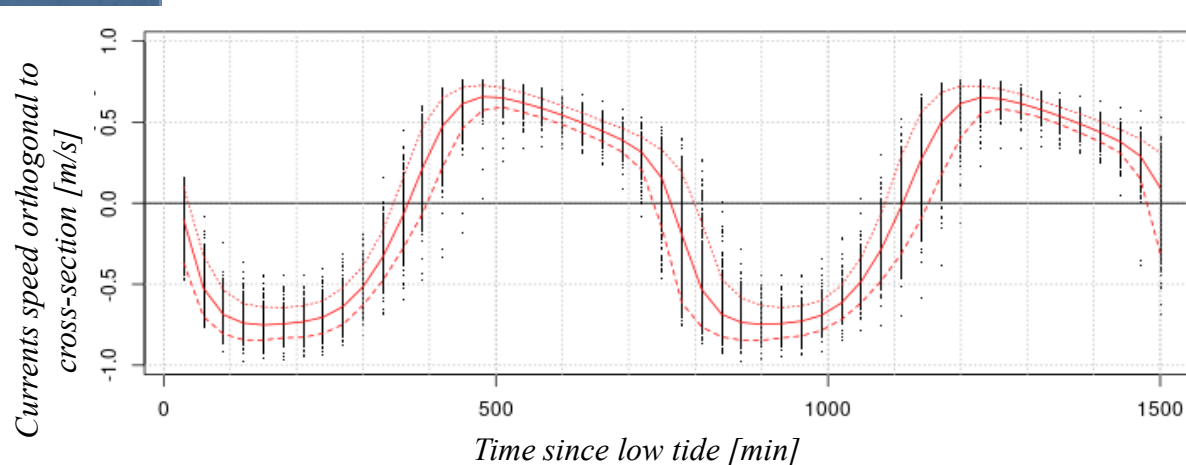


Postprocessing of EasyGSH-Data

- Analysis of currents at one position: current rose with frequency, direction and intensity per bin
- Simple approach for water exchange by using discharge, water volume and residual currents
- Morphological space (Morphologischer_Raum_1996-2016)
- Cross-section averaged flood and ebb current speed (velocity)
- Cross-section averaged flood and ebb flow (discharge)
- Time-averaged water depth
- Tracking Particle-Drift (without settling)

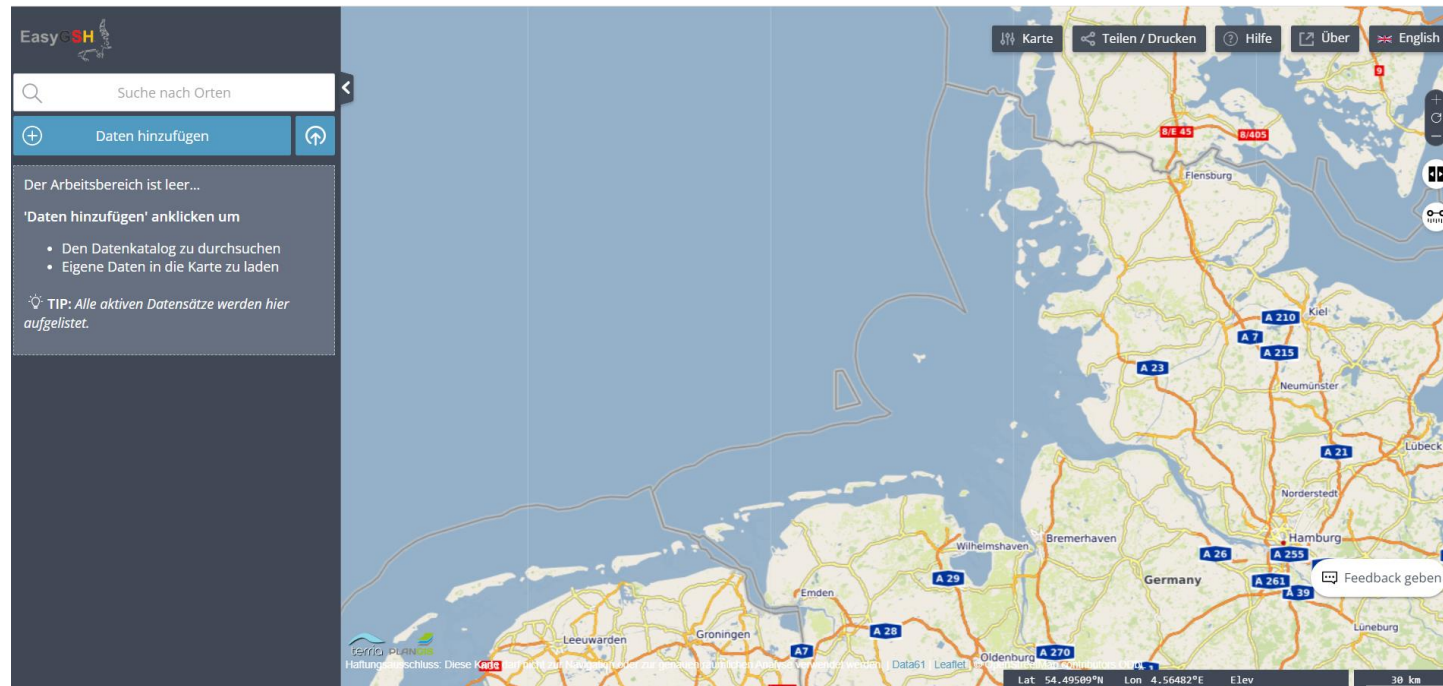


— Frequency of current speed per-direction-bin [%]



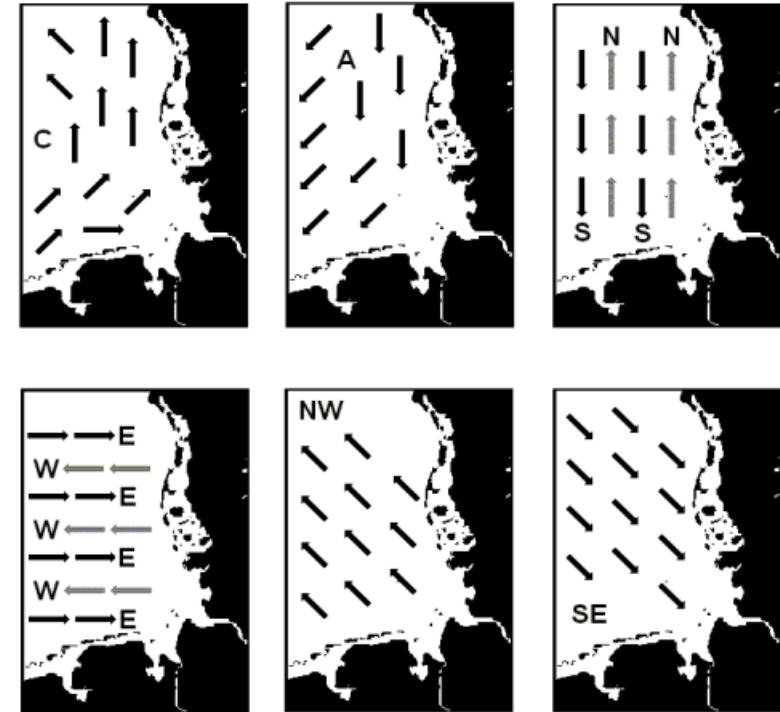
Experiences with EasyGSH data

- *Applied data: morphological space, hydrodynamic and hindcast hydrodynamic data*
- *Findability & technical implementation: intuitive, fast, simple download, regular grid*
- *Resolution 20 min & 1 km: ok for marine environment, for tidal flats and estuarine environment too coarse.*
- *However, resolution in 100 m for annual average available.*



Expectation of TrilaWatt data

- *Comprehensive database on suspended sediment concentration (abiotic) in hindcast – in addition to observed data (e.g. satellite data incl. organic matter)*
- *Extension of model into the estuaries (but still restrictions in resolution – or?)*
- *Updated morphological space (new period)*
- *To some extend options for a server-side postprocessing (e.g. Toolbox)*
- *New or updated “wave atlas” for the German Bight? (wave period and height)*
- *Discussion: Link to recirculation-pattern (figure) of BSH for currents in deep waters (bottom currents e.g.) or waves? → simplification of events?*



Klein (2020): Zirkulationsstatistik, Deutsche Bucht

(https://www.bsh.de/DE/PUBLIKATIONEN/Nordseezustand_Aktuell/_Anlagen/Downloads/3-2-3-Zirkulationsstatistik-DB_2020.pdf?__blob=publicationFile&v=4)

Contact person: Monika Donner
mail: donner@bafg.de

Federal Institute of Hydrology
(BfG)

