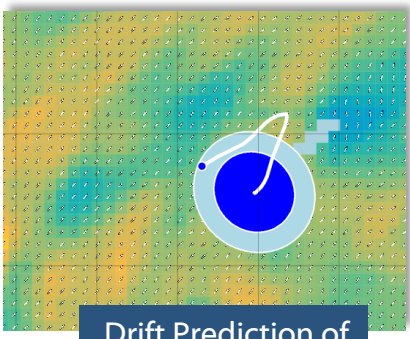
HELZEL Messtechnik

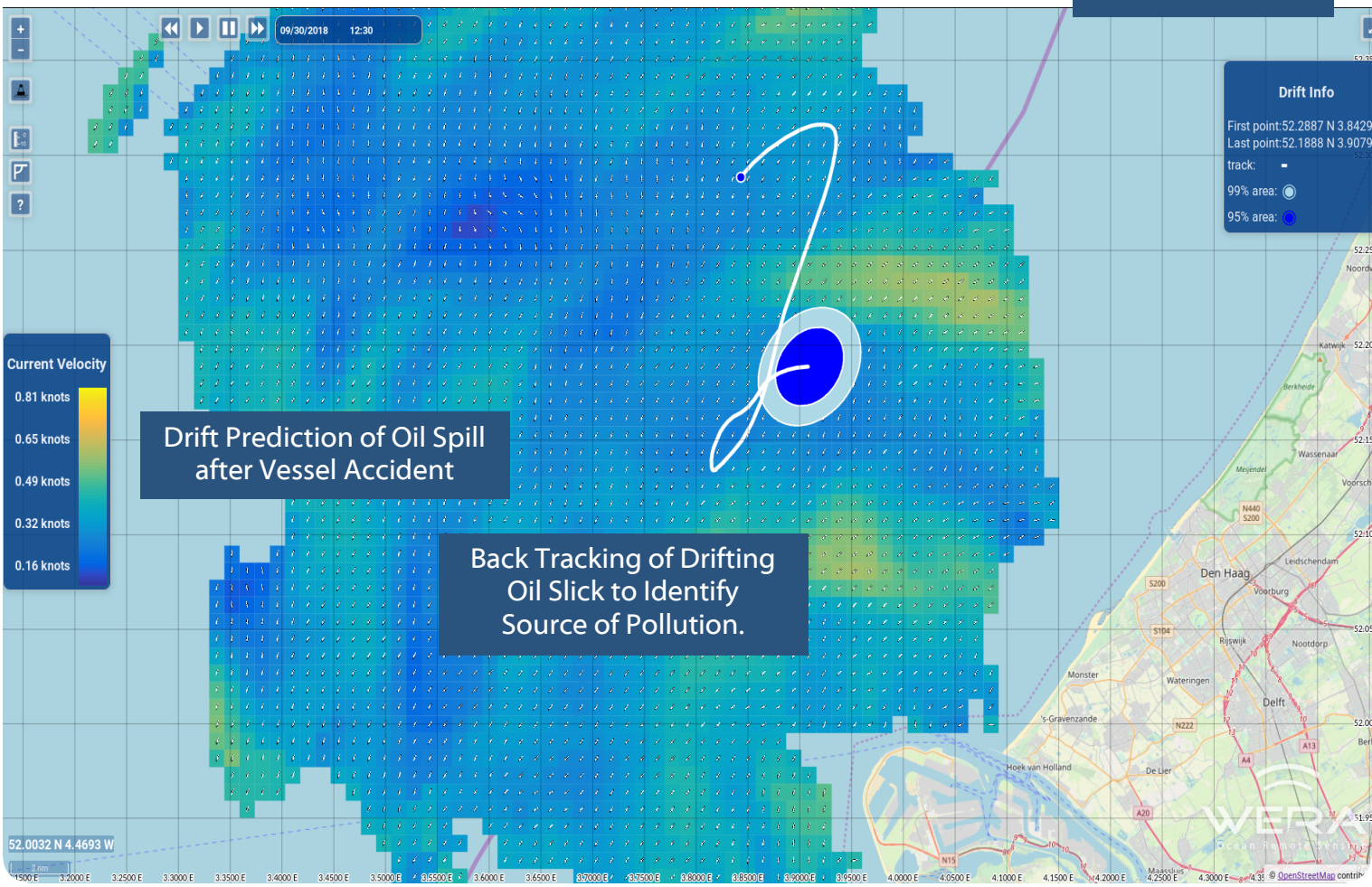
WERA Remote Ocean Sensing

Ocean Current Drift Prediction for SAR and Environmental Applications

WERA provides reliable ocean current data in near real-time. These data can be used in **combination** with **numerical models** to increase the reliability of **drift predictions** for environmental protection applications and for **Search and Rescue (SAR)**. **WERA Drift Prediction (WDP)** is as web based interface that uses the combined current measurements of two or more **WERA** stations to show a trajectory of floating objects.



Drift Prediction of "man-overboard"



Leader in reliable high-quality ocean current, wave and wind mapping

WERA years of excellence in remote ocean sensing

WERA – Drift Prediction, a valuable tool for Hazard Management

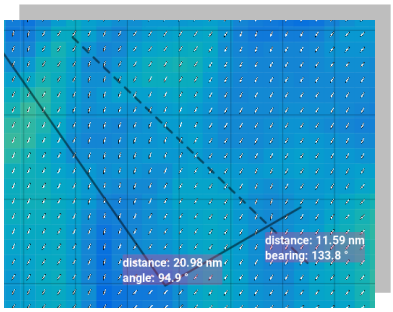
Method: WERA Drift Prediction feeds measured ocean current data, together with wind data from a Global Atmospheric Model into a drift model (OpenDrift) to create an optimized drift prediction. This drift model takes surface-currents and wind-fields into account to estimate a drift trajectory of an object. It is an approved method with high spatial and temporal resolution and high data-availability.

To get this high spatial and temporal resolution data, the WERA Data Manager takes the current vectors acquired by WERA HF radars and performs quality checks in real time. Then, an additional process is interpolating this high quality data to achieve the desired high spatial and temporal resolution.

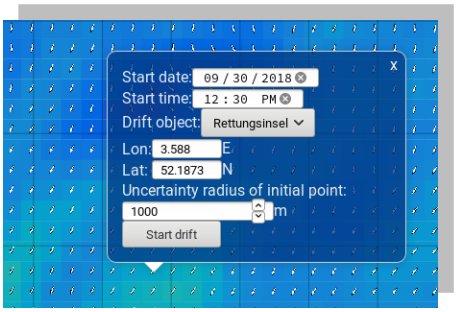
WERA Drift Prediction prepares and configures the model with these data, and displays the results of the predicted drift on a web based graphical user interface.

Fields of Application

- Maritime safety
- Search and Rescue
- Salvage operations
- Environmental protection
- Homeland security (customs)
- Scientific applications



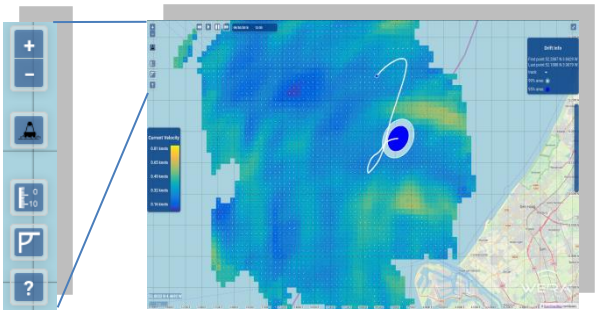
Additional tools to analyse unknown conditions



User Interface to initiate drift prediction

WERA real-time data improves the reliability of drift predictions used for:

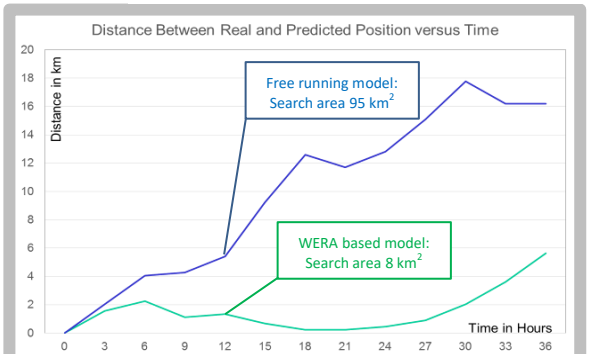
- SAR of people lost at sea
- Search of drifting containers
- Risk analysis of drifting boats
- Pollution (oil spill) drift
- Simulation and analysis of incident scenario



Output Screen of current drift prediction

List of provided services

- Customized configuration of WERA Drift Prediction
- Integration into existing networks
- Operational services and data management
- Implementation of regional meteorological and hydro dynamical models to provide reliable ocean current forecasts
- Access to dedicated or instant forecasts



Difference between real and predicted positions
Comparison between free running model (blue) and WERA based data (green).
[Plotted data are from an experiment at the French coast]

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