HELZEL Messtechnik

WERA Remote Ocean Sensing

Metocean Data for Offshore Installations

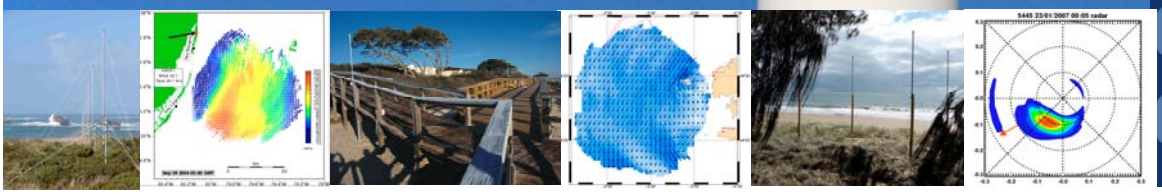
special

WERA combines all information for **Coastal Management** ; Measurements with **high spatial** and **temporal resolution** of **surface currents**, **wind-** and **wave** parameters for the **planning**, **installation** and **maintenance** phase of your offshore project.

- Reliable real-time data for wave, wind and current
- Maps of significant wave height
- Directional Wave Spectra
- Accurate long term data over a large area
- No in-water components
- Easy to service and maintain

Every day
WERA delivers
valuable ocean data
for a wide range of users:

- *Coast Guards*
- *Met-Office*
- *Port Authority*
- *Fishing Centre*
- *Touristic Centres*
- *Vessel Traffic Service*
- *Scientists*



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

WERA years of excellence in remote ocean sensing

WERA
Remote Ocean Sensing

Use the Convenience of Shore Based Instruments for Your Offshore Project

- **Feasibility Studies**
  The **wave climate** can be measured in detail, **significant wave height**, **wave direction** and **period**.
  Accurate and reliable **surface current** data are provided and information about **wind direction & speed** can be derived as well.
  All these data can be used to define design parameters such as wave loads etc.

- **Environmental Studies**
  In particular the surface current data can be used to estimate the influence of **drifting pollutant** in case of an accident or to estimate the modification of sediment transport caused by the offshore construction.

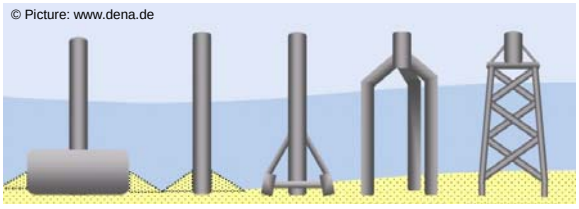
- **Optimise Site and Device Performance**
  Coastal waters can be extreme dynamic and hard to predict. HF radar measurements provide reliable real-time data with **high spatial** (100 to 1000 m) and **temporal** (5 min) **resolution**. With these data you can optimise your site and device performance.

- **Optimise Deployment** (Cost reduction)
  For the construction in open waters you need to get **reliable forecasts** of the ocean parameters at the construction site. The combination of the HF radar data with numerical ocean models (data assimilation) can significantly improve the **prediction quality**. This can make your construction work much **more effective**.

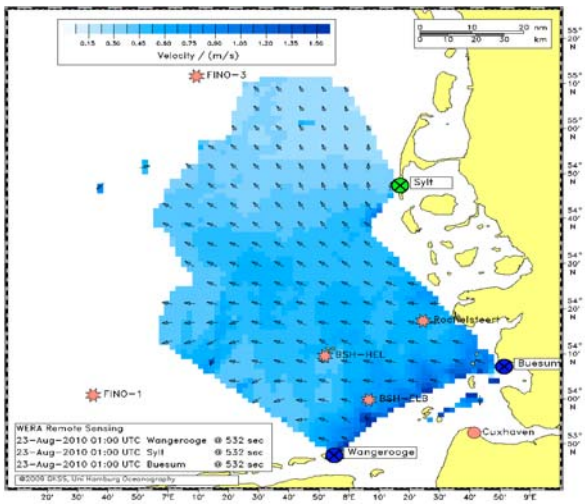
- **Safety** (during construction and operation)
  In case of an accident **drifting persons** or material can be found easier by using an HF radar based reliable **drift prediction**.

- **Device Protection**
  During operation you can use these reliable forecasts to protect your offshore installation **during strong storm** events.

- **Cost Effective Monitoring**
  The shore based HF radar stations are easy to maintain and will provide permanent reliable data at **low operational costs**.



Reliable data of the current, wind and wave situation in combination with bathymetry data will ease the decision on the choice of the correct installation material.



Surface current map of the WERA sites Wangerooge, Büsum and Sylt, German Bight operated by Helmholtz-Center Geesthacht GmbH (former GKSS)

WERA is flexible and easy to deploy and available for permanent or short-term installation. A mobile WERA configuration is available as well.

The WERA systems can be purchased or leased.
Scientific service for specific measurement campaigns are available as well.

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www.helzel.com