

Beack Wrack Fences

Measures for sustainable coastal protection



Wattle-like beach wrack fence in Eckernförde

Beach wrack is any marine-generated organic material that is washed up onto the beach by waves and currents. It can generally be found in the swash zone, in lines along the foreshore and sometimes at the back of the beach especially after storms. The type of beach wrack landing on a beach is a result of what is growing in near-shore waters and the weather conditions. It usually consists of drifting and decomposing marine life debris. In the Baltic Sea region, the latter mostly includes torn off sea grass, macro algae (brown and red species) and shells.



Beach wrack at the beach of Friedrichsort, Kieler Förde.

Beach wrack fences

- Wattle-like fences made out of wooden stakes and filled with beach wrack ensure controlled deposition of beach sand and thus prevent erosion by drifting
- Plastic-free sandbreak variant
- Historical examples of sand break fences found in Scandinavia survive to this day



Conventional plastic sand break in Warnemünde

Use

- Combines a nature-based coastal protection measure and aesthetic landscaping for attractive tourist beaches
- Could save costs on the disposal of beach wrack
- Easy to assemble

Challenges

- Beach wrack needs to be screened for litter first
- Communication between municipalities and public authorities
- Individual cost analysis on a local level
- Compliance with local policies needs to be checked individually

Long-term potential

- Sand drift protection for beaches
- Ecological enhancement of coastal protection measures
- Sustainable use of beach wrack
- Use of biodegradable materials creates no waste

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