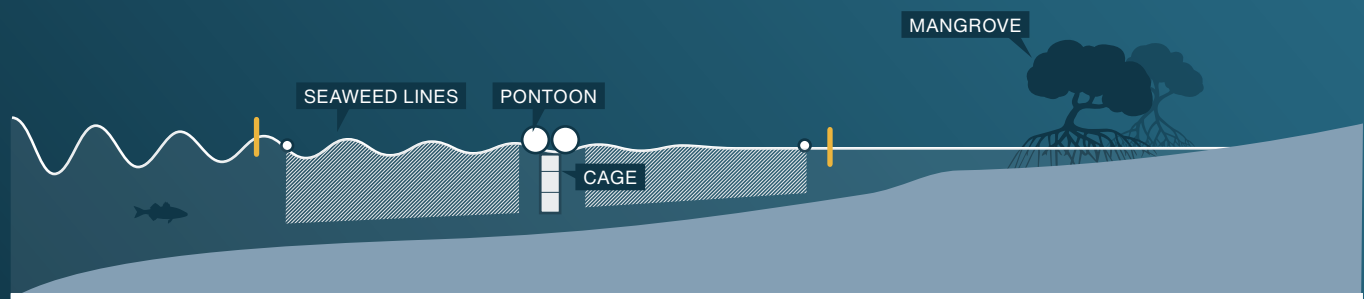


THE LIVING BREAKWATER

Breakwaters are usually big concrete blocks that protect the shoreline. Mitchell Williams (26) and Frej Gustafsson (23), who recently graduated with an MSc in Aquaculture and Marine Resource Management, designed a nature-based living breakwater that also functions as an ecosystem. With their ReShore concept, they won the audience award of the 4TU impact challenge. 'We are currently making plans for testing it in the Oosterschelde next year.'

Infographic Pixels&inkt



Anchor

MANGROVE

SEAWEEED LINES

PONTOON

CAGE

The living breakwater can be used in:

ReShore has many more functions than a traditional concrete breakwater.

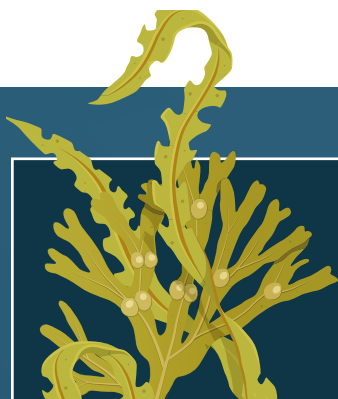


Coastal protection

Protecting coastal communities that are at risk.



Food production: it can function as a nursery for fish species, thereby increasing fishery yields.



Seaweed lines

Kelp can be cultivated on lines, creating an integrated breakwater from the surface to the seafloor.

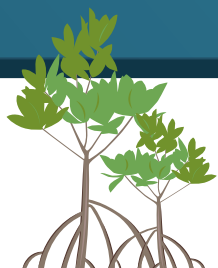
Pontoon, 15 metres long

Underwater cage

Mussels, sponges or oysters can live here. Their mass will break the waves, while water still flows through.



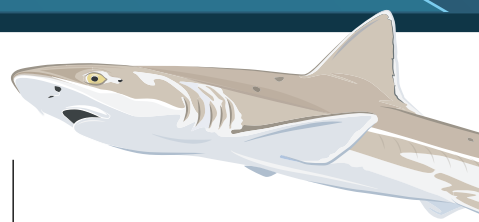
Height 8-10 metres



Ecosystem restoration to protect delicate ecosystems like mangroves, which function as natural breakwaters once mature.



The removal of excess nitrogen, phosphorus and heavy metals by the seaweeds and shellfish that filter the water.



The creation of resilient habitats for different marine animals through the formation of an artificial reef.