



Ocean Health

An initiative by Van Oord

Shellfish reefs

Ocean Health protects, enhances and restores ecosystems worldwide. We aim to help nature thrive by incorporating eco-friendly components into the design of seabed interventions, and by actively inducing the establishment of targeted species. Together we can turn man-made infrastructure into rich habitats.

Eco-friendly designs for scour protection cable crossings, and for other wind farm and offshore energy related constructions benefit the marine environment, thereby also contributing to a positive public perception of the roll out of new offshore wind energy projects.

Recent project - 2022

Luchterduinen Oyster reef Restoration

- Installation of oyster broodstock to serve as larvae pumps, locally kickstarting oyster reef development
- Techniques building upon 4 years of collaborative research between science and industry
- Outplacement of four oyster tables – 6000kg concrete structures on which live adult oysters are fixed
- Design tailored to specific local hydrodynamic and sediment dynamic conditions



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Our solutions

- Step 1: Landscaping - Incorporating a variety in materials, dimensions and (sizes of) cavities in the design of marine infrastructure will result in a greater variety of marine life
- Step 2: Induce Life - Offshore energy installations are often located in remote areas without connectivity to natural reefs, so active introduction of brood stock is needed to kickstart the development of self sustaining reefs

Processes

Van Oord uses advanced design solutions to benefit biodiversity in and around its construction works. For example:

- Develop and implement methods for creating shellfish reefs within offshore wind farms
- Alter the conventional scour protection designs used at the base of wind turbines to create diversified habitats
- Execute pilots to determine the construction materials that are most suitable for enabling natural reef development (for coral & shellfish)

Creating value



Restoring ecosystems



Infrastructure protection



Local tourism development



Economic value



Protect and enhance biodiversity

Our added value

Scale

Unique expertise to engineer and execute large scale marine construction projects that have the potential to enhance ecosystem services and deliver biodiversity net gain

Ingenuity

Before introducing targeted species, we seek to engineer the optimum physical boundary conditions for ecosystem development to kick-start biodiversity regeneration

Ecoscour Survey: creating habitats for marine life



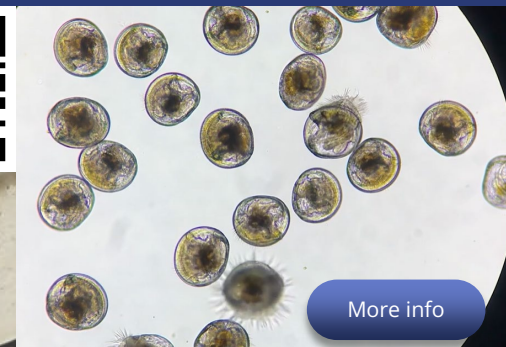
More info

Reintroduction of European Flat oysters at Borsselle V



More info

How to create an artificial reef



More info