

CHALLENGE 3:

## Offshore wind farms: building with nature

### An optimal design for flat oyster constructions in offshore wind farms

#### Background

The installation of large-scale offshore wind farms in the North Sea make it both possible and necessary to strengthen the nature within and surrounding the wind farms.

One way to introduce oysters in the wind farms is to place racks with oyster baskets on the bottom of the sea. These oysters can seed new reefs. Oysters improve the water quality and attract other marine life. Therefore, Stichting De Noordzee and Natuur & Milieu have launched the project: De Rijke Noordzee.

A first pilot at the Luchterduinen wind farm, has shown that the location is suitable. However, the oyster racks did not meet the expectations. The racks have been partly covered with sand and there are doubts about corrosion resistance of the material used. Currently these racks consist of a steel frame (1x1,5m).

In the upcoming years, this project will continue and expand with new partners and more optional locations to run pilots for the oyster racks. Are you one of their future partners and start a eventually a pilot? To make future pilots a success, innovation is needed for the construction materials used, and at the same time prevent the constructions from being covered with sand.

#### The Challenge

The challenge of the Stichting Noordzee and Natuur & Milieu, is to improve marine life by introducing oysters that reproduce and contribute to the development of new reefs.

The aim of the challenge is: Make an optimal design to contain live oysters so that we can effectively introduce and increase flat oyster populations in offshore wind farms. There is no limit to the designs. Please think out of the rack /cage design boundaries.

The design should be resistant to forces present in the North Sea, giving oysters enough oxygen and food to survive and reproduce and should protect the oysters from being covered in sand. The design should also be easy to place and lift at sea, and be made out of material that withstands corrosion.



