

## Impact of artificial reefs on biodiversity in the marine environment

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Because of previous projects with artificial reefs in wind farms, current existing constructions are in study to see if it is possible to add artificial reefs and if these artificial reefs improve the region. Because the old structures to protect the country are not designed to maximize biodiversity. Artificial reefs can substantially impact the aquatic ecosystem. Marine ecosystems are critically investigated at the jetties of IJmuiden, as well as how they may be improved. This presentation will highlight research on how artificial reefs can or could improve the aquatic ecosystems around IJmuiden's northern pier. During this research, in-situ transect diving methods are used to determine the current biodiversity on the jetty.

Furthermore, literature research aims to determine if and which artificial reefs could enhance biodiversity in the area. The study shows that Echinoderms dominate the area. Within the boundaries of the research, only eleven different species stood present, of which only two reef-building keystone species were located. Lastly, the presentation ends with recommendations for further action. The documented research will be published as a chapter in the Book Life Below Water for the United Nations Sustainable Development Goal 14.

### **Keywords**

Artificial Reefs; Structures; Biodiversity; Marine Ecosystems; Sustainable Development Goals