# Predictions for Subsea Piling Templates

**Publieke samenvatting / Public summary**

## Aanleiding

In the offshore wind industry, a subsea piling template can be placed on the seabed in order to precisely place steel piles for an offshore wind foundation. After installation of the foundation piles the subsea piling template is removed and reused for placement of the next set of piles. The foundation piles need to be accurately placed in the seabed so a jacket foundation construction can be installed on the piles to form a foundation for an offshore wind turbine or offshore high voltage station.

## Doelstelling

Deltares, Van Oord and TWD are eploring design optimisations and installation limits of a subsea piling template, with a self-leveling capability, when used on erodible soil. This could lead to significant cost savings if it can be shown that during the installation time the scour (erosion of sediment) around such a subsea piling template remains under the maximum allowable threshold and no scour protection is needed to prevent this.

## Korte omschrijving

Due to the unique geometry of the template, it is not possible to estimate the scour development around the structure. Furthermore, the maximum allowable (spatially varying) scour around the template is unknown. Hence new research is needed to solve the challenges. The main research question is what the amount of scour is that can be expected around such a subsea piling template during the installation phase and how this will influence the satbility of the subsea piling template

**Projectinformatie / Project information**

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Deltares

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during installation.

**Resultaat**

The results from this research will help in the optimization of wind farm designs by improving (physical) model methods for scour predictions, making them more realistic, reducing conservatism in the design approach. The results from these tests are immediately applicable for (future) subsea piling template designs and improved installation procedures (e.g. ommitting scour protection) can be considered by the offshore wind industry.

De data in deze applicatie is afkomstig van de Rijksdienst voor Ondernemend Nederland (RVO) en wordt in samenwerking met de Topsector Energie ontsloten.
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