

Het hoogheemraadschap van Schieland en de Krimpenerwaard

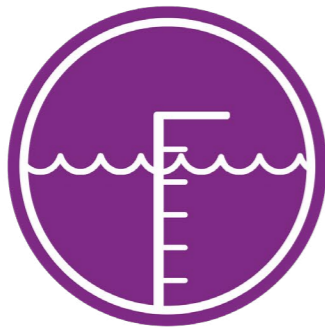
Introduction

The Water authority of Schieland en de Krimpenerwaard (HHSK) is responsible for managing quality and quantity of surface water in an area that includes a large part of the city of Rotterdam and surrounding areas with a more rural character.

In order to manage an extensive network of waterways and keep them free from accumulating sediments, to reduce risks of flooding, maintain the quality of the water and to keep waterways accessible for water-based (recreational) transport HHSK has to dredge them.



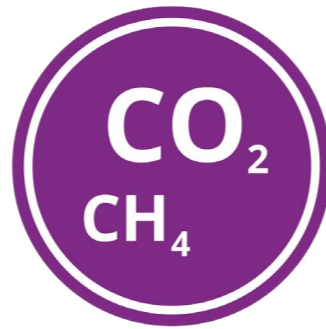
150,000 cubic metres of maintenance dredging



Area of HHSK below sealevel -2 up to -6,7 mNAP



Subsidence goes on (10-50cm before 2050)



GHG-emissions due to peat oxidation in NL is equal to the exhaust of 2 million cars.

HHSK dredges approximately 150.000 m³ of sediment per year.

A high percentage of the dredged sediment is transported and dumped as waste - a very costly and wasteful operation. Today many techniques and knowledge are available on using sediment as a building material. We want to make this available so that our sediment can be used as a resource. Large areas of peatland in Dutch polders are oxidising and compacting. This results in the last decades in lowering land elevation with big consequences for water management, biodiversity, economical and ecological utility and GHG-emissions. We asked ourselves: Can't we use our sediment to counteract this problem!?



Managing organic waste stream

Case Study

In the USAR project, HHSK wants to test a circular application with a pilot in the Krimpenerwaard in which we process three local specific residues – sediment, manure and clipping – into a locally applicable product. In the project we want to test the practical applicability and effects of this new resource material on the soil conditions in different plots.

We reduce waste streams and we tackle the problem of soil subsidence in our peat pasture areas. Which has a major impact on the water management and use of the area. We are committed to improving and contributing significantly to the reduction of CO₂ emissions.

With the use of renewable resources, we can make a major contribution to a circular biobased economy:

- ▶ Reduce waste streams and volume of recycled sediment
- ▶ Devalue organic waste streams
- ▶ Counteract soil subsidence
- ▶ Reducing greenhouse gas emissions

Different steps to be tested:

- ▶ Mixing of three resources (sediment, green waste and manure)
- ▶ Application on 25 hectares of farmland



Dutch polders; extensive peatlands

Dredging taking place on the Dutch Polders

