

Case Study Beneficial Use of Sediments

Project	<i>Room for the River</i>
Classification	<i>R5B_2006_NL</i>
Major Function	<i>Resiliency</i>
Other Functions	<i>Restoration</i>
Location	<i>Rhine, Waal, IJssel and Meuse rivers, The Netherlands</i>
Volume	<i>Total sediment/soil volume 35 - 40 million m³ (including flood plain soils), (excess sediment/soil volume 5 million m³)</i>
Technique	<i>Excavation, segregation and reallocation of the different fractions</i>
Contaminants	<i>Present, but acceptable for reuse within the Dutch Soil Directive (criteria: no unacceptable ecotoxicological risk and no degradation of the overall quality of the waterbody)</i>
Granulometry	<i>Mix of gravel, sand, silt and clay, both wet (sediment) and dry (floodplain soil)</i>
Scale	<i>Real project scale</i>
Client	<i>Ministry of Infrastructure and the Environment, Rijkswaterstaat</i>
Executor	<i>Multiple consultancies and contractors (on different subprojects), Research institutes: STOWA, KNMI, Deltares, Alterra and universities</i>
Research program	<i>National Water and Climate Knowledge and Innovation Programme (covering topics like ecological impact, climate adaptation, resilience, adaptive delta planning, cyclic rejuvenation, flood probability, etc.)</i>
Contact	<i>Deltares (Arjan.Wijdeveld@deltares.nl)</i>
Year Start – End	<i>2006 – 2015</i>

Description of the project

The goal of the Dutch Room for the River Program is to give the river more room to be able to manage higher water levels. For 30 locations measures were taken to give the river space to flood safely. This as an alternative to further increase the height of the dikes. To make this possible, ~40 million m³ of soils and sediments had to be reallocated. Most of the soils/sediments could be used within the project, but for some of the sediments an under water storage site (much like a Confined Deposition Facility or CDF) had to be constructed. By using old (or sometimes newly constructed) quarry sites (gravel, sand or clay) these quarry sites could be partially filled. The end result is an increase in wetland and shallow lake habitat.

Constructing a CDF type of solution (the stored sediments have contamination levels in line with the soil use specific standards, hence they are not seen as contaminated) in former pit lakes is one example of beneficial sediment use within room for the river. There are more examples. See the provided web links for information on the 30 locations.

Graphical information



Figure 1 Room for the River

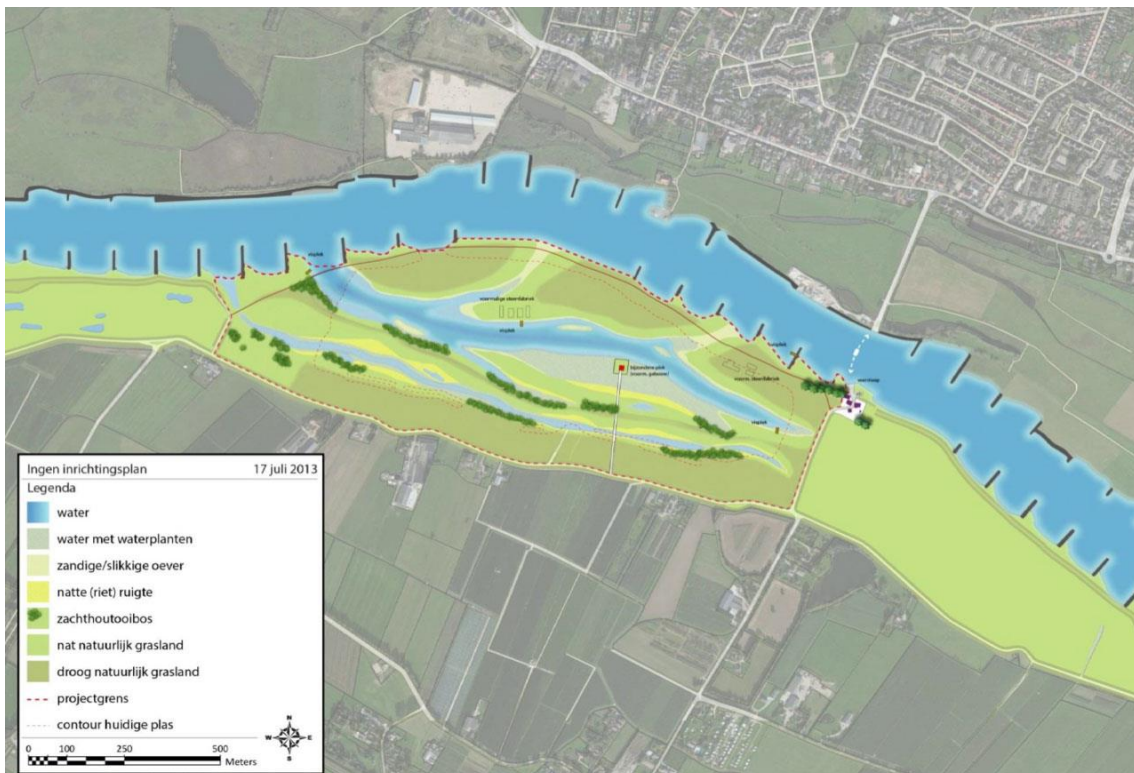


Figure 2 Reallocation site for sediments

References/web links

<https://www.ruimtevoorderivier.nl/english>

<https://www.rijkswaterstaat.nl/english/water-systems/protection-against-water/room-for-the-river.aspx>

[https://en.wikipedia.org/wiki/Room_for_the_River_\(Netherlands\)](https://en.wikipedia.org/wiki/Room_for_the_River_(Netherlands))

