Group 2

SURICATES: demonstration through pilots of sediment reuse for coastal defence or climate change mitigation

Interreg North-West Europe
SURICATES
European Regional Development Fund

The **SURICATES** project is a research initiative funded by the European Union regional funds (INTERREG NWE), aimed at increasing the reuse of dredged sediments.

It addresses:

European policy on Circular Economy

EU Waste strategy

Sustainable water transport

Dredged sediments are one of the biggest potential waste flows, according to regulations.

Dredged sediments over 200 Mm3/y (80 Mt dry weight)

Current practice: relocation at sea (marine sediments), **on land disposal** (inland waterways)

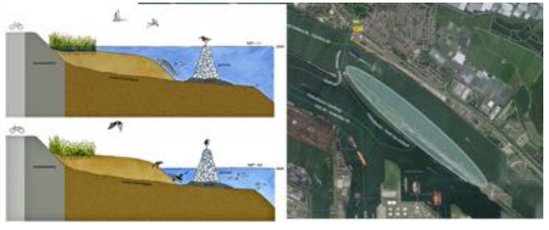
Sediments are part of our potential mineral resources for civil engineering (but also of our environment).

> Sediments are eligible to circular economy thinking (SedNet, 2019)

Pilot projects
Rotterdam (200,000 t)

Application of dredged sediments in estuarine works aimed at improving the channel and the resilience to major flood events

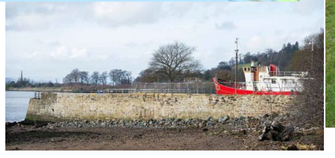
Improvement of the resilience of the river banks against major flood events

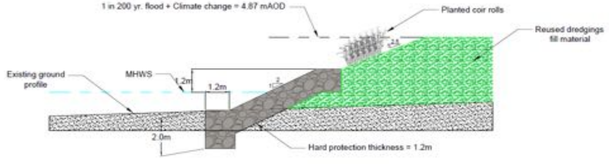


Pilot projects
Scottish Canals (20,000t)

coastline defence

land restoration and development





Future projects (Ireland, France)

Identifying opportunities for flood or coastal defences from sediments relocation

Issues

Coastal erosion—Sand Engine

Flood dykes

Lift up Lowlands

The toolbox

Regional inventories of available sediments and of needs for climate change-related civil works.

Economic modelling

Societal approaches

Environmental monitoring

Civil engineering testing and validation

Risk analysis

Convince project operators that reuse approaches can be safe

Baseline monitoring

Later evaluation of economic and environmental impacts from pilots at the local scale

Expected outcome

Development of a reuse sector (industries, services, SMEs).

Drive up sediment reuse in NW Europe by 1.3 Mt/y after 5 years, and by 2.3Mt/y after 10 years.

Which opportunities for valorisation ?

Focus on low cost, large volume solutions, to avoid market bottlenecks

Minerals for civil engineering—Reducing sand or clay extraction

Climate change, erosion and flood risk increase require greater mitigation measures (strengthening or regeneration of harbour/river banks, beach nourishment), consuming high volumes of natural resources.

Interreg North-West Europe · Investing in Opportunities · Université de Lille · Cork Institute of Technology · Deltares · brgm · TEAM² · Port of Rotterdam · Scottish Canals · University of Strathclyde Glasgow · ixsane · IMT Lille Douai · UCC University College Cork, Ireland

Battelle Sediments Conference
February 11-14, 2019 | New Orleans, Louisiana

E. Masson (Université de Lille), J. Harrington (Cork Institute of Technology), A. Widjeveld, H. Groot (Deltares), R. Lord (University of Strathclyde), T. Debuigne (IXSANE), M. Wensveen (Port of Rotterdam), A. Hamilton (British Waterways T/A Scottish Canals), M. Benzerzour (IMT Douai), M. O'Connor (University College Cork), **B. Lemiere (BRGM) (corresponding author - b.lemiere@brgm.fr)**