PARTNERS

STOWA | NL

KU Leuven | BE

University of Siegen | DE

University of Lille | FR

Rijkswaterstaat | NL

Department of Mobility and Public Works | BE

HZ University of Applied Sciences | NL

Cerema | FR

Ministry of Defence | NL

Flemish Waterways | BE

Regional Water Authority Noorderzijlvest | NL

ISL engineering | FR

Regional Water Authority of Hollands Noorderkwartier | NL

ESTP – French graduate school of engineering | FR

Catholic University of Louvain | BE

Research Institute for Nature and Forest | BE

Radboud University | NL

Map: © EuroGeographics Association for the administrative boundaries (NUTS regions)

THE PROJECT

In Bonsai international flood defense, science, and education experts work together to create solutions to prevent flooding due to climate change.

We create possibilities for the next generation of flood experts to learn and dedicate ourselves to creating a transnational network for future cooperation.

Total project budget
€10.7 million

EU funding
€6,4 million

Timeline
2025 - 2029

Contact

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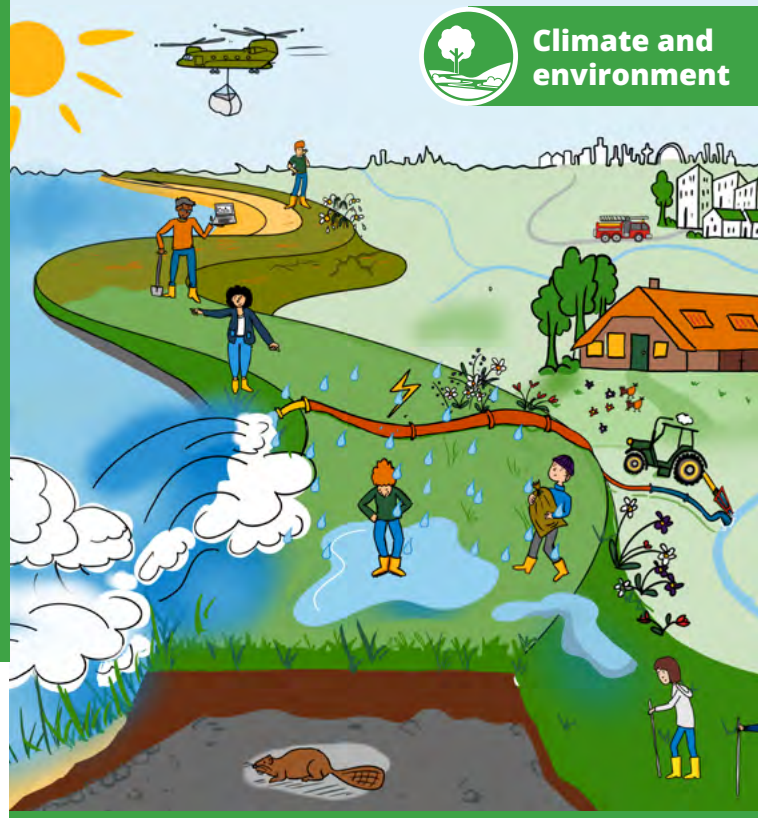
nwe-bonsai

bonsai.nweurope.eu

Interreg North-West Europe

Co-funded by the European Union

BONSAI



BOOSTING FLOOD RESILIENCE IN ESTUARINE SYSTEMS ANTICIPATING SHIFTING CLIMATE ZONES

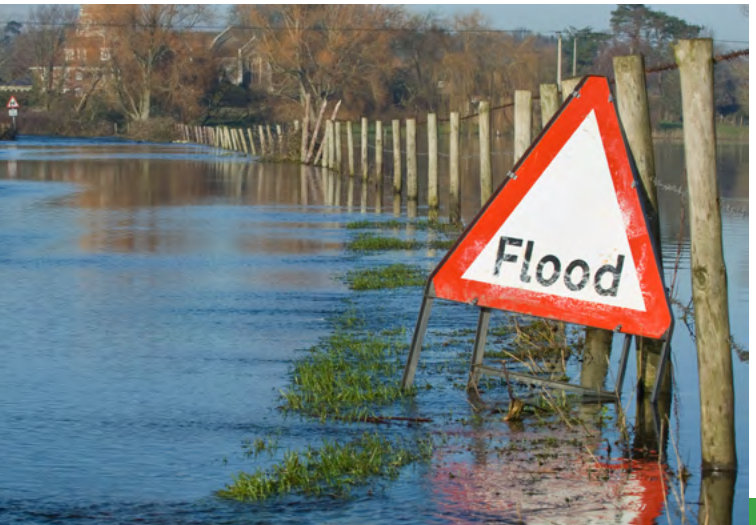
CHALLENGE

Climate change

Due to climate change, tidal estuaries in Northwest Europe face increased flood risks as extreme weather intensifies and sea levels rise. Current flood defense infrastructure must adapt to shifting climate zones and increasingly severe conditions.

The estuarine systems of Northwest Europe are densely populated and home to vital industries and infrastructure. The flood protection infrastructure is not designed for these conditions. Without proactive preparation for climate change impacts, these areas face severe threats to communities, economies, and ecosystems.

This is a transnational challenge requiring cross-border cooperation to develop solutions, share knowledge, and train the next generation of flood resilience professionals.



OBJECTIVES

BONSAI strengthens flood defense systems in tidal estuaries across Northwest Europe, making them more resilient to the impact of climate change both now and in the future.

Using test sites across multiple Northwest European climate zones, the project brings together knowledge to develop and share proactive and responsive flood protection measures. Through capacity building, we empower flood management organizations and societal partners in NWE to enhance their resilience and respond effectively to flood threats.

5 Solutions

30+ Associated organisations

1 Strategy

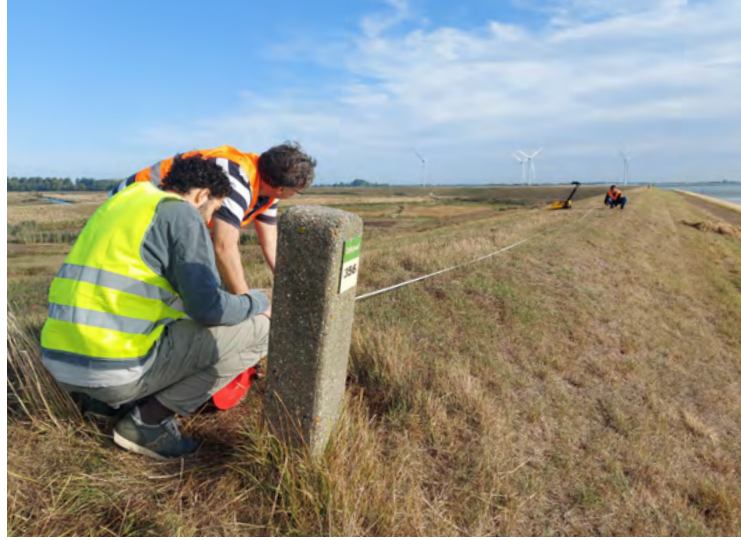
40 Organisations with increased capacity

80+ People trained

3 Action plans

5 topics

BONSAI focuses on critical areas including erosion, animal activity, biodiversity, nature-based solutions, and disaster management - creating lasting impact through an integrated approach to flood resilience.



EXPECTED RESULTS

BONSAI delivers practical tools for Northwest Europe's flood resilience: one transnational strategy and three action plans addressing short-term defense, long-term resilience, and disaster management.

We develop five proven solutions tackling erosion, animal activity, biodiversity, nature-based solutions, and disaster management. These will be implemented by project partners and made available region-wide.

Comprehensive training programs - including disaster management courses, international exercises, summer schools, and a flood academy - will equip 80+ current and future professionals. New courses in curricula and knowledge sharing across partners, authorities, and communities of practice strengthens regional capacity and awareness for lasting climate resilience even beyond the project.