

Safeguarding climate & environment in the North Sea Region

More than 40 ongoing North Sea Region projects are promoting compliance with core EU environmental policy and legislation through smart, cost-effective solutions that are often designed to benefit local communities. Working in transnational teams, these projects invent new solutions, expand existing ones, and conduct pilot trials to reality-check their ideas. The examples below demonstrate the scope and diversity of North Sea Region projects helping to put EU green strategies into practice.

ADAPTING TO CLIMATE CHANGE



The EU Climate Adaptation Strategy reflects the pressing need to build climate resilience. North Sea Region projects are spearheading new measures to bolster cities, towns and rural areas against future impacts such as floods and droughts.

- **FRAMES** builds multi-level governance and response systems designed to build flood risk resilience and help authorities cope with flooding.
- **Building with Nature** integrates natural dynamics and landscape structures in innovative flood defence systems.
- **BEGIN** builds climate resilience in 10 of the region's large cities, integrating blue-green infrastructure in city plans and construction projects. The project applies a social innovation approach.
- **CATCH** supports midsize cities and towns in bracing themselves for climate change effects through comprehensive tools and guidance.

KEEPING CARBON IN THE GROUND



Many North Sea Region projects help fulfil European climate policy and law, for example the Renewable Energy Directive, the Clean Energy for All Europeans Package, and the Land Use and Forestry Regulation.

- **Carbon Farming** promotes farming methods that sequester carbon in the soil and improve soil quality, for example via cover crops and no-till techniques.
- **CANAPE** supports the vital role of peatlands in sequestering and storing huge amounts of carbon. It restores degraded peatlands and promotes sustainable peatland farming, locking the carbon safely underground.
- **INDU-ZERO** designs a factory producing energy renovation packages at half the current price. The concept could potentially reduce the carbon footprint of 22 million homes in the region, causing 79 Mtonnes CO₂ emissions per year.
- **COBEN** facilitates community-owned renewable energy enterprises that provide tangible economic, environmental and social benefits to enrolled citizens.

SECURING CLEAN WATER



Healthy water systems are under threat in the North Sea Region due to its dense population, intensive agriculture and many industries. Implementing the EU Water Framework Directive is therefore a key priority.

- **WaterCoG** improves the dialogue with local stakeholders about the Water Framework Directive, discussing the options to meet its obligations.
- **TOPSOIL** fosters integrated management of the quantity and quality of groundwater, based on ground-breaking topsoil mapping techniques.
- **Sullied Sediments** develops tools to track and remove EU Watch List Chemicals from our waterways, protecting our drinking water and healthy ecosystems. The project uses a citizen science approach to raise public awareness of the issue.
- **NuReDrain** invents a filter that can remove both nitrogen and phosphorus from agricultural runoff, protecting waterways from nutrient pollution.

MANAGING BIODIVERSITY



Several ongoing projects underpin EU legislation addressing the biodiversity crisis, such as the Habitats and Birds Directives, the Marine Directive, and the Pollinator Initiative.

- **JOMOPANS** develops joint techniques and systems for monitoring underwater noise in the North Sea and tracking its impact on marine mammals.
- **GEANS** develops genetic tools to effectively assess the status of bottom-dwelling marine species, using DNA barcodes to create DNA libraries and creating 'DNA passports' for species that are 'canaries in the coal mine' for marine ecosystems.
- **PARTRIDGE** will bring back farmland birds and insects, raising biodiversity in its pilots by 30%. The project takes a bottom-up approach, where farmers and hunters collaborate with NGOs and public agencies to identify and test solutions.
- **PROWAD LINK** creates links between business and protected areas, supporting the local society to profit from nature conservation in the Wadden Sea.

FOSTERING THE CIRCULAR ECONOMY



In line with the EU Circular Economy Strategy and other European policies, the core focus of some North Sea Region projects is to reduce waste, increase recycling and foster a lifecycle approach to products and services.

- **BIOCAS** takes recycling of biomass to the next level via a cascading approach where more valuable parts of the biomass are first extracted. Among its first outputs is an award-winning, bio-based bridge.
- **DecomTools** develops eco-innovative approaches to decommissioning off-shore wind turbines, reducing the cost by 20% and the CO₂ footprint by 25%.
- **Soilcom** explores tailor-made compost to improve soils in the North Sea Region, turning waste into resources and reducing pesticide use and carbon emissions.
- **ProCirc** addresses procurement as a strategic instrument to foster a circular economy. It will run 30+ circular procurement pilots with a value of €40M. Each pilot aims to reduce 20-25% raw materials, waste and CO₂ emissions.