ADDRESSING CHANGE IN THE NORTH SEA REGION

ANNUAL REPORT SUMMARY 2019
Changing the game

The Interreg North Sea Region Programme supports transnational teams of innovators to make the region a smarter, greener and more liveable place for its 60 million citizens.

North Sea Region projects respond to changes like global warming, demographic shifts, and the rapid advancement of technology. They seek to create durable impacts by designing smart solutions that contribute to a resilient economy and provide added benefits.

By pilot testing and demonstrating solutions in real-life settings, they act as test beds for new ideas and often inspire changes in policy frameworks.
Five new projects were approved in December 2019, at which point nearly all funds for the VB programming period had been allocated. The main focus of the Programme is now on supporting projects to implement their activities and capitalise on their project achievements, outputs and results.
For each priority, the Joint Secretariat mapped the locations of beneficiaries and the links between them in terms of project partnerships.

The resulting maps showed that:

• North Sea Region projects foster extensive cooperation between organisations across the entire region.

• Each priority has different geographic strongholds, reflecting the priorities and strengths of the participating countries.

• In addition to large cities, many smaller cities are involved. This confirms the Programme’s role in fostering cohesion in the North Sea Region.

Priority 1: Links between beneficiaries
The size of each dot reflects the number of beneficiaries in each location as of November 2019.
BIOCAS bridge awarded

In 2019, the Ritsumasyl Biobridge designed by the BIOCAS project won the Dutch Circular Award and the Lighthouse Award. It was also nominated for the Infratech Innovation Award and the Dutch Building Prize.

This circular bicycle bridge is made of 100 % biobased composite material including flax and resin.

SalFar: A royal visit

Princess Victoria of Sweden visited the SalFar project to learn about saline farming. Due to climate change and sea level rise, the ability to grow crops on saline soil is becoming important in coastal areas.

High points in 2019

European spotlight

SHARE-North and PARTRIDGE were both featured in the PANORAMA magazine. PARTRIDGE was also highlighted in a publication marking 40 years of the EU Birds Directive.
How to build a resilient future
How can the North Sea Region accelerate the energy transition and build its climate resilience? The Climate Conference showcased a wealth of innovative ideas and brought together regional experts, policymakers, and youth representatives in discussions.

A video to start you up
Inno-Quarter won first place in the North Sea Video Contest for their lively video on startups using festivals to test products and services.
2imprezs wins the Slam!
Two young “agents of change” won the hearts of the audience at the Interreg Project Slam 2019! This project involves more than 20,000 school kids in slashing 30% of their schools’ energy use.

It’s all about cooperation
The Joint Secretariat teamed up with other Interreg programmes to present and discuss about transnational cooperation.
Activities & outcomes

All North Sea Region projects fall within one of the Programme's four priority themes. In the following pages, you can see milestones reached and explore three projects in each priority theme.

Priority 1
Thinking growth

Priority 2
Eco-innovation

Priority 3
Sustainable North Sea Region

Priority 4
Green transport & mobility
Forging ahead together

Partners form strong networks within selected niches. Together, they build capacities and smart solutions that bring industry and the public sector into the future.
Priority 1

Milestones reached

- 1812 enterprises cooperating in knowledge partnerships
- 100 business support measures launched
- 91 innovation support measures for public service delivery
PERISCOPE
Forging innovation partnerships for blue growth in the North Sea Region

THE CHALLENGE
PERISCOPE seeks to establish a permanent innovation ecosystem in the North Sea Region. The aim is to foster transnational innovation partnerships for sustainable business development and exploit emerging blue market opportunities.

HIGHLIGHTS
• Launched the Ocean Digital Innovation hub Network (ODIN), which will provide scalable and replicable market-driven support to the development of new industrial DigiTech value chains with applications in the blue economy.
• Explored the emerging business opportunities for decarbonising the North Sea through offshore vessel charging stations, digitalisation, smart inspection and maintenance.
• Conducted a survey in the North Sea region’s blue economy in order to better understand the climate for business innovation.
• In its new national Ocean Strategy, the Norwegian government highlighted PERISCOPE as an example of best practice.

15 partners
- Denmark, Germany, Norway, Sweden, the Netherlands, the UK

€4.1 million total budget | €1.5 million ERDF | €550.000 Norwegian funds

https://northsearegion.eu/periscope
THE CHALLENGE

Relatives, neighbours, friends and volunteers: People who care for others are putting in a lot of hard work, yet this is rarely acknowledged. Due to societal trends, pressures on these caregivers are mounting. In For Care supports informal carers and spotlights their role in society.

HIGHLIGHTS

- Launched the FRIDA app in several Norwegian municipalities, facilitating communication with volunteers.
- Developed VR simulations as a learning tool for volunteers.
- Organised fun activities and free gym subscriptions for informal carers in Hoogeveen, the Netherlands.
- In Aalst, Belgium, a traveling café for informal carers was launched, enabling them to meet and chat. Turnhout trialled ways to foster community, such as “neighbourhood sports”.
- 74 organisations adopted solutions developed by the project.
- Achieved 10 policy changes to better meet the needs of informal carers across the North Sea Region.

Pilot gardening

In one of the pilots, residents from four neighbourhoods come together in one area to do joint gardening and get to know each other.

Getting to know your neighbour

In Turnhout, Belgium, photos and short personal stories of 50 local citizens were shared on social media and displayed in shop windows. This enabled people in the neighbourhood to start new conversations.

16 partners
Belgium, Denmark, Norway, Sweden, the Netherlands, the UK
€4.5 million total budget | €1.5 million ERDF | €680,000 Norwegian funds
https://northsearegion.eu/in-for-care
The networking tool is really good at identifying potential partners for us. And the crucial thing is that we meet the relevant partners in real life.

- Sales manager M. Winther Møller, BIC Electric
Resource efficiency, circular concepts and low-carbon products: Partnerships help enterprises and local communities to join the green economy value chains and bring down carbon emissions.
Priority 2

Milestones reached

156 green services, processes & products piloted
A smart factory blueprint for cost-effective energy renovation of buildings

THE CHALLENGE

Energy efficiency of buildings is key to meeting the EU climate goals - a staggering 40% of European carbon emissions come from buildings.

In the North Sea Region, 22 million houses built between 1950 and 1985 are causing 79 Mtonnes CO₂ emissions per year. However, energy renovation is currently too expensive to be rolled out for the majority of the relevant buildings.

INDU-ZERO is taking a bold approach to tackling this challenge: The project is preparing a blueprint for smart factories delivering net zero energy renovation packages at industrial scale and at half the cost. The goal is to quickly provide sufficient capacity to realise affordable energy renovation at scale.

HIGHLIGHTS

- Developed concepts for the production of walls, roofs, logistics, and factory industrial processes. The solution includes the ability to choose customised cladding.
- Selected three renovation packages covering terraced houses, detached houses, and apartment buildings.
- The Dutch housing association Domijn is set to trial and showcase the first renovation packages in 2020, followed by similar trials in the partner countries.
- INDU-ZERO met great interest at European conferences including Housing Europe and Sustainable Built Environment (SBE). They joined a meeting of the EU Thematic Group 1 on Construction in November 2019.
- In 2019, the project website had 15,000 page visits, indicating a high level of stakeholder interest.
Carbon Farming
Agricultural soils can store huge amounts of carbon. The challenge is to make it profitable.

THE CHALLENGE
Healthy soils can hold vast amounts of carbon. Special farming techniques, such as no tillage, support carbon sequestration (CS). However, farmers need incentives to use them.

Carbon Farming validates viable business cases for CS and explores options for third parties to compensate their CO₂ footprint. The pilots are expected to improve soils and lock 10,000 tonnes of CO₂ in farmland soil.

HIGHLIGHTS
• Over 500 farmers took part in a survey to gauge their knowledge.
• Produced a fact sheet explaining four business models for farmers using CS techniques.
• Presented the project at numerous events. At the world’s leading trade fair for agricultural technology, AGRITECHNICA, the project hosted a highly popular conference attracting 150+ participants eager to learn about climate-friendly farming.

It is good to see that our fertile soil in Zeeland also provides a breeding ground for innovation and climate solutions - Jo-Annes Bat, board member province of Zeeland and Joris Baecke, farmer and board member ZLTO
COBEN
Unlocking the power of civic energy is key to accelerating the green energy transition.

THE CHALLENGE
Local communities and businesses can become the key drivers of energy transition if they choose to engage in and benefit from locally produced green power. COBEN has developed the Civic Energy Cycle to build community-driven energy supply chains.

HIGHLIGHTS
• Inspired the Regional Energy Strategy of the province of Drenthe and community-led Local Energy Plans in Scotland.
• Dutch Emmen Municipality adopted a spatial planning directive stipulating 20% citizens’ ownership of new solar installations.
• The COBEN business models generated interest with third parties beyond the pilot initiatives.
• In Landkreis Osnabrück, Germany, three new district heating networks were built enabling SMEs to market surplus heat. The Eeklo Heat Network in East Flanders is projected.
• 429 home energy renovation schemes adopted in Ringkjøbing-Skjern, Denmark. Savings are projected at 9.4 GWH/year.
• Helped 58 communities reduce CO₂ emissions. In Østfold alone, 16.4 million kWh/year of fossil energy has been replaced.

3,000 STAKEHOLDERS
By demonstrating workable and flexible solutions, COBEN has built a strong network of over 3,000 stakeholders engaged in civic energy.

11 partners
Belgium, Denmark, Germany, the Netherlands, Norway, Sweden, the UK
€7.5 million total budget | €3.5million ERDF | €226,000 Norwegian funds
https://northsearegion.eu/coben
PRIORITY 3: SUSTAINABLE NSR

a liveable place for all

Pollution, climate change, biodiversity decline: Innovators are involving citizens to tackle environmental risk and enhance liveability.
Priority 3

Milestones reached

24 Climate adaptation solutions demonstrated

48 Sites managed using new solutions
THE CHALLENGE

With its large fish stocks, energy resources, and blooming tourism and trade, the North Sea holds a vast potential for blue growth.

However, using space for one purpose may preclude another. In addition, the North Sea is home to a wealth of marine wildlife which is under pressure from human activity. Reconciling all the interests is a complex puzzle that requires thorough analyses, smart planning and cooperation between the countries sharing the North Sea.

NorthSEE brings together governmental and regional agencies, academic institutions, and other key stakeholders of maritime spatial planning (MSP) in the North Sea.

The aim is to jointly explore and align on sustainable future pathways concerning three core topics: Shipping, energy and the environment.

HIGHLIGHTS

- Published almost 20 reports providing analysis and recommendations on transnational spatial planning, shipping trends and routes, energy policy trends and infrastructure, connectivity of marine protected areas, and more.
- Topics explored in 2019 include e.g. a comparative analysis of spatial planning designations in the North Sea; offshore grids and electricity interconnectors linked to the growth in offshore windpower; and the role of regions in MSP.
- Organised the Connecting Seas Conference in Hamburg together with the Baltic Sea Region project BaltLines, attended by 250 delegates.
- Established collaboration with other EU-funded projects, e.g. Baltic LIINES (on MSP in the Baltic Sea) and SEANSE (on Strategic Environmental Assessments in the North Sea).
**THE CHALLENGE**

The effects of floods increase every year in the North Sea Region, threatening multiple core functions of society. There will never be enough resources to protect every single citizen from flooding, but if we combine resilience measures smartly, we can minimise impact. No single organisation or country has the knowledge to develop sustainable solutions for these challenges alone.

**HIGHLIGHTS**

- Applied the Multilayer Safety approach in 15 pilot sites across the North Sea Region.
- Raised awareness of decision makers and authorities about the need to minimise the effects of floods.
- Developed policy recommendations to implement the Multilayer Safety approach.
- Presented policy recommendations to the EU Floods Directive Working Group.
- Produced tools for community resilience self-assessment.
- Produced risk and hazard maps for emergency planning.
- Produced education packages for schools and stakeholders.

17 partners
Denmark, Belgium, Germany, the Netherlands, the UK
€6.9 million total budget | €3.4 million ERDF
https://northsearegion.eu/frames
Sullied Sediments
On guard: Watching out for EU Watchlist chemicals in our waterways

THE CHALLENGE
Emerging pollutants found in waterways may threaten the health of people and ecosystems. Yet little is known about them. The project develops tools to assess, treat and prevent contamination of aquatic sediments, while volunteers are trained to gather data.

HIGHLIGHTS
• Completed extensive sampling across the North Sea Region.
• Introduced a ‘dipstick’ for volunteers to measure phosphate levels in fresh water, and the RiverDip app transferring the data to an online map.
• Launched tools helping water managers to better understand the effects of pollution and select the best techniques for treating polluted sediments.
• The BBC featured the project’s volunteer sampling campaign.
• The project’s ground-breaking use of low-cost pollen and spores technology to clean contaminated water was presented at the American Chemical Society and featured in Forbes Magazine.

13 partners
Belgium, Germany, the Netherlands, the UK
€4.0 million total budget | €2.0million ERDF
https://northsearegion.eu/sullied-sediments
Transport stands for roughly 25% of carbon emissions in Europe. How fast can we move towards net zero carbon? Experts and professionals from across the region are jointly putting ideas to the test.

PRIORITY 4: GREEN MOBILITY
Priority 4

Milestones reached

95 New/improved transport solutions
THE CHALLENGE

Transport accounts for around 25% of Europe’s greenhouse gas emissions. More than 90% of all transport is oil-based. Switching to clean transport fuels is therefore key to meeting the goals of the European Green Deal.

Green hydrogen - produced from renewable energy sources like wind or solar power - is a promising alternative. However, expanding the green hydrogen sector requires technological development, supply side skills and storage methods.

HyTrEc2 explores how to produce, store and distribute renewable energy based hydrogen for fuelling innovative hydrogen vehicles, including vans and waste trucks. By offering training for businesses interested in entering the hydrogen supply chain, the project is stimulating the hydrogen economy.

HIGHLIGHTS

- The project’s work on green hydrogen generated interest among national energy suppliers in Scotland, resulting in a spin-off project with the UK government.
- Carried out simulations of an innovative forklift.
- Deployed and trialed several hydrogen cars and vans in different parts of the region. Groningen’s HyTrEc2 electric hydrogen waste trucks have already been replicated for another Interreg project.
- Initiated hydrogen training for supply chain companies and car mechanics.
- Based on their work within HyTrEc2, Aberdeen City Council won the 2019 Scottish green energy awards and was also selected as Local Authority Fleet Operator of the Year.
- HyTrEc2 partners Groningen and Drenthe entered into partnership with the EU identifying Northern Netherlands as a Hydrogen Valley to be delivered by 2025.
THE CHALLENGE
Urban residents need many goods delivered from outside the city. But diesel trucks cause noise, congestion, traffic danger, air pollution, and - not least - carbon emissions. To tackle this problem, SURFLOGH is setting up smart hubs, from where goods are brought into the city via low-carbon transport methods.

HIGHLIGHTS
- Introduced the Good Goods concept in Borås, Sweden. This involves a terminal coupled with an electric delivery van.
- In Mechelen, Belgium, a locker system was installed for 24/7 pickup in response to growing e-commerce.
- Conducted research for business modelling applicable to sustainable logistics.
- Piloted e-cargo bike delivery concepts in Edinburgh, Scotland.
- Organised hackathons in all partner cities where students developed innovative ideas for green city logistics.

6 partners
Belgium, Sweden, the Netherlands, the UK
€2.7 million total budget | €1.35 million ERDF
https://northsearegion.eu/surflogh
#IWTS 2.0
Making the green choice easier: Identifying and overcoming barriers to river transport of goods

## THE CHALLENGE
Transport of goods happens mainly via trucks travelling highways and roads, a transport mode with a heavy carbon footprint. Meanwhile, smaller inland waterways remain under-utilised although transport by barge is a far more climate-friendly option.

Challenges to realise a major shift in freight shipping from roads to waterways include a lack of know-how in the logistics chain, specific problems of transshipment (moving the goods from one mode to another), and smaller waterways lacking formal classification that would allow standard vessels to use them.

#IWTS 2.0 promotes a modal shift of freight transport from roads to inland waterways by building capacities and exploring solutions to the main technical and administrative issues.

### HIGHLIGHTS
- Published the #IWTS Transshipment Manual providing guidance on switching from other transport modes to inland waterways. The manual was received with great interest in the logistics community.
- Thanks to targeted stakeholder meetings within the port of Drachten area, freight owners discovered inland waterway transport as an opportunity leading to a modal shift from road to water.
- Euro Class II standard barges cannot sail on the Aire & Calder, Bullholme Lock sizes prevents this. A feasibility design study for the extension of Bullholme Lock is in progress; the lock was drained, and laser, ground, chamber surveys of the lock are done.
- Curriculums for students are developed and piloted in vocational training at operator and management level, especially for navigating on smaller waterways.
- The Full Mission Simulator in Harlingen is used to simulate potential modal shifts in the city of Leeuwarden to identify opportunities and hindrances.

10 partners
Belgium, Germany, Sweden, the Netherlands, the UK
€3.4 million total budget | €1.7 million ERDF
https://northsearegion.eu/iwts20

Modal shift is a mind shift
- Dr Lars Stemmler, bremenports
North Sea Region projects

**PRIORITY 1**
BLING | CORA | CC COM³ | CUPIDO EXSKALLERATE | FBD Growin 4.0 | In For Care | Inn2POWER | In2I Inno-Quarter | Lean Landing | Northern Connections | NorthTick | Like! PERISCOPE | PROWAD LINK | REFRA ME RIGHT | SCORE SHINE

**PRIORITY 2**
2imprezs | ACCESS BIOCAS | Carbon Farming | Circ-NSR | COBEN DecomTools | DUAL Ports | EMPOWER 2.0 | INDU-ZERO | NON STOP | OESA | ProCirc Salfar | SCALE-UP SOILCOM SMARTGREEN Stronghouse | WASP

**PRIORITY 3**
BEESPOKE | BEGIN BWN | C5a CANAPE | CATCH FAIR | FRAMES GEANS | IMMERSE Jomopans | NorthSEE NSW | NuReDrain PARTRIDGE | Sullied Sediments | TOPSOIL WaterCOG

**PRIORITY 4**
#IWTS 2.0 | ART-Forum | AVATAR BITS | G-PaTRA HyTrEc2 | MOVE North Sea CONNECT PAV | SHARE-North SURFLOGH SEEV4City | Stronger Combined | ZEM Ports NS

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