

Interreg
North Sea



Co-funded by
the European Union

Strong results, new beginnings

2022

Interreg North Sea VB 2014-2020
Annual Report Summary





Together through crisis

On 24 February 2022, Europe's outlook shifted overnight with the Russian invasion of Ukraine. Beyond the deeply saddening disruption of peace, human rights and unity, the war has had severe impacts around the world, sending energy prices skyrocketing and exacerbating the global food crisis.

Meanwhile, as the Covid-19 pandemic retreated, the biodiversity and climate crises continued. In Europe, the summer of 2022 turned out to be the warmest on record.

In times of great uncertainty, cooperation across borders brings people together to build resilience. Throughout 2022, North Sea partnerships delivered strong solutions within, among others, green energy transitions, sustainable food production, and climate adaptation.

Also, the new North Sea Programme was endorsed, enabling us to continue uniting people across borders to make the North Sea Region a better place. This seems more important than ever.

Read on to catch a glimpse of all the highlights from 2022!



PROGRAMME HIGHLIGHTS

North Sea Conference 2022

This year saw the first North Sea Conference in three years as the Covid-19 pandemic finally loosened its grip. The event gathered an enthusiastic crowd happy to meet each other in beautiful Bruges, Flanders. The three-day event offered plenty of examples of project impacts, project exhibitions, and excellent speakers providing new and exciting perspectives on the future of the North Sea Region.

Relive the event in images and videos: [Throwback to the conference](#)



The North Sea Programme turns 25

The year 2022 marked our programme's 25-year anniversary. We are proud to have supported North Sea movers and shakers to realise their game-changing ideas during all this time. We are blown away by all the achievements reached by our projects so far.

And with the official endorsement of the new North Sea Programme, we are happy to set sail towards many more Interreg North Sea adventures, supporting transnational cooperation to make a difference to the North Sea Region's 60 million citizens in the years to come!

[Read the story celebrating our first 25 years](#)



At the North Sea Conference opening dinner in Bruges, the Flemish hosts marked the anniversary with this gorgeous cake.



Head of Secretariat Christian Byrith speaks at the opening dinner.

Showcasing project impacts

As our programme is nearing its final stages, we are taking stock of what our funding has achieved. In 2022, we made a special effort to disseminate project solutions and successes.

Scoop the impact

During this full-day event, North Sea projects delivered creative and entertaining performances presenting their impacts.

Using the theme of Atlantis, the projects invited the audience to join them on short 'dives' to find their amazing treasure chest of achievements.



© 8213Erika via Canva.com

Achievements online

We launched a new section on our website, presenting project highlights and results within 12 different themes.

[Explore project impacts](#)

Let's North Sea!

Video stories from around the North Sea Region

In 2022, we launched a video project to showcase the fantastic work of some of our projects. TV and radio journalist Shane Woodford travelled around the region to capture and tell visual stories from seven selected Interreg North Sea funded projects.

The first four videos were published in 2022, with the rest following in 2023. We are super proud of these videos and the featured projects. Enjoy watching!



1 AVATAR

Green urban freight transport

[Watch the video](#)



2 INN2POWER

Innovation in offshore wind supply chains

[Watch the video](#)



3 BITS

Bikes in Intelligent Transport Systems

[Watch the video](#)



4 CANAPE

Restoring peatland ecosystems

[Watch the video](#)

Snapshots: Coping with climate change

A few examples of why our funding matters in a world marked by global warming. Learn more on our website pages showcasing project solutions within [climate adaptation](#) and [energy efficiency](#).



SCALE-UP unlocked at least €13.6 million of private and public funds for sustainable innovations. The pilots cut CO₂ emissions by more than 50% in 42 locations.

BEGIN, CATCH and **FRAMES** published tools helping cities and regions adapt to climate impacts. BEGIN's approach alone is included in plans worth over €1 billion.



INDU-ZERO's project leader, Ulla-Britt Krämer, was named one of 10 female leaders in construction, based on her successful work to fast-track energy renovations in the scope of INDU-ZERO.



FEATURED PROJECTS

PRIORITY 1

Thinking GROWTH



NorthTick

Taking stock of tick-borne disease in a warming world



Primarily due to climate change, ticks are on the rise in Northern Europe. And so are tick-borne diseases such as Lyme borreliosis (or Borrelia infection), Tick-Borne Encephalitis (TBE), and other less well known but sometimes serious illnesses.

NorthTick engages practitioners, experts, and citizens across the North Sea Region to raise awareness and deal with the emerging health issue patterns. One citizen science project involved 40,000 scouts!



By the end of 2022, NorthTick had identified a new tick-borne disease and produced diagnostic tools and treatment options for two lesser-known tick-borne diseases. And that is just a sample of this project's achievements!



Ticks use mammals such as roe deer, dogs, and humans as involuntary blood hosts in their complicated life cycle. This enables the ticks to transmit a range of diseases.

TICK MYTH-BUSTING

Did you know that...

- Ticks are found in urban areas, too?
- Most tick-bites happen in gardens?
- You may have Lyme disease without the classic circular rash around the bite?



BLING

Cool kids on the blockchain: Public services

BLING – Blockchain in Government – helps demystify the use of blockchain in the public sector, leveraging blockchain technologies for the benefit of citizens, SMEs, and communities.

In January 2022, BLING got behind the launch of the largest ever Dutch governmental blockchain project, a privacy-friendly app called the Energy Wallet (EnergieKnip). The City Council of Emmen wanted to stimulate the energy efficiency of private homes by offering a grant of €50 for buying energy-saving devices. The main focus was on low-income areas. The app was an instant success as citizens claimed €150,000 in just 13 days!

This led the municipality to double the grant. By April, over 8,500 citizens had engaged. The app has received plenty of interest from around the world and work is now ongoing to extend its use to other areas.

The Energy Wallet is only one of many highlights! From inspiring use cases and demos to hackathons and conferences, BLING put a strong spotlight on blockchain in the public sector.

BLING tested its Self-Sovereign Attendance App during the North Sea Conference in Bruges, with conference-goers as willing participants.





PROWAD LINK

World-class nature as a basis for sustainable income

Under the slogan "Protect and Prosper", PROWAD LINK unlocks the potential of natural heritage as a driver for sustainable jobs and nature-friendly business, using branding as a pivotal tool.

For the Wadden Sea World Heritage site, the project developed an online branding toolbox. A good practice guidebook for SMEs from Geirangerfjord, The Wash & North Norfolk coast, and the Wadden Sea includes soap and beer made from local wild plants; green transport for tourists; and lodges offering conservation weekends.

The project also successfully launched the North Sea Sustainable Innovation Challenge 2022 on sustainable entrepreneurship contributing to a happier and healthier North Sea Region.

Over 800 organisations engaged in the project's co-creation activities. This approach has inspired activities set to continue beyond the project, such as the Danish School Camp network, the Dark Sky Initiative, the Fjord Co-work platform, and new sailboat trip offers in Norfolk.

A wide-angle landscape photograph of the Geiranger Fjord in Norway. The image shows steep, green mountainsides on either side of a narrow, dark blue fjord. The sky is bright blue with scattered white clouds. The water of the fjord is calm, reflecting the surrounding greenery and the sky.

One of the project pilots was the World Heritage Site Geiranger Fjord in Norway.

PRIORITY 2

ECO INNOVATION



SMARTGREEN

Signed, sealed, delivered: the zero-emission greenhouse

Amid soaring energy prices, SMARTGREEN works to make the greenhouse industry more energy efficient.

A SMARTGREEN pilot in Norway developed a greenhouse concept using 50% less energy for heating and reducing carbon emissions to near zero and using very little fresh water. Also, the yield is 40% higher. No wonder that the concept has caught the attention of growers and researchers around the world.

The greenhouse is designed as a closed system where a mineral (zeolite) captures and recycles CO₂. Special lighting, forced ventilation, and solar power are also part of the set-up.

A Norwegian grower now plans to scale the pilot up 100 times to commercial size.



The trials were done with tomatoes but the concept is expected to work with most vegetables.

Photo: Erling Fløistad / NIBIO



DecomTools

When and how should offshore wind farms retire?

As offshore wind power becomes mainstream, the first generation of marine wind farms is already ageing, creating new questions and dilemmas.

When is it better to demolish or prolong the life of the turbines? And what is the most responsible way to do so?

To help stakeholders, DecomTools has produced a decision support system, 15 simulation or Virtual Reality models, a blade recycling test, and three e-courses.

The project pioneered new solutions and 8 scientific articles have been published based on their work.

DecomTools garnered much interest. The project has inspired at least four spin-off projects.



For offshore wind to be truly green, the wind farms' entire life cycle must be managed sustainably. The need to deal with old offshore wind farms can give rise to a new diversified industry, creating new jobs in Europe.

Photo: Colourbox.com/#103629



ProCirc

Circular procurement proves its worth

From furniture to workwear, vending machines, and e-vehicle charging stations: Public and private procurers are driving markets and influencing supply chains.



ProCirc promotes circular criteria in procurements in its 32 pilots. And they work! Many of the trials have seen large reductions of CO₂ emissions, waste, and virgin material compared to standard procurements. In 2022, two pilots in Denmark and the Netherlands won procurement awards.

The project has produced buyer tools such as a circular procurement guidebook among others. ProCirc also works with the supply chain and creates visibility for the suppliers. For example, the Potterij pilot created a virtual tour showcasing 19 suppliers of circular construction materials.

ProCirc set up 18 Communities of Practice in six countries, allowing procurers to collaborate with suppliers.

ProCirc's work is being taken up. In Norway, 57% of furniture procurements, with a value of €100 million, used at least one of the project's Minimum Circular Requirements in 2022.

PRIORITY 3

Sustainable

NSR



North Sea Wrecks

Dealing with the toxic legacy of war

The North Sea is littered with hundreds of ship and aircraft wrecks, over a million ton of munitions, and chemical warfare agents left by two world wars. Leaking explosives and toxic substances may endanger marine wildlife as well as human activities.

North Sea Wrecks mapped wartime wrecks and objects on the North Sea floor and developed a software tool to assess the risks. Surveying 15 wrecks, the team discovered significant traces of explosives in water, sediment, and organisms around leaking munitions.

The project's work enables public authorities to prioritise wrecks with potential hazardous content.

North Sea Wrecks has inspired the work of key governance bodies such as the OSPAR Commission.

The project also put war residues in the North Sea firmly on the public agenda. During 2022, more than 8,000 people visited its travelling exhibition in five North Sea Region countries.

An article published in *Frontiers in Marine Science* made headlines worldwide, including in leading media such as the *New York Times* and *New Scientist*. It presented the project's findings that substances leaking from the WWII John Mahn shipwreck still impact the marine environment.



Photo: Cornelia Riml



CANAPE

Restoring the power of peatlands

Peatlands cover only 3% of the planet, yet they store more carbon than all the world's forests. They also purify water, offer wildlife habitat, and provide resilience to droughts and floods.

Many peatlands have been drained for agriculture, releasing the stored carbon. CANAPE worked to restore such peatlands using innovative methods. In the pilot areas, water storage capacity was restored by over 190,000 m³ per year, reducing the risk of floods and capturing 501 tonnes of CO₂ per year.

CANAPE also investigated paludiculture - sustainable peatland farming - making products from native plants. They found this feasible but requiring some form of subsidy. Using biomass residues from conservation work led to cost savings of €340 per hectare. A trial producing charcoal from woody debris turned into a successful commercial product.

The work of CANAPE is being taken forward by at least 10 new projects and initiatives!



CANAPE worked with the local communities and engaged 600 people in citizen science activities.



NuReDrain

Innovative filters keep waterways clean

Farmland fertilisers like nitrogen and phosphorus are often washed into rivers and lakes, polluting the aquatic environment.

In response to this, NuReDrain has developed new filter systems and shown that they remove on average 60-80% of these nutrients from agricultural waters. The project also investigates how to recycle the filter material when it becomes less efficient and must be replaced.

The technologies covered range from DIY filters for greenhouses to sophisticated systems removing nitrogen and phosphorous from so-called nutrient hotspots.



PRIORITY 4

Green TRANSPORT



AVATAR

The (water)way to go: Zero-emission, autonomous vessels

Urban canals and waterways have come into focus as an eco-friendly alternative in city freight logistics. AVATAR takes this idea further by working with highly automated vessels running on green energy.

The project produced prototypes, use cases, and business cases around this concept. In 2022, it was retrofitting one vessel and building another to provide live demos. AVATAR also produced a market review to uncover existing inland waterway transport systems and their economic viability.

The AVATAR team promoted their work in a series of events in 2022. The project was also the first to star in the seven-part video series showcasing North Sea projects and their work across the region.

Spotlight on energy

In the AVATAR energy use case, city freight vessels charge the batteries overnight using hydrogen power. Heat released during the charging gets stored in a buffer tank used in central heating.





Stronger Combined

Cooperation is key to combined mobility success



Stronger Combined supports green and better mobility in the countryside. Combining different modes of green transport makes it possible to provide convenient and sustainable transport options to rural residents.

Open school buses, shared electric bikes, carpooling, demand-responsive transport options, e-cargo bike rentals, multi-modal planning apps... There are many ways to combine transport modes in rural areas.

Stronger Combined has tested them all in their pilots. The recipe for success? Listening to the citizens and tailoring mobility options to their needs. The project did lots of consultations, citizen meetings, and surveys to get it just right.

The project also focused on making data accessible for enhanced public-private collaboration fostering combined mobility and Mobility as a Service.

Many initiatives launched by Stronger Combined will continue after project end. Easy access to green mobility in rural areas has come one step closer to reality!



ART-Forum

Navigating automated road transport

Automated transport is fast becoming a reality that cities and regions need to face. The ART-Forum project brought planners, policymakers, experts and citizens together to reap the benefits and avoid the pitfalls, ensuring that automated transport will be smart, safe, and green.

The project's pilots and trials shed light on the issue. For example, the first self-driving bus in Denmark; test runs for an automated bus depot in the Netherlands; and the first autonomous pilot on a public road in Flanders, a shuttle transporting both goods and passengers.

A feasibility study found it is possible to introduce highly automated transport in the bustling City of Bremen. Meanwhile, the City of Bergen put in place new regulations for micromobility that improve the safety of passengers in small electric vehicles.

ART-Forum hosted events building the capacity of regional authorities to futureproof their transport strategies.



AT A GLANCE

Interreg North Sea project achievements by end-2022



*The figures shown above reflect achievements made by VB (2014-2020) projects

Interreg North Sea Region Programme VB (2014-2020)

PROJECTS

Priority 1: Thinking growth

BLING	I2I	NorthTick
COM3	In For Care	PERISCOPE
CORA	Inn2POWER	PROWAD LINK
Create Converge	Inno-Quarter	REFRAME
CUPIDO	Lean Landing	RIGHT
EXSKALLERATE	Like!	SCORE
FBD	Northern	SHINE
GrowIn4.0	Connections	

Priority 2: Eco-innovation

2IMPRESZ	EMPOWER 2.0	SOILCOM
ACCESS	INDU-ZERO	Stronghouse
BIOCAS	NON STOP	WASP
Carbon Farming	OESA	
Circ-NSR	ProCirc	
COBEN	SalFar	
DecomTools	SCALE-UP	
Dual PORTS	SMARTGREEN	

Priority 3: Sustainable NSR

BEESPOKE	GEANS	TOPSOIL
BEGIN	IMMERSE	WaterCoG
BwN	Jomopans	
C5A	NorthSEE	
CANAPE	NSW	
CATCH	NuReDrain	
FAIR	PARTRIDGE	
FRAMES	Sullied Sediments	

Priority 4: Green transport

IWTS 2.0	PAV
ART-Forum	SEEV4-City
AVATAR	SHARE-North
BITS	SURFLOGH
G-PaTRA	ZEM Ports NS
HyTrEc2	North Sea CONNECT
MOVE	Stronger Combined

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