

## Targeting the reduction of plastic outflow into the North Sea [FA] (TREASURE)

### A.1 Identification

Call

Call 2C (FA)

#### A.1.1 Project title

Targeting the reduction of plastic outflow into the North Sea [FA]

#### A.1.2 Project acronym

TREASURE

#### A.1.3 Lead Partner

Universität Oldenburg

#### A.1.4 Start Date

01/05/2023

#### A.1.4 End Date

30/04/2026

#### A.1.4 Project duration

36 months

#### A.1.5. Priority

Priority 3. A climate resilient North Sea Region

#### A.1.6. Priority specific objective

3.2 Enhancing protection and preservation of nature, biodiversity and green infrastructure, including in urban areas, and reducing all forms of pollution

### A.2 Summary

#### A.2 Project Summary

A large share of marine litter reaches the sea via inland waterways, posing a serious threat to the environment and human health. Recognising the urgency of this challenge, the North Sea Commission Marine Resources Group initiated this transnational project to reduce plastic pollution in waterways.

Our consortium involves regional authorities, water management bodies, knowledge institutes, companies, and NGOs from 5 countries with the long-term **goal** to reduce the outflow of macroplastic waste from inland waters into the North Sea.

The innovation of this project lies in the integrated cross-sectoral approach, which is needed to successfully identify, prevent, and remove litter from inland waterways. We address **four interrelated thematic pillars (TP)**:

*Governance & policy:* Improve multi-level governance for effective cooperation by actors along water systems and improve policies at different levels for waste prevention.

*Data collection & analysis:* Use surveying and observation methods, e.g. citizen science, drone technology, to expand knowledge about composition, distribution and sources of waste, and harmonise methods.

*Prevention & behaviour change:* Educate and train target groups in industry, government and the public on the need and opportunity to reduce plastic spillage and implement interventions for litter prevention (e.g. recreational and scientific waste collection).




*Removal of plastic waste:* Apply different techniques for the collection and removal of plastic debris from rivers and harbours to get insight in their (cost) effectiveness.

The core of the project consists of **Living Labs** at different river-sea interfaces e.g. the Frisian Peninsula (DE), Dutch deltas (NL), Nieuwpoort Yser estuary (BE), French ports and harbours (FR), and Westcoast watersheds (DK).

Each region implements a combination of policy, data collection, awareness, and removal activities to develop robust, practice-based solutions to reduce riverine waste that can be used across the North Sea region.

## B.1 Partners

### B.1.1 Project partners

	Identity / Questions	Address	Budget
 1	<p><b>Carl von Ossietzky Universität Oldenburg</b> No</p> <p>Abrv.: UOL</p> <p>Name (EN): University of Oldenburg</p> <p><i>Lead Partner</i></p> <p>VAT number: DE 811184499</p> <p>Entitled for VAT recovery: No</p> <p>Type: Higher education and research organisations</p> <p>Legal status: Public</p> <p>State aid: Not State Aid Relevant</p> <p>Letter of intent: </p> <p>Self declaration:</p>	<p>Address: Ammerländer Heerstraße 114-118, 26129 Oldenburg, Germany ( NUTS: DE943 )</p> <p>Website: <a href="https://uol.de/">https://uol.de/</a></p> <p>Contacts: Antonia Krebs</p>	924.500 €
	<p>Which of the organisation's thematic competences and experiences are relevant for the project?</p> <p>Several working groups/departments of the University of Oldenburg (UOL) work on different issues dealing with nature conservation measures, biodiversity, sustainable economics, and landscape ecology and planning. Main experiences and competences cover the fields of research, teaching and the raising environmental awareness through citizen science projects, workshops, social media, public talks etc. The three UOL institutes/working groups involved (<a href="#">COAST</a>, <a href="#">Institute of the Chemistry and Biology of the Marine Environment</a> <a href="#">Geoecology Working Group</a>, <a href="#">Working Group Applied Geography and Environmental Planning</a>) were part of a 4 years research project dealing with sources, pathways and abatement strategies of macroplastics in the southern North Sea, covering fields of monitoring, citizen science and awareness rising which play a major role in the pillars of the TREASURE project. Methods, results and publications of the Macroplastics project are presented in the web (<a href="http://www.macroplastics.de">www.macroplastics.de</a>).</p> <p>What is the role (contribution and main activities) of your organisation in the project?</p> <p>With profound experience in leading Interreg NSR projects, including flagship projects, e.g. NorthSEE and COBEN, the University of Oldenburg will take the lead of the applied project covering all parts of administration tasks, organizing shared activities of the planned five living labs in France, Belgium, the Netherlands, Denmark, and Germany, as well as the associated living lab in Gothenburg (SE). Members of the three involved UOL working groups and ArL WE are part of activities in the East Frisian-Frisian-Wilhelmshaven Living Lab (PlasticFREEsia).</p> <p>UOL will be the overall living lab coordinator, coordinator of the pillar governance &amp; policy (together with ArL WE), and coordinator of the PlasticFREEsia Living Lab. UOL will coordinate the project communication and dissemination activities, events (e.g. kick-off event), and the development of material (storymaps, newsletter, etc), and is responsible for the delivery of all project-level activities and a comparative synthesis of results.</p> <p>If applicable, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.</p> <p>The University of Oldenburg has a huge experience in participating as well as in managing larger international or EU co-financed national and international project. For example in 2022 the University hosts two clusters of excellence (Hearing for all and The Ocean floor – Earth's Uncharted Interface), ERC-Synergy and Starting grants, as well as two Interreg VB North Sea Region projects (A North Sea Perspective on Shipping Energy and Environmental Aspects in MSP (NorthSee) and Delivering Community Benefits of Civic Energy (COBEN)). The two working groups applying for the TREASURE projects have been associated partners in the Interreg/North Sea Programme (e.g. COBEN Project, North Sea Rural) and will additionally benefit from the existing experiences at the UOL and the assistance by the Department for Research and Transfer (European Funding, European Financial Management).</p> <p>What is the benefit of participating in the project for your organisation?</p> <p>The topic of marine pollution is of great relevance for research, but also for teaching activities in several faculties and degree programmes (BA Environmental Science, MA Landscape Ecology, MA Marine Environmental Science, MA Water and Coastal Management, MA Sustainable Economics and Management). Applied research projects offer the opportunity to involve students into the process of transformation of theory into action via bachelor and master thesis work. The Geoecology Working Group together with NGOs (eg Mellumrat e.V. Verein Jordsand, Schutzstation Wattenmeer) and public authorities (Lower Saxon State Department for Waterway, Coastal and Nature Conservation, NLWKN) working on the field of monitoring marine litter at the North Sea coastline worked on a protocol for recording marine litter in riverine systems which is comparable to the OSPAR protocol for beach monitoring. The activities in the thematic pillar data collection &amp; monitoring will foster the working progress on this issue.</p>		
 1.1	<p><b>Amt für regionale Landesentwicklung Weser-Ems</b> No</p> <p><i>Sub-Partner</i> of Carl von Ossietzky Universität Oldenburg</p> <p>VAT number: -</p> <p>Entitled for VAT recovery: No</p>	<p>Address: Theodor-Tanzen-Platz 8, 26122 Oldenburg, Germany ( NUTS: DE943 )</p> <p>Website: <a href="https://www.arl-we.niedersachsen.de/startseite/">https://www.arl-we.niedersachsen.de/startseite/</a></p>	56.647 €

Type: Regional public authority  
Legal status: Public  
State aid: Not State Aid Relevant  
Letter of intent:  
Self declaration:

Contacts: Marta Jacuniak-Suda

Which of the organisation's thematic competences and experiences are relevant for the project?

The Office for Regional Development Weser-Ems (ArL WE) acts in the region of Weser-Ems as the main contact point for facilitating regional and international cooperation as well as for coordination and permission of spatial planning activities. It provides expert advice to municipalities, public institutions, policy makers, academia, enterprises, industry, NGOs and citizens. It supports the Lower Saxon ministries in the implementation of their strategic tasks. In order to provide positive impulses for sustainable regional development, the ArL WE initiates and implements cooperation projects and brings together various stakeholders for joint activities.

The thematic focus areas are defined in the Regional Action Strategy Weser-Ems 2021-2027. One focus is nature conservation in coastal areas of the Lower Saxon part of the Wadden Sea National Park, estuaries, and water bodies. One operative aim within this focus area is the reduction of plastic litter in the North Sea environment.

What is the role (contribution and main activities) of your organisation in the project?

ArL WE will support the University of Oldenburg with coordination activities in the pillar "Governance and policies" on project level and on the level of the East Frisian-Frisian and Wilhelmshaven Living Lab (PlasticFreeSia). It will assist the University with conducting interviews with key regional actors, interpretation of results, and with the organisation of pillar coordination meetings and regional workshops. It will assist with the formulation of recommendations on the improvement of governance structures and policies for the reduction of the outflow of plastic litter to the North Sea (i.e. "Plastic Pact").

ArL WE will consult and discuss project activities with key stakeholders, e.g. NLWKN, Lower Saxon ministries, Wadden Sea National Park and coastal municipalities. ArL WE will ensure that project results are widely disseminated across the region of Weser-Ems, and will support regional stakeholders in setting-up a competence center "Plastic Free North Sea" in the region.



If applicable, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

The staff at the ArL Weser-Ems acts as the regional contact point for Interreg A Programme Germany-the Netherlands, Interreg B North Sea and North West-Europe Programmes as well as Interreg Europe Programme. Therefore, the staff at the ArL WE has experience in implementation of Interreg projects and is thus very well networked in the region.

Specifically, for the project TREASURE, Dr. Marta Jacuniak-Suda will contribute with her professional background in environmental sciences (Master degree) and governance of coastal areas (PhD) and experience with advising policy makers on the implementation of regional and European policies. She has long-term experience in qualitative research methods, project management and implementation of international research projects, including Interreg projects.

What is the benefit of participating in the project for your organisation?

ArL WE will clearly profit from international experience exchange on the reduction and prevention of plastic litter in coastal areas and estuaries. Specifically, it will establish contacts with other public organisations and regional stakeholders participating in the project. ArL WE will profit from their expert knowledge on reduction and prevention measures as well as technical solutions. ArL WE will learn how the governance structures and policies are being formed and implemented in other North Sea Region countries participating in the project and how the existing good practices, and new activities and solutions can then be transferred and applied in the entire Weser-Ems region. The benefit from the participation of ArL WE in the project will be not limited to this organisation. The project results will be disseminated to relevant policy makers in ministries, municipalities, and among regional stakeholders in different sectors (e.g. ports, fishing, shipping, conservation, tourism).

 2	<b>Hoogheemraadschap Hollands Noorderkwartier</b> No Abrv.: HHNK Name (EN): Regional Water Authority of Holland Noorderkwartier <i>Project Partner</i> VAT number: NL8113.36.487.B01 Entitled for VAT recovery: No Type: Regional public authority Legal status: Public State aid: Not State Aid Relevant Letter of intent:  Self declaration:	Address: Stationsplein 136, 1703WC Heerhugowaard, Netherlands ( NUTS: NL328 ) Website: <a href="https://www.hhnk.nl/">https://www.hhnk.nl/</a> Contacts: Irma Kouwenhoven	190.944 €
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Which of the organisation's thematic competences and experiences are relevant for the project?

HHNK is the water manager in the province North-Holland north of the North Sea Canal. It protects 200,000ha of land against flooding by maintaining over 300km of sand dunes and dikes and 1000km of belt canal dikes. The water system is managed for both the quality and quantity by a canal system spanning over 20,000km.

Dealing with the Water Framework Directive, HHNK gained experience dealing with various pollutants. HHNK monitors water quality, helps execute water system analyses, devices appropriate measures, and collaborates with stakeholders along the production/usage chain from source to end-of-pipe to reduce pollution and improve water quality. With plastics HHNK has experience with awareness campaigns, monitoring, and has experimented with a plastic bubble barrier before to assess effectivity

against microplastics. This includes useful competences in hydrology, water quality, ecology, stakeholder management, integrated water resource management, water governance, and communication.

What is the role (contribution and main activities) of your organisation in the project?

HHNK is coordinating the living lab activities at the Helsdeur, including regional activities with regards to monitoring, data analysis, a capture system near the pumping station Helsdeur, prevention, and behaviour change.

HHNK is an important stakeholder for the monitoring plan and the results of the data analysis, as well as one of the regional government bodies that shares responsibility for reducing plastic waste in the water system.

HHNK will help the pillar coordinators to find each other within the living lab and to establish contact with relevant regional stakeholders. It will also help bring results further in the area.



HHNK will transfer knowledge and experience from the living lab Helsdeur to the TREASURE overarching products, including a final report on data analysis, a multi-criteria assessment tool for intervention measures, communication material and a living lab legacy, including lessons learnt for plastic pollution management and policies.

If applicable, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

As an organization we have experience in participating in international EU co-financed projects. In the previous Interreg period HHNK participated as a partner in four Interreg projects; LOGIC (NWE), WaterCoGov (NSR), STAR2C's (2 Seas) and ENDURE (2 Seas).

What is the benefit of participating in the project for your organisation?

Transnational knowledge exchange on each of the four pillars; plastic monitoring, data analysis, testing of capture systems in different types of environments, corrective, preventive, and policy measures, and governance. Also a shared experience of living lab coordination.

 3	<b>Stichting De Noordzee No</b> Abrv.: NSF Name (EN): North Sea Foundation <i>Project Partner</i> VAT number: NL005965135B01 Entitled for VAT recovery: Partially Type: Interest groups including NGOs Legal status: Public State aid: Not State Aid Relevant Letter of intent:  Self declaration:	Address: Arthur van Schendelstraat 600, 3511MJ Utrecht, Netherlands ( NUTS: NL310 ) Website: <a href="https://www.noordzee.nl/">https://www.noordzee.nl/</a> Contacts: Marijke Boonstra	383.850 €
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Which of the organisation's thematic competences and experiences are relevant for the project?

NSF has extensive Clean Seas Program with various running projects focused on beach- and river litter research, public campaigns and sustainable shipping, political and business lobbying focused on a source-based solution approach to stop (plastic) pollution. NSF is experienced with political and business lobby activities and public campaigning comprising citizen awareness/involvement. NSF has initiated the Clean River project, where volunteers are trained to conduct river litter monitoring. It is one of the largest citizen science projects in the world that collects data on river litter. This is innovative and can help to collect large quantities of data and river litter, which can help to find plastic litter hotspots. This information is key to tackle sources of river litter.

What is the role (contribution and main activities) of your organisation in the project?

NSF will lead the data collection & analysis pillar, with 5 years experience in monitoring river litter on a national scale and implementing data in a national governmental monitoring method. NSF is experienced in translating monitoring data into source-based solutions. NSF contributes by sharing this experience and knowledge in the data collection pillar to use this in a transnational setting by adapting the method to transnational watersystems. NSF aims to work towards a harmonised European river waste monitoring approach across the EU. This will improve the availability, quality and comparability of data on plastic waste in rivers at transnational level. Based on this, the consortium can develop guidelines and policy recommendations contributing to the reduction of river waste in EU and national policy, and engage in actions to prevent river waste targeting hotspots (e.g. cities or companies) and frequently found items (product development, innovation).




If applicable, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

The NSF founded in 1980 has extensive experience with executing long – and short turn projects with small and large budgets. These projects are funded by various public and private funders. Most of our work is focussed on the Netherlands, however various projects on sustainable wind energy, sustainable food, clean seas and marine protected areas are focussed on strengthening international cooperation. In addition, we work together intensely with Seas At Risk which is based in Brussel. In the past, NSF has participated in EU co-financed projects such as Interreg however this is now almost 10 years ago. Currently, we are participating in projects with international funders and are experienced with executing international projects.

What is the benefit of participating in the project for your organisation?

A healthy North Sea is a clean North Sea. A sea in which everyone who is active also takes responsibility. That means that no one leaves litter in the sea or on the beach. And that ships do not discharge paint, plastic and cargo residues or emit harmful substances. And no river litter is flowing into the North Sea. Participating in this project contributes and support reaching our goal

of a clean North Sea. This project will provide key knowledge how to tackle sources of marine – and river litter and strengthen relationships and necessary cooperation with various stakeholders.

 4	<b>IVN Natuureducatie</b> No Abrv.: IVN Name (EN): Institute for Nature Education <i>Project Partner</i> VAT number: NL813950326 (B01) Entitled for VAT recovery: No Type: Interest groups including NGOs Legal status: Private State aid: GBER Letter of intent:  Self declaration: 	Address: Plantage Middenlaan 2c, 1018DD Amsterdam, Netherlands ( NUTS: NL329 ) Website: <a href="http://www.ivn.nl">www.ivn.nl</a> Department: IVN Zuid-Holland Dept. Address: Laan van Oversteen 14d, 2289CX Rijswijk, Netherlands ( NUTS: NL332 ) Contacts: Joost Barendrecht	411.105 €
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Which of the organisation's thematic competences and experiences are relevant for the project?

IVN is lead partner of the Clean River project. In this project we are working on the ambition of plastic free rivers in the Netherlands by 2030. In the project Clean Rivers we coordinate River bank clean-ups with volunteers and company's (~10.000 people involved/year). We also collect river litter data by citizen science (more than 1100 volunteers involved). For this we train and support volunteers and engage volunteers by the organizing method. We publish our information by website and social media and lobby for prevention policy's and legislation from local to EU level. We also approach and address company's and industry's to take their responsibility in preventing river litter. We also bring together divers public organisations (provinces, municipality's, water authority's), company's and NGO's around a specific river area (for example the Maasdelta) to act on a joined strategy to prevent river litter.

What is the role (contribution and main activities) of your organisation in the project?

IVN coordinates the Maas Delta living lab. It's our task to approach and engage living lab members: municipality's, provinces, water authority's, area management organisations, clean-up community's, interest organizations, company's, etc. We bring them together, organize meetings and initiate activities in the 4 pillars in the living lab. We collect results and organize the reporting. We join pillar coordination meetings and bring in the experience of the living lab for other partners. We organize co-financing and accountability of the expenditures in the living lab Maas Delta and the own activity's in the other living labs.



We also take part in the development of other project material/activities, e.g. the serious game and business case challenges.

If applicable, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

IVN was associated partner in the LIVES project (Litter Free Rivers and Streams) in the Interreg V-A Euregio Meuse-Rhine program. IVN was posted at the lead partner Province of Limburg to provide the project management, build the crossborder network on Clean Rivers and share our expertise. More information can be found on: [www.litterfreeriversandstreams.eu](http://www.litterfreeriversandstreams.eu)

What is the benefit of participating in the project for your organisation?

The results of the activities in the living lab Maas Delta and the experience gained in all the activities in the pillars and other living labs will serve our overall goal of plastic and litter free rivers in 2030. The process of cooperation of so many stakeholders in the living lab will support the joined effort to reach this goal. Engagement of stakeholders and responsible organisations (public and private) in environmental problems and initiating change in acting to solve the problems is a core activity of IVN. Also our experience in citizen science, empowering active volunteers and supporting them by the organizing method will be further developed by participation in this project.

 5	<b>Vlaams Instituut voor de Zee</b> No Abrv.: VLIZ Name (EN): Flanders Marine Institute <i>Project Partner</i> VAT number: BE0466.279.196 Entitled for VAT recovery: No Type: Higher education and research organisations Legal status: Public State aid: Not State Aid Relevant Letter of intent:  Self declaration:	Address: Wandelaarkaai 7, 8400 Ostend, Belgium ( NUTS: BE255 ) Website: <a href="https://www.vliz.be/">https://www.vliz.be/</a> Contacts: Gert Everaert, Lisa Devriese, Daphne Vrijelinck, Ana Catarino	615.050 €
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Which of the organisation's thematic competences and experiences are relevant for the project?

The Ocean and human health research department of VLIZ focuses on research related to plastic detection and the impact of plastic pollution on the environment and human health and has a strong team of plastic litter experts. VLIZ expertise on macro- and microplastics pollution includes the assessment of exposure, effects, and risk. Marine litter constitutes an important research theme within VLIZ, involving multi-disciplinary collaborations both at national and international level. The Policy & Innovation Division also covers the valorisation of new knowledge to stakeholders from policy, industry, science and society. Together with those stakeholders, innovation projects are launched to investigate innovative solutions.

VLIZ also promotes ocean literacy and marine research visibility among the general public, from citizen science to outreach.

VLIZ Data Centre develops innovative data systems, products, technologies and infrastructures to strengthen the excellence of marine sciences.

What is the role (contribution and main activities) of your organisation in the project?

As a project partner, VLIZ will take up roles in each WP and lead the Living Lab Nieuwpoort (LLN). VLIZ will:

- collect information on plastic pollution and carry out analyses to quantify the overall degree of plastic pollution and associated flux in the LLN;
- involve key stakeholders in the pillar 'Governance and Policy' to gain insight into the enablers/constraints related to the implementation of mitigation measures, and identify gaps in existing regulations. Together with these stakeholders, intervention strategies or campaigns will be considered.
- take up a major role in the development of a tool for decision making, supporting water managers and stakeholders to select best possible plastic-removal systems in specific areas;
- develop a detailed data management strategy, including a detailed data management plan to apply to the entire project in collaboration with the treasure project partners to produce high quality data, compatible with international and well-established standards.




If applicable, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

VLIZ has extensive experience in national, international and EU funded projects, both as a lead institute or as a project partner, leading WPs or specific tasks. Some examples:

- PREP4BLUE (Horizon Europe, 2022-2024) - VLIZ is leading tasks on citizen science and policy
- PLASTIC PIRATES (Horizon Europe, 2022) - VLIZ is leading the implementation of the citizen science project Plastic Pirates – Go Europe! in Belgium.
- AQUA-LIT (EASME/EMFF, 2019-2020) - VLIZ coordinated the North Sea Learning Lab, and the WP and tasks on marine litter mapping and policy measures.
- SOS Zeropol2030 (Horizon Europe, 2022-2024) - VLIZ coordinates the WP on 'Building blocks for Zero Pollution Governance'.
- COLLECT (Richard Lounsbery Foundation (USA), ongoing) - VLIZ is co-leading this citizen science project
- GEANS (Interreg North Sea, 2019-2023) - VLIZ is involved in different task and responsible for the website and data management.
- NSW (Interreg North Sea, 2018-2022) - VLIZ is leading the WP on data gathering

What is the benefit of participating in the project for your organisation?

- Pillar Monitoring: Additional data to gain knowledge on the plastic flux to the North Sea and on harmonisation of monitoring protocols/methods. This new knowledge is compiled and offered to stakeholders (e.g. the annual VLIZ policy informing brief on marine litter) to stimulate new innovations and design action plans including policy measures
- Pillar Collection/Removal: Development of the TREASURE Box and validation for LLN
- Pillar Governance & policy: By engaging with local stakeholders in the LLN and exchanging knowledge between partners, VLIZ will gain extensive insights to enhance its supporting role towards policy
- Pillar Prevention & Behavioural change: VLIZ is already involved in diverse awareness raising and citizen science (CS) initiatives. The knowledge gained from and shared in TREASURE will inspire future initiatives. Participation in CS has a positive impact on the public's scientific and ocean literacy, an important requisite of the EU Mission to 'Restore our Ocean and Waters'

 6 <b>Noria Sustainable Innovators No</b>	Address: Schieweg 13, 2627AN Delft, Netherlands ( NUTS: NL333 )	517.575 €
Abrv.: Noria	Website: <a href="http://www.noria.earth">www.noria.earth</a>	
Name (EN): Noria Sustainable Innovators	Contacts: Rinze de Vries	
<i>Project Partner</i>		
VAT number: NL861271014B01		
Entitled for VAT recovery: No		
Type: SME		
Legal status: Private		
State aid: GBER		
Letter of intent: 		
Self declaration: 		

Which of the organisation's thematic competences and experiences are relevant for the project?

Noria is an expert on monitoring and removing plastic litter from the water. Noria has several litter removal devices operating and performed already dozens of projects in the field of floating litter.

Noria uses the 3R method: Research, Remove, Reduce

In Research Noria can perform:

- GIS analysis to find potential hotspots
- Quantify floating plastic with usage of cameras and AI-algorithms
- Take microplastic-samples up until items of 300 nanometres

In Removal Noria has:

- The CirCleaner, a system that can remove floating plastic up until 70 cm under the water level. The system is applicable in strong flowing rivers.

- The CanalCleaner, a system that can remove floating plastic up until 20 cm under the water level. This system is developed for locations like harbours and inner-city areas where a minimal current is present, and wind is the most important factor that influences the plastic behaviour.

In Reduce Noria give advice in how plastic litter in the environment can be prevented in the future.

What is the role (contribution and main activities) of your organisation in the project?

- monitoring of the quantities of plastic litter floating in the water from HHNK
- Remove the plastic litter from the water
- Share knowledge about earlier projects with the partners of the project.
- Brainstorm about manners how governance in the plastic litter project can be improved.
- Coordination of activities within the removal of plastic waste pillar
- OSPAR analysis, or coordination of these activities
- Water column measurements (what/how much plastic is found on what level in the water column)
- Development of serious game

If applicable, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.




Noria has carried out many projects in the Netherlands between from 2018 until 2022 and in 2021 participated in a European Interreg project, Litter Free Rivers and Streams. One of Noria's core values is collaboration. That is why they also work together with organizations such as TU Delft, Wageningen University, Deltares, The Ocean Movement and possibly other smaller organizations or private volunteers. They already have two plastic litter removal systems that can be tested and further developed during this project.

Interreg Litter Free Rivers and Streams (LIVES) - Noria did a review on best practices for monitoring of plastic pollution in the catchment area of the Meuse and analysed how build a cross-border dataset.

For Rijkswaterstaat, Noria analyzed approximately 50 litter removal techniques, categorized them and made a comparison to see what technique, or category, could be used under what specific circumstances. It resulted in a "*selection model*".

What is the benefit of participating in the project for your organisation?

1. Share knowledge and solutions that Noria has gained and developed in the last years of research
2. Learn from experiences of other countries in the field of floating litter.
3. Increase Noria's international network
4. Demonstrate and test Noria's products

 <b>7 International Marine and Dredging Consultants NV</b> No Abrv.: IMDC <i>Project Partner</i> VAT number: BE 0422.376.305 Entitled for VAT recovery: Yes Type: SME Legal status: Private State aid: GBER Letter of intent:  Self declaration: 	Address: Van Immerseelstraat 66, 2018 Antwerp, Belgium ( NUTS: BE211 ) Website: www.imdc.be Contacts: Boudewijn Decrop	137.500 €
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Which of the organisation's thematic competences and experiences are relevant for the project?

- Hydraulics
- marine litter and plastics
- Numerical simulation of currents, plastic items, bubble screens

What is the role (contribution and main activities) of your organisation in the project?

IMDC will contribute to the Living Lab Nieuwpoort by means of aiding the placement and design of a plastic removal device.

More specifically, IMDC will prepare simulations of currents and plastic transport in the river estuary selected, based on which the best location for optimal efficiency can be selected.

IMDC will also contribute to the design by assessing what are feasible water depths and current velocities for the proper functioning of a bubble screen.




If applicable, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

IMDC is a private company, but has a philosophy of technological progress through R&D projects. IMDC participated and coordinated numerous projects with EU, non-EU and local funding. Projects' funding include FP-7, Horizon 2020, Interreg, Martera, Worldbank funding, Asian Development Bank funding.

What is the benefit of participating in the project for your organisation?

IMDC – with partners – entered into a development trajectory to bring the technology of plastic catchers to a higher level by applying a Digital Twin to plastic catchers and the environment they are placed in. In this way, we aim to: (1) optimise retention efficiency (2) allow maximum use of renewable energy for powering the system and (3) provide proven efficiency by monitoring the plastic flux in the river and reporting on actual efficacy.

With a demonstration case in the Living Lab Nieuwpoort, we aim at bringing the technology one step closer to technological readiness for applications worldwide.

 8	<b>Société d'Exploitation du Centre national de la Mer No</b> Abrv.: Nausicaá Name (EN): Nausicaá, National Sea Experience Centre <i>Project Partner</i> VAT number: FR 43378074744 Entitled for VAT recovery: Yes Type: SME Legal status: Private State aid: De Minimis Letter of intent:  Self declaration: 	Address: Boulevard Sainte Beuve, BP 189, 62200 Boulogne sur Mer, France ( NUTS: FRE12 ) Website: <a href="http://www.nausicaa.fr">www.nausicaa.fr</a> Contacts: Iwona Gin, Fabien Jandau	559.274 €
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Which of the organisation's thematic competences and experiences are relevant for the project?

[Nausicaá](#) is an aquarium & a marine science centre in Northern France. Visited by c. 800000 people annually, Nausicaá has extensive experience in disseminating scientific information to varied audiences in exhibitions on 10 000 m<sup>2</sup>, raising awareness of the ocean, promoting sustainable consumption-production habits & behaviour change, developing learning programmes, citizen science projects, events and communication campaigns on diverse topics including marine pollution.

Nausicaa collaborates regularly with local schools, universities and the French Education Ministry.

Since 2019 Nausicaá has hosted Blue Living Lab, a platform dedicated to open innovation & blue economy to support projects and start-ups (e.g. a pocket version of an underwater ROV, AI & modelling of marine ecosystems) with guidance, tools & testing facilities.

The Blue Society Forum, an area for polls & quizzes about innovative products and services, has a polling capacity of 2000 respondents/week in a high season.

What is the role (contribution and main activities) of your organisation in the project?

As project partner, Nausicaa will take up roles in each WP:

- coordinate the Living Lab in France;
- lead pillar Prevention & Behaviour Change to raise awareness of needs and opportunities to reduce, monitor, recycle & remove plastic from waterways and coastal areas, and encourage businesses, governing bodies and the public, including young people, to take action and change their consumption/production patterns as entities and individuals;
- carry out stakeholder workshops and a citizen science project to engage local stakeholders, schools and aquarium visitors in the activities of data collection, analysis and monitoring, implementation of preventive measures & solutions, and contribute to toolbox development;
- hold surveys to gain insight into enablers/barriers related to the implementation of plastic use mitigation measures and behaviour change;
- develop storytelling content, e.g. for ArcGIS story maps, in collaboration with the University of Oldenburg
- develop business case innovation challenges

If applicable, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

Although new to Interreg/North Sea Programme, Nausicaa has a twenty-year experience in EU projects as lead coordinator, work package leader or participant: Iseca, Sumaris, ValGOrize, Sea for Society, Columbus, Sea Change, BlueNights, and others.

Examples:

- AQUA-LIT (EASME/EMFF, 2019-2020) – Nausicaa developed methodology & led WP Learning Labs on marine litter in the Baltic, Mediterranean & North Sea basins.
- MARINA (Horizon 2020, 2016-2019) – Nausicaa developed methodology & led WP Mobilisation and Mutual Learning Workshops on marine & societal challenges, Blue Growth and Responsible Research & Innovation in 13 countries.
- H2O:Source2Sea (Interreg FMA, 2019-2023) – Nausicaa coordinates WP Communication and develops educational tools for the general public and schools.
- Team4Ocean (EMFF, 2019-2022) – Nausicaa coordinates the project with local schools and stakeholders to help young people put ideas into practice and harness skills for marine innovation.

What is the benefit of participating in the project for your organisation?

The project will provide Nausicaa with updated knowledge about how to tackle aquatic and coastal plastic pollution, strengthen & develop new relationships and necessary cooperation with local and European stakeholders in the North Sea basin.

In particular Nausicaa will be able to involve our Blue Living Lab and upgrade our expertise in the living lab methodologies, open innovation, co-creation and circular economy in relation to plastic, as well as extend its outreach zone.

The knowledge gained from and shared in the project will inspire our future initiatives. We will practise storytelling, a new communication technique for us, whereas the implementation of a citizen engagement project will contribute to our learning programmes and improve the ocean literacy of the general public and youth, an important requisite for the EU Mission to Restore our Ocean and Waters, Ocean Science Decade and SDDs.



<p><b>9</b> <b>Université du Littoral Côte d'Opale</b> No          Abrv.: ULCO  <i>Project Partner</i>          VAT number: FR 01195944038          Entitled for VAT recovery: Yes          Type: Higher education and research organisations          Legal status: Public          State aid: Not State Aid Relevant          Letter of intent:           Self declaration:</p>	<p>Address: 1, place de l'Yser – BP 71022, 59140 Dunkerque, France ( NUTS: FRE11 )          Website: <a href="https://www.univ-littoral.fr/">https://www.univ-littoral.fr/</a>          Department: Institut des Sciences de la Mer et du Littoral (ISML)          Dept. Address: Bassin Napoléon, Quai Robert Masset,, 62200 Boulogne-sur-Mer, France ( NUTS: FRE12 )          Contacts: Rachid Amara, Perine Doyen, Alexis Garcia</p>	<p>366.641 €</p>
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Which of the organisation's thematic competences and experiences are relevant for the project?

The sea and coastline topic is the main research area for the University of Littoral. The Oceanology and Geosciences Laboratory is one of the most important laboratories in the field of coastal oceanography in France. The Institut des Sciences de la Mer et du Littoral (ISML) houses a micro and macroplastics research platform dedicated to sampling, monitoring and analysis of plastic pollution in different water bodies. This platform is equipped with a set of recent instruments (microRaman, MacroRaman, Micro FTIR, Pyrolyse, microscopes) allowing all the analyses necessary to determine the nature, composition and sources of plastics. ISML has a solid experience in sampling, monitoring and analysis of plastics. In the project framework, we will be mainly involved in the " Data collection and analyses" pillar. We also have strong collaborations with partners such as municipalities, region, ports, environmental NGO and thus involve ourselves in the pillar "Prevention and behaviour change".

What is the role (contribution and main activities) of your organisation in the project?


As project partner, ULCO addresses the data collection and prevention pillars. Our expertise in sampling and monitoring methods and plastics analysis will be shared with the consortium members. In particular, we will share our experience in the development of aquatic drone that we are developing for sampling (macro and micro) plastics in all types of water bodies (even in confined and hard-to-reach areas such as harbor, rivers and inland waterways). We also develop an aquatic drone equipped with a hyperspectral camera that will allow the automatic recognition of plastics on the water surface. These innovative methods will be performed at the Belgian and French living labs, and can then be deployed in order to homogenize plastic pollution study methods. In this way we also contribute to the other pillars of the project. We collaborate with local and regional authorities and organisations, who are involved in prevention. In this way we also contribute to the other pillars of the project.

If applicable, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

ULCO has experience in managing EU co-financed projects with two MSCA RISE granted by the EC in 2019. ULCO can rely on the experience and management of its Research Administration Department. This Department has two projects managers, one of them being a senior project manager, experienced in several EU programmes (Horizon 2020, Horizon EUROPE, Life+, COST...). The Research Administration Department provides financial and HR supports regarding the management of the project, and IP support regarding the management of the results of the research. ULCO already managed some INTERREG projects, but is new to the North Sea Programme.

What is the benefit of participating in the project for your organisation?

This project will allow us to develop and/or strengthen our collaborations with partners working on the same issues and to benefit from their expertise. It will increase our network and also allow the mobility of young researchers and PhD students and the co-supervision of theses. Finally, participation in the TREASURE project consortium will increase the recognition of our team in the field of plastic pollution and we hope that the monitoring methods we are developing will contribute to the standardisation of methods for studying plastic pollution. Moreover, ULCO will be able to communicate to socio-economic partners to increase their involvement in future control programs against plastic pollution.

<p><b>10</b> <b>Centre d'études et d'Expertise sur les Risques, l'Environnement, la Mobilité et l'Aménagement</b> No          Abrv.: Cerema          Name (EN): Centre for Studies and Expertise on Risks, the Environment, Mobility and Urban Planning  <i>Project Partner</i>          VAT number: FR 94130018310          Entitled for VAT recovery: No          Type: Sectoral agency          Legal status: Public          State aid: Not State Aid Relevant          Letter of intent:           Self declaration:</p>	<p>Address: Technopôle Brest Iroise - 155 rue Pierre Bouguer, 29280 Plouzané, France ( NUTS: FRH02 )          Website: <a href="https://www.cerema.fr/">https://www.cerema.fr/</a>          Contacts: Pierre-Yves Belan</p>	<p>249.000 €</p>
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Which of the organisation's thematic competences and experiences are relevant for the project?

The Cerema is a national agency that depends of the ministry of environment and territories. Our position between national decision and their implementation in the territories offer us a relevant position.

Our direction is working on littoral and rivers issues that make us particularly efficient on subjects that concerns that interface river/sea.

We work on the issue of plastic waste in the environment in the frame of the Marine Strategy Framework Directive (MSFD) and its national declination "[Zéro déchets plastique en mer](#)" as a member of the national working group on plastic waste in transfer

pathways.

What is the role (contribution and main activities) of your organisation in the project?

The Cerema will lead the pillar "Governance & policy" in the French Living Lab and make the link with the other Living Lab.

Into this pillar, the Cerema will produce an analysis of local implementation documents of waste management (WFD, MSFD, Waste Directives ...) and local policies: recycling, organisation of collection, prevention policy, circular economy policy, etc.

The Cerema will organise participative workshops with local institutional stakeholders in waste management to coordinate actions.

On the other pillars, the Cerema will contribute on "Data Collection & analysis" by creating a fine cartography of waste accumulation on riverbanks.




The work with local authorities will also permit to participate to some other pillars as "Removal of Plastic Waste", "Prevention and behaviour change", or "Data Collection & analysis" by evaluating the efficiency of solutions to fight plastic in wastewater networks. These results will be compared with previous Cerema work.

If applicable, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

We are new to Interreg North Sea Programme.

What is the benefit of participating in the project for your organisation?

Cerema intends to promote the work carried out for the Ministry in charge of the Environment. Delighted to enrich its knowledge of the subject through contact with European players, and to be able to go into greater depth on subjects already explored, Cerema will be able to use the knowledge acquired in this project to support French local authorities in charge of implementing their waste policy.

 11	<b>Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux</b> No Abrv.: Cedre Name (EN): Centre of Documentation, Research and Experimentation on Accidental Water Pollution <i>Project Partner</i> VAT number: FR 58 315 429 142 Entitled for VAT recovery: No Type: Other Legal status: Private State aid: GBER Letter of intent:  Self declaration: 	Address: 715 Rue Alain Colas - CS 41836, 29217 Brest, France ( NUTS: FRH02 ) Website: <a href="http://www.cedre.fr/">http://www.cedre.fr/</a> Contacts: Camille Lacroix	271.000 €
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Which of the organisation's thematic competences and experiences are relevant for the project?

Cedre is an association with a public service mission for advising French authorities in case of accidental oil and chemical spills in aquatic environments. Our main activities are spill response support, contingency planning, training, analysis, equipment testing and research. Cedre has expertise on chronic aquatic litter pollution and supports French authorities in the implementation of national and international public policies aiming at reducing aquatic litter pollution (e.g. MSFD). Cedre is a member of several international expert groups working on aquatic litter pollution. We are coordinating the national monitoring programme of litter on the coastline and in estuaries. We also take part in projects aiming to develop knowledge on litter fate and impacts in the aquatic environment and solution to reduce the pollution. Cedre will capitalize on its expertise in both accidental water pollution and aquatic litter to address the issue of litter pollution in port areas and estuaries.

What is the role (contribution and main activities) of your organisation in the project?

Cedre will join as a Project Partner. Cedre will be involved in the French Living Lab and will lead the overall "Removal and plastic waste" pillar. We also contribute to the pillars: "Data collection & analysis" and "Prevention and behaviour change". Cedre will contribute to the assessment of macrolitter abundance, composition and sources in ports and estuaries of the French part of the North Sea region based on field surveys and port agent interviews. Cedre will also do an inventory of existing equipment to recover macrolitter in port areas and rivers and will test the efficiency of a selection of equipment in its facilities and in ports. Based on acquired knowledge, Cedre will build a training course for port agents on good practices to reduce marine litter pollution and develop awareness raising tool to be used by port authorities. Cedre will also contribute to project communication and capitalization, especially towards French authorities, the OSPAR Convention and the EU commission.

If applicable, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

Cedre is new in the Interreg North Sea Programme as it is located in Brittany (France), an area recently included in the Interreg North Sea Program. However, Cedre has an extensive experience of EU co-financed projects. We have participated as project partner or lead partner to several DG ECHO projects such as WESTMOPOCO, MANIFEST and IRAMAR. We are also partner of two Interreg Atlantic Area projects on marine litter: CLEANATLANTIC and OCEANWISE.

What is the benefit of participating in the project for your organisation?

The project will allow Cedre to develop more knowledge, competences and experience on aquatic litter pollution, especially on issues specific to the North Sea. In addition, the project will allow us to strengthen our collaboration at a national and international level and increase our visibility as experts in aquatic litter pollution. We expect to contribute to harmonization of methods and approaches allowing a global assessment of aquatic litter pollution. We also plan to capitalize our experience and competences on accidental water pollution to put it at the service of aquatic litter reduction. Overall, the project will allow us to strengthen our technical and scientific support to French authorities, the OSPAR convention and the European Commission.

<p> 12 <b>MULTI N.V.</b> No</p> <p>Abrv.: MULTI</p> <p>Name (EN): MULTI N.V.</p> <p><i>Project Partner</i></p> <p>VAT number: BE.0435.912.159</p> <p>Entitled for VAT recovery: No</p> <p>Type: Infrastructure and (public) service provider</p> <p>Legal status: Private</p> <p>State aid: GBER</p> <p>Letter of intent: </p> <p>Self declaration: </p>	<p>Address: Orlaylaan 10, 9140 Temse, Belgium ( NUTS: BE236 )</p> <p>Website: <a href="http://www.multi.engineering">www.multi.engineering</a></p> <p>Department: Maritime &amp; Offshore Design &amp; Engineering Office</p> <p>Dept. Address: Orlaylaan 10, 9140 Temse, Belgium ( NUTS: BE236 )</p> <p>Contacts: Niko Fierens</p>	<p>379.396 €</p>
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Which of the organisation's thematic competences and experiences are relevant for the project?

- The Maritime & Offshore market represents about half of MULTI.engineering's activities. Our focus within this market has shifted to more sustainable themes like reduced emissions of ship powering, offshore renewable energy production and global waste solutions for waterways. Due to this shift MULTI has developed competences that are important to develop and design efficient systems within these themes.
- Since 2018 MULTI has been working on the concept development of a plastic river cleaner with air bubble screens. This work has resulted in the successful grant by MarTERA of the DEMARC project. Within this project MULTI.engineering will research and develop a concept for a MARine River Cleaner (MARC) upto the delivery of a virtual model for the river Scheldt that is intended to be validated by means of a desktop review in collaboration with Herbosch-Kiere.

What is the role (contribution and main activities) of your organisation in the project?

MULTI will be a project partner, taking up the design role for the demonstrator in the Living Lab Nieuwpoort (LLN). MULTI will:

- Develop the design of a small-scale floating garbage collection tool.
- Develop the design of an air bubble screen suitable for the selected Living Lab location in Nieuwpoort, based on the input by partner IMDC.
- Define the electrical power and compressed air balance in order to have the correct supplies on site available.
- Supply partner Herbosch-Kiere with the required design information to allow for the manufacturing, building and installation of the demonstrator hardware.
- Follow-up during the building of the demonstrator.
- Follow-up during the installation and operation of the demonstrator during the Living Lab.
- Write a report with learnings and conclusions based on the findings during the building and operation of the demonstrator unit.

If applicable, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.


MULTI has extensive experience in national funded projects, both as a lead or as a project partner, leading WPs or specific tasks. Some examples:

- INTENSSE-H2 (Blue Cluster Feasibility study, 2022) - MULTI is project partner in a consortium of 3 Flemish companies and one research institute, and is the lead for the WP's related to the research into the motions of an offshore floating platform for the production of green hydrogen.
- PLUXIN (Blue Cluster CSBO project, 2020-2023) – MULTI is member of the industrial advisory board, focusing on the WP's related to the 2Dh model and the valorization.
- DEMARC (MarTERA - ERAnet, 2021-2023) – MULTI is project partner in this research project, responsible for the WP's related to the concept development and virtual modelling of a river cleaner. Other partners are IMDC and three German organizations (two private and one research institute).

What is the benefit of participating in the project for your organisation?

- Data collection: the demonstrator will allow us to validate the mathematical models that are predicting the flux of plastic garbage, by means of real life collection and measurement of floating plastic. The living lab will allow to gain important data to further develop monitoring of plastic flux in waterways
- Removal: The lab in Nieuwpoort will allow to develop a small design that can actually be built and tested, as the first MARC to be designed and built. The main research questions that MULTI would like to find an answer for during the Living Lab demo, are 1) What is the efficiency of the collecting basket when using tidal flows? 2) What is the most effective water depth to which the collecting basket is to be lowered? Does the calculated compressor air flow (required for the air bubble screen) correspond to the anticipated garbage catch efficiency? 3) What are the dimensions required for the filter mesh in the garbage collecting basket, related to the actual garbage particles size?

<p> 14 <b>Kommunenenes Internationale Miljøorganisation</b> No</p> <p>Abrv.: KIMO</p>	<p>Address: C/o Varde Kommune, Bytoften 2, 6800 Varde, Denmark ( NUTS: DK032 )</p>	<p>336.600 €</p>
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Name (EN): Local Authorities International Environmental Organisation  
*Project Partner*  
VAT number: CVR-nr. 29189811  
Entitled for VAT recovery: Yes  
Type: Local public authority  
Legal status: Public  
State aid: Not State Aid Relevant  
Letter of intent:   
Self declaration:

Website:  
<https://www.kimointernational.org/networks/denmark/>  
Contacts: Ryan Metcalfe

Which of the organisation's thematic competences and experiences are relevant for the project?

KIMO represents a network of local municipalities working together for clean seas and coastlines. We have over 30 years of experience working with issues such as marine litter. KIMO Denmark manages 3 OSPAR litter monitoring beaches in Denmark. We have participated in MARLISCO project as well as the INTERREG "REN Kystlinje" project, both dealing with best practices and awareness about marine litter. KIMO is an observer in OSPAR's marine litter ICGML group and participates in development of the RAP riverine litter action. Riverine litter is a focus point of KIMOs present work programme.

What is the role (contribution and main activities) of your organisation in the project?

KIMO will be involved as coordinator of the work packages in the municipality of Varde and associated watershed. In close cooperation with the municipality and water treatment facilities, we will create a living lab concentrating on Litter inputs to the Varde River. We will be responsible for implementing the TREASURE Project's four work packages associated activities and outputs. We will also have close communication and collaboration with the other Danish partners and liase with international partners across the North Sea region, sharing experience and contributing to the project goals and objectives.



If applicable, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

KIMO Denmark was the Baltic node coordinator for the EU FP7 funded MARLISCO Project: <https://www.marlisco.eu/> Where we coordinated activities for Danish and German partners. WE participated in research, such as stakeholder surveys and awareness activities such as a wandering exhibition about marine litter and video contest for school children. KIMO Denmark was also partner in the Skagerrak interreg projekt "Ren Kystlinje" <https://www.scribd.com/document/392508624/Resultatrapport-Interreg-%C3%98KS-prosjektet-Ren-Kystlinje> One of the products from KIMO was a background report about sharing of experience on managing marine litter: <http://www.symbioscentrum.se/download/18.28b810b6167ac1d153b2c95b/1545357183302/Baggrundsrapport%20Ren%20Kystlinje.pdf> We also have since managed the coastal lottery in Denmark, which was an idea that was generated from this project. <https://kystlotteriet.dk/>

We are new to the Interreg/North Sea Programme.

What is the benefit of participating in the project for your organisation?

We will gain experience and knowledge that we can use to replicate and expand these ideas in larger urban locations and watersheds. KIMO has a strategic direction to prevent litter entering the marine environment through both technical applications and awareness. The experience with governance & policy, and data collection & analyses will feed into KIMO's work in OSPAR's expert group on marine litter and the Regional Action Plan's goals for monitoring and reduction of riverine litter. The data collection will be essential to determine what solutions could be implemented locally and in future projects. The work on prevention & behaviour change can be shared in the KIMO International network and replicated in projects around the North Sea, reeding the results of the project into a wider context with a more widespread impact. Experience with removal will be shared and can lead to recommendations for the use of suitable best technologies that will be shared in the local authorities network.

 15	<b>Lemvig Vand A/S</b> No Name (EN): Lemvig Utility <i>Project Partner</i> VAT number: CVR 32832296 Entitled for VAT recovery: Yes Type: Infrastructure and (public) service provider Legal status: Public State aid: Not State Aid Relevant Letter of intent:  Self declaration:	Address: Havnen 8, 7620 Lemvig, Denmark ( NUTS: DK041 ) Website: <a href="http://www.Lvs-as.dk">www.Lvs-as.dk</a> Contacts: Lars Nørgård Holmegaard	385.625 €
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Which of the organisation's thematic competences and experiences are relevant for the project?

The organisation is a utility provider and takes care of sewage water and stormwater in Lemvig community of 508 km2. Lemvig Utility has 2 mio m3 treated sewage water in outlet per year. About 10 mio m3 rainwater is in the outlet from the separated sewage system. The outlet goes through rivers and waterways and will end in the North Sea. The organisation has competences and experiences of handling water issues and run projects.

Klimatorium ([www.klimatorium.dk](http://www.klimatorium.dk)) has an exhibition with about 40.000 visitors per year. The target groups are tourists, schoolchildren, professionals, citizens, who learn from real solutions. The results from the TREASURE project will be brought into the exhibition and didactic materials for schoolchildren.

What is the role (contribution and main activities) of your organisation in the project?

The organisation will join as a project partner and is responsible for implementing the four work packages in Lemvig. They will lead the joint westcoast watershed Danish living lab, with the focus on tackling the outlets, both from the treatment works and the storm water system. Here there will be practical stations of collecting macroplastic. The practical data will be collected for use in the total project but also as case study for a Danish utility.

The project will be in the exhibition of Klimatorium and also used for education materials for school children.

If applicable, describe the organisation's experience in participating in and/or managing EU co-financed projects or other international projects.

The organisation has experience in some EU finances project for instance EU LIFE "Coast to Coast Climate Challenge" and EU REACT.

What is the benefit of participating in the project for your organisation?

The organisation will benefit by gaining knowledge on the amount of macroplastic in the outlets from the utility. This will be the first case in Denmark of having access to this knowledge. The organisation will also receive ideas with regard to new solutions of handling plastic waste.

The results of the TREASURE project will be displayed and freely accessible in the exhibition for the wider public. Up to 40.000 visitors per year will learn from the TREASURE results.

Total budget 5.784.707 €

## C.1 Objective

### C.1.1 Project overall objective

TREASURE aims to reduce marine pollution by preventing the outflow of plastic waste from inland waters into the North Sea by improving governance, policy, data collection, removal and prevention approaches, resulting in a cleaner riverine and marine environment through science-supported cooperation.

## C.2 Spotlight themes

### C.2.1 Does your project contribute to the Digitalisation spotlight theme?

Yes

#### C.2.1 Contribution to spotlight theme: Digitalization

The project consortium is jointly developing a digital decision support tool in form of the "TREASURE Box", which presents a solution for water managers and decision makers throughout the North Sea region in supporting the selection of the most (cost-)effective data collection and removal solutions in different areas, e.g. ports or estuaries.

### C.2.2 Does your project contribute to the Rural-urban linkages spotlight theme?

Yes

#### C.2.2 Contribution to spotlight theme: Rural-urban linkages

Litter pollution in our rivers mainly originates from urban centres and the activities that are concentrated there. However, the negative impact is often disproportionately experienced in rural coastal areas, where the plastic litter accumulates. By spreading through water systems, rivers and ultimately to the sea, litter is the most abundant "man-made item" affecting nature and rural areas. Engagement of citizen scientists and volunteers living in cities to clean up the rural environment strengthens the rural-urban connection.

It is important to analyse how cities and their surrounding rural coastal communities can cooperate more effectively on preventing plastic litter outflow. The TREASURE project plans to raise awareness on this interdependence and initiate closer cooperation between urban and rural coastal actors.

### C.2.3 Does your project contribute to the spotlight theme: Strengths and challenges in the North Sea basin

Yes

#### C.2.3 Contribution to spotlight theme: Strengths and challenges in the North Sea basin

Too often is the issue of plastic pollution framed as a local or regional problem, with [fragmented governance structures](#) where key stakeholders work [isolated](#) from each other. The need to facilitate cooperation between local, regional, national, but also inter- and transnational stakeholders is evident, especially since plastic pollution is a widespread problem in the entire North Sea basin- as identified by the North Sea Commission's Marine Resources Group.

TREASURE plans to solve the joint plastic problem through cross-sectoral innovation: Four interrelated thematic pillars will be addressed within living labs, in order to successfully implement tested solutions to reduce marine plastic pollution from inland waters. Therefore, it contributes to strengthening the forces in the North Sea basin, not only by reducing plastic pollution, but also by informing effective multi-level policy frameworks. Thus, it supports the protection of a healthy ecosystem on which local communities depend on.

## C.3 Relevance and context

### C.3.1 What are the common territorial challenge(s) that will be tackled by the project?

Every year, at least 14 million tons of plastic end up in the ocean, and plastic makes up 89% of all marine debris found from surface waters to deep-sea sediments ([OSPAR 2022](#); [IUCN 2021](#)). Not only marine species suffer from this issue by ingesting or being entangled by plastic debris, which causes severe injuries and death. Plastic pollution also threatens food safety and quality, human health, coastal tourism, and further contributes to climate change. Furthermore, a significant share of marine litter reaches the sea via rivers and inland waterways. An integrated approach to identify, remove, and reduce this riverine waste can make an important contribution to the elimination of plastic soup. As the North Sea environment does not abide by socially constructed territorial borders and national or regional jurisdictions, transnational cooperation and coordinated exchange is urgently needed to develop effective and lasting solutions to prevent and reduce the outflow of plastic into the North Sea environment.

There exist critical knowledge gaps, not only about the whereabouts of plastic in waterways and their flux into the North Sea, but there are also only fragmented governance structures on all levels. Based on tested local practical experiences in the partner regions, TREASURE will fill these existing gaps in the European plastic pollution governance by establishing transnational solutions to reduce plastic pollution in the marine environment.

### C.3.2 How does the project tackle identified common challenges and/or opportunities and what is new about the approach the project takes?

While the issue of plastic waste in waterways and the marine environment has been on the agenda of various international strategies and projects, there still a lack of interdisciplinary and holistic solutions to effectively map and manage the problem at hand. In order to fill those existing gaps in data, governance, removal, and prevention strategies, a holistic approach is needed in which transnational actors work together to map and collaboratively tackle the plastic flux into the North Sea.

TREASURE will do exactly this by applying a common methodology of mapping, testing, and implementing cross-sectoral solutions through regional living labs. This joint methodology is urgently needed to establish comparable data that can inform effective policies, as well as prevention and removal strategies. Since there already exist a number of approaches and established guidelines (e.g. OSPAR), TREASURE will build upon current knowledge and expertise and develop a common approach to plastic litter classification, in order to harmonise data and methods between the regions and be able to identify suitable approaches for future adopters for various situations.

### C.3.3 Why is transnational cooperation needed to achieve project objectives and results?

Solutions and strategies to tackle to outflow of plastic waste into the North Sea are widely lacking or fragmented, with a disconnection between the national, regional, and local levels, and a myriad of different definitions of litter classification and methods. In order to establish a common approach and effective solutions on a European level, transnational cooperation is urgently needed. A regular, well-structured and documented transnational knowledge transfer offers the foundation for meaningful cooperation in implementing appropriate and innovative methods and tools, and will facilitate the transnational exchange of best practices and lessons-learned. For instance, data collection methods developed in one partner region will be implemented into all suitable living labs.

The common methodology and exchange between the different regional living labs offer the basis for lasting European cooperation in the management of plastic pollution. And even within the living labs, cross-border cooperation helps to facilitate the successful development of innovative and effective solutions, e.g. Belgian and French cooperation in the Nieuwpoort living lab.

### C.3.4 Who will benefit from your project outputs?

Target group / Specification

#### 1 Sectoral agency

Improvement of policies, best practices and introduction of circular approaches through targeted recommendations and exchange based on the project results in specific sectors, e.g. agriculture and horticulture; aquaculture; shipping industry; packaging/tyre industry.

#### 2 National public authority

National policy makers and administration (e.g. ministries, technical authorities, port authorities, water protection associations) will benefit through the development of new, or improvement to existing policies and planning instruments, as well as targeted recommendations based on the project results.

#### 3 Higher education and research organisations

The collected transnational data and all related project results will be made available in an open-data knowledge platform for researchers to use.

#### 4 Infrastructure and (public) service provider

A reduction of plastic waste in waterways and the North Sea environment mitigate challenges faced by water providers through plastic loads in the waterways and sewage systems.

## 5 Interest groups including NGOs

The development of a common approach to data collection and waste classification can assist the roll-out of such measures for relevant NGOs and conservation groups and help to establish a centralised strategy for decentralised and fragmented initiatives in the living lab regions, as well as in the entire North Sea region and beyond.

## 6 Education/training centre and school

In the living lab regions, activities related to the prevention and behaviour change pillar target schools from all levels with information material and participation measures for the reduction of plastic waste.

## 7 Local public authority

Municipalities benefit through raised awareness and involvement in developing appropriate policy and governance measures for tackling the plastic pollution problem in the living lab regions, as well as through being able to access the "TREASURE box" as means to find appropriate governance tools and information.

## 8 Regional public authority

Regional public authorities benefit through raised awareness and involvement in developing appropriate policy and governance measures for tackling the plastic pollution problem in the living lab regions, as well as through being able to access the "TREASURE box" as means to find appropriate governance tools and information.

## 9 Other

The general public is a central target group, particularly as they are not only involved in the prevention & behaviour change campaigns as well as data collection methods through citizen science approaches, but are also the ones, who will experience the environmental benefits of reduced macro plastic pollution.

### C.3.5 How does the project contribute to wider strategies and policies?

#### Strategy / Contribution

#### 1 European Green Deal

By targeting the reduction of plastic outflow from inland waters into the North Sea, TREASURE directly contributes to following priorities of the European Green Deal:

- protecting our biodiversity and ecosystems
- reducing water pollution
- moving towards a circular economy
- improving waste management

This will be done through targeted and practice-based policy recommendations, transnational data collection & monitoring, prevention & behaviour change measures, and removal & recycling innovation.

#### 2 Other : Zero pollution action plan

TREASURE's overall objective and targeted measures contribute to the key 2030 targets of the Zero pollution action plan to speed up reducing pollution at source, specifically to the target:

- improving water quality by reducing waste, plastic litter at sea (by 50%) and microplastics released into the environment (by 30%);

By reducing the outflow of macro plastics into the North Sea, TREASURE improves water quality in inland waterways, as well as reduces macro and secondary microplastic pollution.

#### 3 Other : EU Plastics strategy

The plastics strategy aims to protect our environment and reduce marine litter. TREASURE contributes to this aim by targeting the reduction of plastic outflow from inland waters into the North Sea. Furthermore, through targeted recommendations and input regarding the directive on single use plastic products and fishing gear, the project contributes to curbing plastic waste at its source.

#### 4 Other : UN Ocean Decade & Sustainable Development Goal SDG14

The project will add to achieving the target 14.1: By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.

#### 5 Other : OSPAR North-East Atlantic Environment Strategy and second Regional Action Plan on Marine Litter

TREASURE directly contributes to the OSPAR Environment Strategy and second Action Plan on Marine Litter, especially to:

- Actions to reduce land-based sources of marine litter
- Cross cutting actions to improve knowledge and understanding

This is done by regularly informing OSPAR about the project progress and outputs and through targeted and practice-based policy recommendations, transnational data collection & monitoring, prevention & behaviour change measures, and removal & recycling innovation.

### C.3.6 Synergies

#### Title / Description

#### 1 Cross-border measures to reduce plastic pollution in waterways

The threat of plastic pollution in waterways, and flowing into the marine environment, has been addressed in cross-border projects, e.g. the Interreg Channel Manche project "PPP - Preventing Plastic Pollution", the Interreg Euregio Meuse-Rhine project "LIVES", TREASURE wants to build on the experiences of these projects in order to incorporate the lessons-learned into our own project design and activities, e.g. LIVE's inventory of best monitoring practices, PPP's activity pack for schools.

#### 2 Transnational measures to reduce plastic pollution in waterways

In order to widen the expert network and build upon best-practices and lessons learned, TREASURE exchanges with previous and ongoing transnational cooperation projects, i.e. the Interreg NSR project IMMERSE in order to build on synergies regarding the governance in estuaries. TREASURE and IMMERSE exchange on approaches for micro (IMMERSE) and macro (TREASURE) plastics for a holistic approach in the North Sea region. TREASURE will also exchange with the Interreg Europe projects CAPonLITTER and PLASTEKO, particularly as a starting point for local prevention solutions of marine litter. TREASURE will assess the transferability of both projects' outputs for the TREASURE living labs.

### C.4 Project partnership

#### C.4 Project partnership

The partnership is made up by experts from different sectors and regions, collaborating locally but also transnationally through regular exchange between the planned living lab locations. The partners were selected based on relevance and know-how to successfully address the problem in each of the specific regional contexts. Here, focus was placed on a balanced mix of different types of organisations, i.e. local & regional authorities, public agencies, water boards, NGOs, enterprises, and research institutes. Each of the partners will also draw on their existing stakeholder network within their respective living labs and thus, the project can ensure a broad and cross-sectoral range of stakeholders, which is needed to successfully reduce plastic pollution.

The variety of Dutch and French partners is due to specialised expertise in the different needed areas. For each region, the involved partners will collaboratively design a joint living lab. Associated partners will join indirectly and participate in living labs or implement their own pilot activities, e.g. the Province of North Holland will assist HHNK in the governance & policy pillar.

Each partner is responsible for the own living lab activities and will transfer relevant methods and insights with the entire consortium. Each living lab has a coordinator and there are living lab, as well as overall pillar coordinators for the four thematic pillars, who will meet at least once every three months. Thus structure enables meaningful transnational learning and the transfer of best-practices.

Individual responsibilities are also ascribed to certain partners, e.g. VLIZ will cover the umbrella task for all partners of drafting, implementing, and managing the data management system

As the lead partner, UOL will be the overall living lab coordinator and will coordinate the project communication and dissemination activities and lead and is responsible for the implementation of all project-level activities & outputs.

### C.5 Work plan

#### C.5 Work Packages

Number/Title

Investments

#### 1 Building blocks for litter-free waters

0

Work Package Objective

This work package prepares foundations for the living labs by identifying common barriers and needs in the four thematic pillars (governance&policy, data collection&analysis, prevention&behaviour change, removal) to develop the TREASURE living lab blueprint.

Communication objective(s) and target audience

Raising awareness and ownership of regional decision makers and stakeholders, e.g. local and regional authorities, tourism sector, industry, shipping, fishery and NGOs, by communicating the urgency of needed intervention in plastic-waste mitigation in inland waterways. The aim is to form the basis for transnational exchange between the partners and stakeholders.



## Activities

Activity	Indicator	Target
<p><b>1 Preparation of integrated action plans for TREASURE Living Labs</b></p> <p>Desk-based preparation for the shaping of the TREASURE Living Labs in each partner region (5), identifying status quo of existing barriers and needs, and integrating objectives in each of the four pillars (governance&amp; policy, data collection&amp; analysis, prevention&amp; behaviour change, removal of plastic waste). This will be presented and discussed in the kick-off event for the alignment of upcoming activities.</p>	Report	5
<p><b>2 TREASURE Living Lab stakeholder identification and incentive campaign</b></p> <p>Identification and incentive campaign of TREASURE living labs targeted at local and regional stakeholders in each partner region (5) to raise awareness and facilitate engagement in the project approach and joining living lab activities.</p>	Communication Initiative	5
<p><b>3 Standardisation of classifications and definitions</b></p> <p>Transnational agreement on a standardised set of definitions and classifications of plastic litter for the development of a uniform approach for data collection and analysis in order to synchronise the methods applied.</p>	Report	1
<p><b>4 Identification of plastic hotspots</b></p> <p>Identification and analysis of available data of river litter in each partner region (5) and the need for data collection for the purpose of the living labs. Identification of macro plastic accumulation zones and sources.</p>	Data collection activity	5
<p><b>5 Data Management Plan</b></p> <p>A well-structured data management plan to cover the description of data and metadata, their storage and long-term preservation and the open access to and sharing of research data.</p>	Other	1
<p><b>6 Partner workshop for blueprint development</b></p> <p>Partner meetings to align each of the living lab action plans into a transnational "TREASURE Living Lab blueprint" that makes the methodology applicable for future adopters. The blueprint will be made accessible via the TREASURE website and corresponding partner outlets.</p>	Internal Event	2
<p><b>7 Harmonisation of action plans</b></p> <p>Harmonising action plans in order to identify common requirements for the development of the living lab blueprint.</p>	Report	1

## Outputs

Indicator	Output	Target
Strategies and action plans jointly developed	<p><b>TREASURE Living Lab blueprint</b></p> <p>Development of a joint methodology for setting up living labs for plastic-free waters, comprised of four main pillars: governance&amp; policy, data collection&amp; analysis, prevention &amp; behaviour change, and waste removal techniques. This blueprint will then be transferable to other estuaries and waterways and will offer the basis for the development of the TREASURE Legacy in WP4.</p>	1
Strategies and action plans jointly developed	<p><b>Integrated Living Lab action plans</b></p> <p>Integrated action plans for the implementation of activities in the four thematic pillars: governance &amp; policy, data collection &amp; analysis, prevention &amp; behaviour change, and removal. These planned activities will be based on the identified needs and barriers. They will offer the foundation for the transnational TREASURE living lab blueprint and the activities carried out in the living labs in WP2.</p>	5

## Investments

Number/Title

Investments

**2 Implementation of Living Labs**

0

Work Package Objective

Applying the TREASURE living lab action plans, each of the five partner regions will address each of the four thematic pillars with different emphasis, leading to reduced plastic waste within their regional framework.

Communication objective(s) and target audience

Enhancing exchange and fostering cooperation between regional stakeholders, e.g. local and regional authorities, tourism sector, industry, shipping, fishery and NGOs, on the integrated dimensions of plastic-waste management.

Activities

Activity	Indicator	Target
<b>1 TREASURE Living Lab coordination</b> Biannual transnational meetings between the partners for exchange on the living labs' progress, lessons learned, best practices and activities applied. Transnational exchange will inform the joint development of implementation tools for future adopters.	Internal Event	6
<b>2 TREASURE Pillars coordination</b> Transnational meetings (every three months) between the coordinators within each pillar: governance and policy, data collection and analysis, prevention and behaviour change, removal of plastic waste. Exchange on progress, best practices, and lessons learned.	Internal Event	12
<b>3 Living Lab stakeholder engagement campaign</b> Within each TREASURE living lab (5), a set of key stakeholders identified in WP1 for each of the thematic pillar will be engaged and continuous exchange structure established to collaboratively participate in the living lab's progress through regular exchange, e.g. through workshops, roundtables, interviews, etc.	Other	5
<b>4 Governance and Policy - Analysis of governance structures for plastic free estuaries and waterways</b> Regional stakeholder workshops with local and regional policy stakeholders to raise awareness about the urgency of intervention needs, to identify their needs and foster a closer, cross-sectoral and multi-level cooperation. Using interactive awareness-raising methods, such a TREASURE serious game.	External Event	10
<b>5 Governance and Policy - Analysis of policy framework for plastic-free estuaries and waterways</b> Identification of gaps in existing regulations, determination of appropriate intervention points, development of regional work-plans for implementing the measures, analysis of implementation progress of running activities.	Report	5
<b>6 Data collection and analysis - sampling</b> Generate data on macroplastic ( $\geq 5\text{ mm}$ , in some cases including <i>nerdles</i> $\geq 1\text{ mm}$ ) pollution in the partner region and for the targeted location(s), applying a combination of different methods available, e.g. drone imaging, or citizen science and sociological methods.	Data collection activity	50
<b>7 Data collection and analysis - comparison and harmonisation</b> Comparison of the implementation in practice of the various methods and techniques (providing input for the decision support tool in WP3.2) within this pillar. Analysis and harmonisation of results is done by the pillar coordinator.	Report	1
<b>8 Prevention and behaviour change - participatory development of prevention measures</b>	Data collection	5

Assess and redefine existing prevention campaigns and intervention strategies in each TREASURE living lab region together with different key stakeholder groups that contribute to plastic litter in waterways, e.g. leisure and tourism industry.	activity	
<b>9 Prevention and behaviour change - targeted solution-based prevention package</b> Engage key stakeholders in applying preventative solutions through targeted information programme that makes adoption of solutions accessible, e.g. through local and regional exhibitions that showcase the issue as well as prevention solutions, games, and other interactive engagement measures.	Communication Initiative	15
<b>10 Removal of plastic waste from waterways - accessible litter collection techniques</b> Application and assessment of accessible plastic litter removal and collecting techniques in each TREASURE living lab region.	Data collection activity	15

Outputs

Indicator	Output	Target
Pilot actions developed jointly and implemented in projects	<b>TREASURE Living Labs</b> TREASURE living labs are implemented in each partner region based on the developed action plans in WPI, in order to mitigate the outflow of plastic waste from inland waterways into the North Sea by addressing all four cross-sectional pillars: governance& policy, data collection& analysis, prevention& behaviour change, and removal of plastic litter.	5

Investments

No contents

Number/Title

Investments

**3 TREASURE Box Development**

0

Work Package Objective

Integration and consolidation of the living lab results through the development of a toolbox to make the results accessible for future adopters, e.g. water management authorities, (policy) decision-makers, academia, NGOs, enterprises, and citizens.

Communication objective(s) and target audience

Informing local and regional stakeholders, e.g. civil society, industry actors, public authorities and decision makers about the project results and the development of a decision-support toolbox through targeted information material and workshops.

Activities

Activity	Indicator	Target
<b>1 Transnational exchange on data harmonisation</b> Internal events for the preparation of data aggregation and analysis for the harmonisation of the findings in the four pillars: governance & policy, data collection & analysis, prevention & behaviour change, and removal.	Internal Event	4
<b>2 Transnational aggregation, analysis and comparison</b> Transnational aggregation, analysis and comparison of the data collected in the living labs (through different methods, but based on common classifications) in all pillars, which will feed into the development of a joint decision support tool. This will be done by each pillar coordinator.	Report	1
<b>3 Development of open data platform</b>	Other	1

Synthesising results of TREASURE living labs into open data knowledge platform based on the data management plan in WPI, to make information on governance, removal techniques and business cases, data collection, and prevention measures accessible for future adopters.

<b>4 Multi-criteria decision support tool</b>	Other	1
Development of an online multi-criteria decision support tool, comprising guidance on suitable data collection and plastic removal techniques with insights from other projects and the living labs.		
<b>5 TREASURE Box dissemination</b>	Communication Initiative	5
Engage stakeholders in a set of workshops to apply the TREASURE box, drawing on the partnership's existing networks, e.g. CPMR North Sea Commission, KIMO, and OSPAR for the targeted capitalisation project results.		

Outputs

Indicator	Output	Target
Strategies and action plans jointly developed	<b>Guidance for TREASURE Box</b> One strategy for the targeted guidance for future adopters on the application of the "TREASURE box". The TREASURE box is based on the Living Labs results and acts as a governance support platform, which includes the multi-criteria decision-support tool and open data knowledge platform that provides practical information on the most suitable data collection and analysis methods, removal tools, and prevention measures, in order to assist practitioners, such as water managers, decision makers, and other stakeholders, based on practice-based insights from the living labs.	1

Investments

No contents

Number/Title

Investments

**4 Upscaling and legacy building**

0

Work Package Objective

To anchor the living lab results in the region and spread them through existing wider networks in order to ensure an uptake of the jointly tested and developed solutions beyond the project's lifetime.

Communication objective(s) and target audience

The project results will be disseminated through targeted communication campaigns and capacity-building workshops for public authorities and governance-relevant organisation in order to ensure the uptake of the developed and tested solutions through existing networks and the wider North Sea region. These will be aligned as much as possible with existing annual events, e.g. World Ocean Day or the European Maritime Day.

Activities

Activity	Indicator	Target
<b>1 Multi-level governance and policy guidance for successful plastic pollution mitigation</b> Based on the practice- and science-based experiences from the living labs, multi-level policy and governance recommendations are developed that address the project's four integrated dimensions.	Report	1
<b>2 TREASURE Plastic Pact</b> Development of an integrated municipal/regional commitment "Plastic Pact" based on living labs solutions, which helps to structure responsibilities of future adopters, i.e. as action pledge for local and regional authorities.	Other	1

<b>3 Business case innovation development</b>	Internal Event	3
Engagement of the public, local or regional stakeholders, and experts in the area of business models and societal value through competition events (e.g. hackathon) for innovative and circular plastic waste prevention business case development, drawing on experiences from other projects and the living labs.		
<b>4 Storytelling</b>	Communication Initiative	6
Development of inspiring, immersive ArcGIS story maps and other visual communication materials (i.e. a short film) for innovative dissemination of project results.		
<b>5 TREASURE capitalisation events</b>	External Event	7
From the kick-off to the final event, the project will implement a number of communication events on different levels (local to transnational). The final event will be a joint citizen science-based data collection activity, stretching over the riverbanks and waterways of the involved partner regions, while local events focus more on reaching local target groups. All events will contribute to building up the TREASURE Legacy by disseminating project progress and results.		
<b>6 Nordic exchange and transfer</b>	Communication Initiative	3
Besides the dissemination of TREASURE results through existing networks, the project aims to establish targeted exchange and transfer with the Nordic regions of the North Sea programme area, who have not been directly involved in implementation living lab measures within the project. With this, a holistic coverage of the developed solutions throughout the entire North Sea area will be ensured. Associated partners and supporters from Sweden and Norway (see Annex) will build the foundation for this.		
<b>7 International and European events representation</b>	External Event	3
Participation of TREASURE consortium in international events, e.g. European Maritime Days, North Sea Conference, in order to disseminate the project progress and results, and to reach potential future adopters.		
<b>8 Scientific coverage</b>	Other	10
Publishing of academic papers and scientific contributions on the progress and results of the TREASURE living labs		
<b>9 TREASURE newsletter</b>	Communication Initiative	12
Publication and dissemination of a joint project newsletter every six months, in order to inform project partners, supporters, associated partners, and involved stakeholders about the project's progress and upcoming activities and events.		

#### Outputs

Indicator	Output	Target
Strategies and action plans jointly developed	<b>TREASURE Legacy</b> Action plans for the transnational legacy through the transformation of Living Labs into regional Competence Centres that anchor the TREASURE results into the regions. The plans of establishing 'Competence Centres for Plastic Waste Mitigation' in each living lab location will ensure sustained impact of developed results (such as the TREASURE Living Lab blueprint from WP1 and the TREASURE Box from WP3) beyond the project's implementation time.	5

#### Investments

No contents

## C.6 Results

## C.6 Project results

Indicator	Description	Target
1 <b>Solutions taken up or up-scaled by organisations</b>	Solutions to plastic pollution are developed and implemented in the following 5 Living Labs: East Frisian-Frisian-Wilhelmshaven Living Lab "PlasticFREEsia" (DE); joint Dutch Delta Living Lab (NL); Nieuwpoort Yser (BE); Northern French ports and harbours (FR); and Westcoast watersheds (DK).	5
2 <b>Joint strategies and action plans taken up by organisations</b>	Applicable TREASURE Living Lab strategy that encompasses four integrated pillars of reducing plastic pollution in the North Sea, i.e. governance & policy, data collection & analysis, prevention & behaviour change, and removal of plastic waste from waterways.	1
3 <b>Joint strategies and action plans taken up by organisations</b>	One strategy for a pledge by local and regional authorities outside the project consortium to follow the TREASURE Legacy in each living lab region, and to commit to the "TREASURE Plastic Pact" and applying the TREASURE Box.	1
4 <b>Organisations with increased institutional capacity due to their participation in cooperation activities across borders</b>	Transnational consortium set-up, comprising expertise and political scope throughout the North Sea Region. Each Living Lab entails cooperation with various local and regional stakeholders, whose capacities will improve.	100

### C.6.1 Project outputs and result overview

Output indicator	<b>Pilot actions developed jointly and implemented in projects</b>	Target
Outputs	TREASURE Living Labs	5
	<i>Total per programme output indicator</i>	<b>5</b>
Result indicator	Solutions taken up or up-scaled by organisations	5
Output indicator	<b>Strategies and action plans jointly developed</b>	Target
Outputs	Integrated Living Lab action plans	5
	TREASURE Legacy	5
	Guidance for TREASURE Box	1
	TREASURE Living Lab blueprint	1
	<i>Total per programme output indicator</i>	<b>12</b>
Result indicator	Joint strategies and action plans taken up by organisations	2
Output indicator	<b>Organisations cooperating across borders</b>	Target
Outputs	Number of partners	15
	<i>Total per programme output indicator</i>	<b>15</b>
Result indicator	Organisations with increased institutional capacity due to their participation in cooperation activities across borders	100

## C.7 Project management

### C.7.1 How will you coordinate your project?

The lead partner will be responsible for the overall project coordination. Project-level coordination and progress monitoring will be managed through regular bilateral exchange with project partners and project meetings every six months with the entire consortium (as

well as associated partners).

Communication on project level will be task of the lead partner, who will get regular (at least every two weeks) input by the project partners about current events, progress, and other relevant news. The information will be shared on the Interreg project webspace as well as on a separate project website. Partners will communicate project progress through their network and on their own websites.

Coordination and exchange between the project partners will be based on the living lab coordination structures to ensure optimal transnational cooperation and learning:

- Each living lab has one coordinator, who will manage activities within the living lab and communicate progress to the lead partner once a month.
- Within each lab, coordinators for each of the four thematic pillars are selected. The thematic pillar coordinators of each living lab meet and exchange and progress and best-practices etc. every three months.
  - Results of these meetings will be shared with the living lab coordinators and the lead partner, who will disseminate the information through the partnership and on the websites.

Alongside these regular structured exchanges, bilateral meetings between living labs and pillars are organised based on need for further collaboration and knowledge transfer, e.g. when adopting methods from one living lab in another.

Risks can occur in each living lab if key stakeholders block targeted measures. This will be mitigated by engaging key stakeholders from the onset for co-decisions on relevant steps etc.

The overall responsibilities and project management procedures will be included in the partnership agreement.

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#### C.7.2 Which measures will you take to ensure quality in your project?

In addition to the mandatory tasks of project reporting, financial management, and auditing at project level, the lead partner ensures continuous quality control through applying a uniform project methodology and common language within the project, in order to facilitate the exchange of knowledge across project partners.

Regular exchange and feedback loops on living lab and project level will allow for a continuous adjustment and improvement process. VLIZ will implement an open data management system for the transnational collection of collected data within the four thematic pillars of each living lab.

The Lead Beneficiary will appoint a Project Coordinator to handle all project management assignments. Each beneficiary will be responsible for the coordination of activities in their living lab area and will contribute to overall project management activities. All key decisions will be taken by the partnership as group decisions based on progress monitoring formalized as a standard item on the agenda of the regular project meetings. Monitoring activities are designed to allow for timely intervention where necessary. A partnership contract will regulate responsibilities for unforeseen developments to secure stability of the project.

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#### C.7.3 What will be the general approach you will follow to communicate about your project?

Communication on project level will be task of the lead partner and will follow the programme's publicity requirements.

Additionally, the lead partner will get regular (approx. every 2-3 weeks) input by the project partners about current events, progress, and other relevant news. This will be accompanied by a biannual project newsletter (published by UOL). The information will be shared on the Interreg project webspace as well as on a separate project website. Partners will communicate project progress through local communication channels and their network, and on their own websites. Results and general updates, living lab pillar meetings will be shared with the lead partner, who will disseminate the information through the partnership and on the websites. Each partner will share project activities and results on their organisation's website and available media outlets. A special attention will be given to effective visual content, e.g. infographics, videos, and photos.

A kick-off meeting with all partners, key stakeholders and politicians is planned within the first few months of the project. Citizens will be engaged within the living labs through various approaches, such as citizen science methods. The final event will entail a transnational citizen-science-based event in the final month of the project, highlighting the transnational need for cooperation to create a lasting impact, as well as showcase locally implemented solutions.

Along the common social media outlets like Twitter and LinkedIn, the project aims to develop innovative communication materials, such as Story Maps. This will contribute to effective dissemination of project results to the public, key stakeholders and decision makers. For that, the project will also draw on the well-established wide networks of the project partners, e.g. CPMR North Sea Commission.

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#### C.7.4 Financial management and reporting procedures

Each partner will make reliable financial management provisions within his own administration and accounting system. At project level the lead partner oversees project expenditure and administers project funds and reimbursements with consideration of shared costs. Shared costs and financial responsibilities will be outlined in the partnership agreement.

Auditing of project accounts will be contracted at the prescribed intervals by each partner in line with the programme's designation procedure. The lead partner appoints a First Level Controller to audit project financial reports. For sub-partners, auditing will be done by the main partner.

Each partner reports on the progress according to the requirements. The lead partner coordinates partner contributions to mandatory reports and submits these within the stipulated timelines. Additional reports serve to promote the project's mission and showcase the project success stories.

Sub-partners will report their own financial claims, which are overseen by their main partner's FLC. The main partner will jointly report on the progress made for both their own organisation as well as the sub-partner's. This will be further outlined in the partnership agreement and bi-lateral agreements between main- and sub-partner organisations.

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## C.8 Horizontal principles

### C.8.1 Sustainable development

Positive effects

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### C.8.2 Equal opportunities and non-discrimination

Neutral

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### C.8.3 Equality between men and women

Neutral

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## C.9 Long-term plans

### C.9.1 Ownership

Partners involved in the different living labs will ensure the financial and institutional support for the outputs related to their respective living labs by involving key stakeholders, such as regional authorities, in the project work as well as in the dissemination of the results. The development of the TREASURE Box as a tool will be done by VLIZ (who will provide a blueprint based on the application for the the Nieuwpoort Yser estuary), Noria, and the University of Oldenburg, with the input from all partners.

Through this approach, the partnership ensures that not only are the TREASURE Living Lab blueprints implemented by the relevant stakeholder consortia in each partner region, but furthermore, under the responsibility of the project partner will the outputs, i.e. the TREASURE Legacy and and TREASURE Box, be rooted in the work of the involved stakeholders.

The TREASURE Legacy will ensure that the project's results and expertise will be accessible in the partner regions and beyond. Each partner will be responsible for creating action plans for the development of lasting competence centres, that will be implemented and exist beyond the project's lifetime.

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### C.9.2 Durability

Rivers, estuaries, and harbours are dynamic environments that can accumulate and contribute to the outflow of plastic debris to coastal zones. Exposure to plastics can harm human health, potentially affecting hormonal and neurological activity, while marine and coastal species are affected by pollution, e.g. through ingestion and entanglement. The urgency to act now has also recently been established in the UNEP's resolution to "[End plastic pollution](#)".

To discontinue the input of larger plastic debris to the North Sea, the detection of sources of river litter and accumulation zones (hotspots) of plastic is crucial. Having knowledge about sources and plastic accumulation zones, successful policy measures, intervention strategy's and cost-effective removal techniques at the freshwater-marine interface are crucial to actively facilitate plastic pollution mitigation. The TREASURE Living Lab blueprint alongside the TREASURE Box presents a replicable strategy and offers a set of tools to support local and regional authorities to **effectively tackle the plastic problem**, e.g. through an open data knowledge platform that informs on sources of river litter and accumulation zones, or the applicable decision-support tool for finding removal techniques.

Furthermore, science-based and practice-proven experiences within the various living labs inform the development of multi-level policy recommendation that address gaps in existing EU policy, e.g. the Water Framework Directive (WFD) or align with existing activities in established frameworks such as the Marine Strategy Framework Directive (MSFD), as well as support the creation of effective support structures (e.g. OSPAR Marine Litter Regional Action Plan). The project itself is a result of the North Sea Commission's identified shared political need to foster cooperation in the field of plastic pollution from inland waterways and coastal areas of the North Sea. Through the project's close ties to the North Sea Commission and connections, relevant policy recommendations are disseminated and thus foster policy innovation throughout the North Sea Region.

TREASURE will create a long-lasting positive effect on the reduction of plastic-waste outflow into the North Sea, by actively anchoring the project's developed and tested solutions in the partnership's existing networks, such as KIMO, OSPAR and the CPMR North Sea Commission. By creating action plans for the development of competence centres (the TREASURE Legacy), the project impact will still grow beyond the project's lifetime. The urgency of the issue will therefore be officially anchored in the policy and governance agenda of the North Sea Region's local and regional authorities. Thus, TREASURE will significantly contribute to the overarching goal of protecting the North Sea ecosystem through the development of tested, innovative, and holistic approaches to plastic waste reduction, both on the practice-based application level, as well as on the policy level.

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### C.9.3 Transferability

One of the key aims of TREASURE's transnational cooperation is developing a uniform approach to effectively reduce the outflow of plastic waste from inland waters into the North Sea area (including the English Channel through the French Living Lab). A crucial gap that is filled by TREASURE is the harmonisation of classification and monitoring systems for a common North Sea region wide standard. TREASURE act as a forerunner and ensure the transferability of future data. By establishing the living lab blueprint, future adopters can easily access the applied strategy and implement it in their own regions.

The results of the TREASURE living labs' four thematic pillars will further generate accessible data and information on best practices, collected datasets, policy recommendations, etc.. The "TREASURE Box" presents an open data knowledge base, including a decision support














tool for methods and strategies, that will be developed in the project. These can be applied by relevant target groups, e.g. water managing bodies, local and regional authorities, and NGOs, in various geographical contexts.

The TREASURE living lab activities and the resulting "TREASURE Box" will be disseminated through existing networks of the partners and associated partners through information materials and events, in order to effectively capitalise on the results, e.g. through the networks of the North Sea Commission, KIMO, etc. A "TREASURE Legacy" will be anchored in the entire North Sea region through the creation of action plans for the development of competence centres in each living lab region, which will further ensure that the know-how and support for implementing solutions is available for future adopters.

Furthermore, TREASURE has at its beginning already transnational adopters involved, i.e. the Technical University of Lisbon, and the City of Gothenburg, who will be implementing their own TREASURE living lab and participate in the transnational exchange and learning as a 'TREASURE twin'.

## D.1 Budget

### D.1 Project budget – overview per partner / per budget line

Partner	Staff costs	Office and administration	Travel and accommodation	External expertise and services	Equipment	Infrastructure and works	Preparation costs	TOTAL ELIGIBLE BUDGET
 1 Carl von Ossietzky Universität Oldenburg	690.000 €	103.500 €	35.000 €	56.000 €	0 €	0 €	40.000 €	924.500 €
 1.1 Amt für regionale Landesentwicklung Weser-Ems	40.563 €	6.084 €	10.000 €	0 €	0 €	0 €	- €	56.647 €
 2 Hoogheemraadschap Hollands Noorderkwartier	109.560 €	16.434 €	6.200 €	58.750 €	0 €	0 €	- €	190.944 €
 3 Stichting De Noordzee	299.000 €	44.850 €	10.000 €	27.000 €	3.000 €	0 €	- €	383.850 €
 4 IVN Natuureducatie	74.604 €	11.191 €	12.000 €	278.310 €	35.000 €	0 €	- €	411.105 €
 5 Vlaams Instituut voor de Zee	484.000 €	72.600 €	15.000 €	9.450 €	34.000 €	0 €	- €	615.050 €
 6 Noria Sustainable Innovators	244.600 €	36.690 €	17.500 €	36.245 €	182.540 €	0 €	0 €	517.575 €
 7 International Marine and Dredging Consultants NV	110.000 €	16.500 €	2.000 €	9.000 €	0 €	0 €	0 €	137.500 €
 8 Soci�t� d'Exploitation du Centre national de la Mer	376.586 €	56.488 €	18.700 €	37.100 €	70.400 €	0 €	0 €	559.274 €
 9 Universit� du Littoral C�te d'Opale	266.644 €	39.997 €	22.000 €	13.000 €	25.000 €	0 €	0 €	366.641 €
 10 Centre d'�tudes et d'Expertise sur les Risques, l'Environnement, la Mobilit� et l'Am�nagement	160.000 €	24.000 €	20.000 €	45.000 €	0 €	0 €	0 €	249.000 €

 11 <b>Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux</b>	160.000 €	24.000 €	35.000 €	27.000 €	25.000 €	0 €	0 €	271.000 €
 12 <b>MULTI N.V.</b>	75.892 €	11.384 €	1.200 €	290.920 €	0 €	0 €	0 €	379.396 €
 14 <b>Kommunenes Internationale Miljøorganisation</b>	244.000 €	36.600 €	13.500 €	13.500 €	29.000 €	0 €	0 €	336.600 €
 15 <b>Lemvig Vand A/S</b>	227.500 €	34.125 €	28.500 €	29.500 €	48.000 €	18.000 €	0 €	385.625 €
<b>Total</b>	3.562.949 €	534.443 €	246.600 €	930.775 €	451.940 €	18.000 €	40.000 €	5.784.707 €
<b>% of Total budget</b>	62 %	9 %	4 %	16 %	8 %	0 %	1 %	100 %
<b>ERDF</b>	2.137.769 €	320.666 €	147.960 €	558.465 €	271.164 €	10.800 €	24.000 €	3.470.824 €
<b>Norwegian funding</b>	- €	- €	- €	- €	- €	- €	- €	- €

The budget for the Lead Partner includes a lump sum of 40.000€ as the preparation costs option has been selected.

Request for reimbursement of preparation costs

Yes

#### D.1.1 Staff Costs

Partner	Description	Budget
Carl von Ossietzky Universität Oldenburg	<b>Project coordination</b>	243.500 €
Carl von Ossietzky Universität Oldenburg	<b>Living Lab research (Postdoc)</b>	244.000 €
Carl von Ossietzky Universität Oldenburg	<b>Living Lab research (PhD)</b>	177.500 €
Vlaams Instituut voor de Zee	<b>Living Lab manager</b>	44.000 €
Vlaams Instituut voor de Zee	<b>PhD Researcher</b>	300.000 €
Vlaams Instituut voor de Zee	<b>Data Science Officer</b>	40.000 €
Vlaams Instituut voor de Zee	<b>Social Innovation Officer</b>	80.000 €
Vlaams Instituut voor de Zee	<b>Technical assistant</b>	20.000 €
Université du Littoral Côte d'Opale	<b>Assistant Engineer (plastic sampling and analysis)</b>	118.800 €
Université du Littoral Côte d'Opale	<b>PhD researcher</b>	106.823 €
Hoogheemraadschap Hollands Noorderkwartier	<b>Project coordinator</b>	35.080 €
Hoogheemraadschap Hollands Noorderkwartier	<b>Project support</b>	19.640 €
Hoogheemraadschap Hollands Noorderkwartier	<b>Technical expert</b>	15.180 €
Hoogheemraadschap Hollands Noorderkwartier	<b>Communication expert</b>	9.360 €

Hoogheemraadschap Hollands Noorderkwartier	<b>Financial officers</b>	30.300 €
IVN Natuureducatie	<b>Financial officer</b>	5.280 €
IVN Natuureducatie	<b>Participation coordinator 1</b>	9.222 €
IVN Natuureducatie	<b>Communication officer</b>	25.530 €
IVN Natuureducatie	<b>Trainer</b>	4.800 €
IVN Natuureducatie	<b>Prevention and behaviour specialist</b>	14.760 €
IVN Natuureducatie	<b>Project support</b>	10.512 €
Noria Sustainable Innovators	<b>Project manager + coordinator</b>	73.040 €
Noria Sustainable Innovators	<b>Senior product developer/consultant + financial officer</b>	39.480 €
Noria Sustainable Innovators	<b>Medior product developer</b>	44.160 €
Noria Sustainable Innovators	<b>Medior product developer</b>	35.880 €
Noria Sustainable Innovators	<b>Medior consultant</b>	36.040 €
Noria Sustainable Innovators	<b>ICT developer</b>	16.000 €
Stichting De Noordzee	<b>Project manager</b>	22.000 €
Stichting De Noordzee	<b>Technical expert 1</b>	102.500 €
Stichting De Noordzee	<b>Technical expert 2</b>	134.500 €
Stichting De Noordzee	<b>Communication officer</b>	20.000 €
Stichting De Noordzee	<b>Coordinator / financial officer</b>	20.000 €
Amt für regionale Landesentwicklung Weser-Ems	<b>Project manager</b>	40.563 €
IVN Natuureducatie	<b>Participation coordinator 2</b>	4.500 €
Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux	<b>Project manager</b>	25.000 €
Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux	<b>Technical expert (data collection and analysis)</b>	45.000 €
Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux	<b>Technical expert (training course)</b>	15.000 €
Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux	<b>Technical expert (awareness raising)</b>	10.000 €
Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux	<b>Technical expert (inventory and testing of equipments)</b>	50.000 €

Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux	<b>Coordinator / financial officer</b>	15.000 €
Université du Littoral Côte d'Opale	<b>Technical expert 1</b>	15.768 €
Université du Littoral Côte d'Opale	<b>Technical expert 2</b>	25.253 €
Carl von Ossietzky Universität Oldenburg	<b>Student assistants</b>	25.000 €
Société d'Exploitation du Centre national de la Mer	<b>Project manager</b>	118.800 €
Société d'Exploitation du Centre national de la Mer	<b>Technical expert level 4</b>	85.800 €
Société d'Exploitation du Centre national de la Mer	<b>Technical expert level 6</b>	38.250 €
Société d'Exploitation du Centre national de la Mer	<b>Technical expert level 7</b>	57.225 €
Société d'Exploitation du Centre national de la Mer	<b>Technical expert level 8</b>	48.000 €
Société d'Exploitation du Centre national de la Mer	<b>Financial officer</b>	17.700 €
Société d'Exploitation du Centre national de la Mer	<b>Interns</b>	10.811 €
Centre d'études et d'Expertise sur les Risques, l'Environnement, la Mobilité et l'Aménagement	<b>Project manager</b>	20.000 €
Centre d'études et d'Expertise sur les Risques, l'Environnement, la Mobilité et l'Aménagement	<b>Technical expert 1 (governance &amp; policy)</b>	60.000 €
Centre d'études et d'Expertise sur les Risques, l'Environnement, la Mobilité et l'Aménagement	<b>Technical expert 2 (data collection)</b>	40.000 €
Centre d'études et d'Expertise sur les Risques, l'Environnement, la Mobilité et l'Aménagement	<b>Technical expert 3 (awareness and behaviour change)</b>	5.000 €
Centre d'études et d'Expertise sur les Risques, l'Environnement, la Mobilité et l'Aménagement	<b>Technical expert 4 (removal)</b>	35.000 €
Kommunen Internationale Miljøorganisation	<b>Project manager</b>	100.000 €
Kommunen Internationale Miljøorganisation	<b>Technical expert</b>	124.000 €
Kommunen Internationale Miljøorganisation	<b>Coordinator/financial officer</b>	20.000 €
Lemvig Vand A/S	<b>Project manager</b>	85.000 €

Lemvig Vand A/S	<b>Technical expert 1</b>	76.500 €
Lemvig Vand A/S	<b>Technical expert 2</b>	58.000 €
Lemvig Vand A/S	<b>Coordinator / financial officer</b>	8.000 €
MULTI N.V.	<b>Project manager during design phase</b>	6.960 €
MULTI N.V.	<b>Project manager during building phase</b>	3.480 €
MULTI N.V.	<b>Project manager during testing phase</b>	5.220 €
MULTI N.V.	<b>Project engineer during design phase</b>	15.992 €
MULTI N.V.	<b>Project engineer during building phase</b>	3.198 €
MULTI N.V.	<b>Project engineer during test phase</b>	4.798 €
MULTI N.V.	<b>Project Designer during design phase</b>	20.244 €
International Marine and Dredging Consultants NV	<b>Project manager</b>	17.900 €
International Marine and Dredging Consultants NV	<b>Data analyst</b>	9.800 €
International Marine and Dredging Consultants NV	<b>Modelling engineer</b>	81.400 €
International Marine and Dredging Consultants NV	<b>Assistant</b>	900 €
MULTI N.V.	<b>Tender manager prior to installation, during operation and during decommissioning</b>	16.000 €

Total: 3.562.949 €

#### D.1.2 External expertise and services

Partner	Description	Investment	Award Procedure	Amount
Carl von Ossietzky Universität Oldenburg	<b>Communication measures</b>		Three-offer rule	20.000 €
Carl von Ossietzky Universität Oldenburg	<b>Auditing</b>		Framework contract	8.000 €
Vlaams Instituut voor de Zee	<b>Auditing</b>		Other	9.450 €
Hoogheemraadschap Hollands Noorderkwartier	<b>Auditing</b>		Open procedure	26.250 €
Hoogheemraadschap Hollands Noorderkwartier	<b>Communication and hosting meeting</b>		N/A	7.500 €
Hoogheemraadschap Hollands Noorderkwartier	<b>Water column measurements</b>		N/A	5.000 €
IVN Natuureducatie	<b>Project manager</b>		Framework contract	93.330 €
IVN Natuureducatie	<b>Coordinator 2</b>		Framework contract	15.980 €
IVN Natuureducatie	<b>Governance and policy expertise</b>		Three-offer rule	44.000 €
IVN Natuureducatie	<b>Prevention program Rotte and Schie</b>		Three-offer rule	50.000 €
IVN Natuureducatie	<b>Area manager</b>		Three-offer rule	21.000 €
IVN Natuureducatie	<b>Prevention specialist</b>		Three-offer rule	20.000 €

IVN Natuureducatie	<b>Plastic specialist</b>	Three-offer rule	14.000 €
IVN Natuureducatie	<b>Accountant</b>	Framework contract	20.000 €
Noria Sustainable Innovators	<b>Auditing</b>	N/A	26.250 €
Noria Sustainable Innovators	<b>Serious Game</b>	N/A	9.995 €
Stichting De Noordzee	<b>Auditing</b>	Framework contract	10.000 €
Stichting De Noordzee	<b>External expertise</b>	Framework contract	10.000 €
Stichting De Noordzee	<b>Graphic designer</b>	Framework contract	3.000 €
Stichting De Noordzee	<b>Other</b>	Framework contract	4.000 €
Hoogheemraadschap Hollands Noorderkwartier	<b>Advising governance and policy</b>	Three-offer rule	20.000 €
Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux	<b>Auditing</b>	Three-offer rule	1.000 €
Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux	<b>Organisation of training courses</b>	Three-offer rule	20.000 €
Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux	<b>Translation</b>	Framework contract	5.000 €
Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux	<b>Participation in events</b>	N/A	1.000 €
Université du Littoral Côte d'Opale	<b>Hosting partner meeting</b>	N/A	3.000 €
Carl von Ossietzky Universität Oldenburg	<b>Organisation of workshops</b>	N/A	28.000 €
Société d'Exploitation du Centre national de la Mer	<b>FLC</b>	Other	10.000 €
Société d'Exploitation du Centre national de la Mer	<b>Catering for 1 project meeting &amp; 6 workshops</b>	N/A	3.600 €
Société d'Exploitation du Centre national de la Mer	<b>Trainings in storytelling, facilitation and 3D printing</b>	Three-offer rule	11.500 €
Société d'Exploitation du Centre national de la Mer	<b>Graphic design</b>	Three-offer rule	4.000 €
Société d'Exploitation du Centre national de la Mer	<b>Printing services</b>	Three-offer rule	4.000 €
Société d'Exploitation du Centre national de la Mer	<b>Translation services</b>	Three-offer rule	4.000 €

Centre d'études et d'Expertise sur les Risques, l'Environnement, la Mobilité et l'Aménagement	<b>Participative workshops</b>	Three-offer rule	15.000 €
Centre d'études et d'Expertise sur les Risques, l'Environnement, la Mobilité et l'Aménagement	<b>Translation</b>	Framework contract	5.000 €
Centre d'études et d'Expertise sur les Risques, l'Environnement, la Mobilité et l'Aménagement	<b>Expertise for data consolidation on accumulation areas</b>	Framework contract	15.000 €
Kommunen International Miljøorganisation	<b>Auditing</b>	N/A	9.000 €
Kommunen International Miljøorganisation	<b>Partner meeting</b>	N/A	4.500 €
Centre d'études et d'Expertise sur les Risques, l'Environnement, la Mobilité et l'Aménagement	<b>Auditing</b>	Other	10.000 €
Lemvig Vand A/S	<b>Auditing</b>	Other	3.500 €
Lemvig Vand A/S	<b>Analysis consultants and laboratories</b>	Other	26.000 €
MULTI N.V.	<b>Auditing</b>	N/A	12.000 €
International Marine and Dredging Consultants NV	<b>Auditing</b>	N/A	9.000 €
Université du Littoral Côte d'Opale	<b>Auditing</b>	Other	10.000 €
MULTI N.V.	<b>Project Management during installation and operation (6 weeks - 2 d/wk)</b>	Other	11.520 €
MULTI N.V.	<b>Inspection, removal and weighing of garbage (1/wk)</b>	Other	3.600 €
MULTI N.V.	<b>Electrical power supply by city</b>	N/A	10.000 €
MULTI N.V.	<b>Rental air compressor</b>	N/A	6.300 €
MULTI N.V.	<b>Provision of open top garbage container on the quay side</b>	N/A	3.000 €
MULTI N.V.	<b>Supply and operation of Floating garbage collecting pontoon</b>	Other	75.000 €
MULTI N.V.	<b>Supply and operation of garbage collecting box</b>	Other	20.500 €
MULTI N.V.	<b>Supply and operation of 30 m of perforated tube 4", with ballast weights</b>	Other	31.500 €
MULTI N.V.	<b>Supply and operation of control unit for automated operation</b>	Other	20.000 €
MULTI N.V.	<b>Mobilization of installation barge "Maasmond" (2 times)</b>	N/A	18.000 €
MULTI N.V.	<b>Demobilization of installation barge "Maasmond" (2 times)</b>	N/A	18.000 €
MULTI N.V.	<b>Installation works on-site, using barge "Maasmond" and required crane (2 x 2 days)</b>	N/A	18.000 €

MULTI N.V.	<b>Installation of tube - underwater works</b>	N/A	19.500 €
MULTI N.V.	<b>Delivery, installation and commissioning of complete setup</b>	N/A	12.000 €
MULTI N.V.	<b>During test: inspection &amp; garbage removal, including crantage (1/wk)</b>	N/A	12.000 €

Total: 930.775 €

#### D.1.3 Equipment

Partner	Description	Investment	Award Procedure	Amount
Vlaams Instituut voor de Zee	<b>Sampling and laboratory consumables</b>		Other	34.000 €
Université du Littoral Côte d'Opale	<b>Aquatic drone</b>		Competitive negotiated procedure	25.000 €
IVN Natuureducatie	<b>Materials for monitoring</b>		N/A	2.000 €
IVN Natuureducatie	<b>Garbage bin and other prevention materials</b>		Restricted procedure	23.000 €
IVN Natuureducatie	<b>Litter bags</b>		N/A	6.000 €
IVN Natuureducatie	<b>Communication materials</b>		N/A	4.000 €
Noria Sustainable Innovators	<b>CirCleaner</b>		N/A	115.000 €
Noria Sustainable Innovators	<b>Cameras for monitoring</b>		N/A	22.700 €
Noria Sustainable Innovators	<b>Water column measuring tool</b>		N/A	16.500 €
Noria Sustainable Innovators	<b>OSPAR analysis tool</b>		N/A	8.880 €
Noria Sustainable Innovators	<b>GPS tracers</b>		N/A	10.760 €
Noria Sustainable Innovators	<b>Material for knowledge sessions, support tool, serious game and reports</b>		N/A	8.700 €
Stichting De Noordzee	<b>Citizen science start packages</b>		Framework contract	2.000 €
Stichting De Noordzee	<b>Website costs</b>		Framework contract	1.000 €
Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux	<b>Equipment for the training course</b>		Three-offer rule	5.000 €
Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux	<b>Equipment for equipment testing</b>		Three-offer rule	10.000 €
Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux	<b>Equipment for the data collection</b>		Three-offer rule	10.000 €
Société d'Exploitation du Centre national de la Mer	<b>Labo units/ science tables</b>		Open procedure	42.000 €
Société d'Exploitation du Centre national de la Mer	<b>Equipment for Children's Academy: Trinocular &amp; digital microscopes,</b>		Open procedure	10.100 €



cameras			
Société d'Exploitation du Centre national de la Mer	<b>Digital equipment for Children's Academy: tablets, interactive smart board</b>	Open procedure	7.650 €
Société d'Exploitation du Centre national de la Mer	<b>Annual subscription for IStock/Getty</b>	Framework contract	8.100 €
Société d'Exploitation du Centre national de la Mer	<b>Annual subscription for Suite Adobe Creative Cloud</b>	Framework contract	2.550 €
Kommunes Internationale Miljøorganisation	<b>Litter traps</b>	N/A	12.000 €
Kommunes Internationale Miljøorganisation	<b>Awareness materials</b>	N/A	5.000 €
Kommunes Internationale Miljøorganisation	<b>Test equipment</b>	N/A	12.000 €
Lemvig Vand A/S	<b>Measuring instruments and machinery</b>	Three-offer rule	48.000 €

Total: 451.940 €

#### D.1.4 Infrastructure and works









Partner	Description	Investment	Award Procedure	Amount
Lemvig Vand A/S	<b>Metering station at outfall (small structure, as well as pipes and fittings for handling wastewater and rainwater)</b>		Three-offer rule	18.000 €








Total: 18.000 €

## D.2 Funding

D.2 Project budget per co-financing source (fund) - breakdown per partner

### EU Partners - ERDF

Partner	Funding	Co-financing rate (%)	% of total Funding	Public contribution	Private contribution	Total contribution	TOTAL ELIGIBLE BUDGET
 1 Carl von Ossietzky Universität Oldenburg	554.700 €	60%	16%	369.800 €	0 €	369.800 €	924.500 €
 1.1 Amt für regionale Landesentwicklung Weser-Ems	33.988 €	60%	1%	22.659 €	0 €	22.659 €	56.647 €
 2 Hoogheemraadschap Hollands Noorderkwartier	114.566 €	60%	3%	76.378 €	0 €	76.378 €	190.944 €
 3 Stichting De Noordzee	230.310 €	60%	7%	153.540 €	0 €	153.540 €	383.850 €
 4 IVN Natuureducatie	246.663 €	60%	7%	164.442 €	0 €	164.442 €	411.105 €
 5 Vlaams Instituut voor de Zee	369.030 €	60%	11%	246.020 €	0 €	246.020 €	615.050 €
 6 Noria Sustainable Innovators	310.545 €	60%	9%	207.030 €	0 €	207.030 €	517.575 €
 7 International Marine and Dredging Consultants NV	82.500 €	60%	2%	55.000 €	0 €	55.000 €	137.500 €









 8 Societe d'Exploitation du Centre national de la Mer	335.564 €	60%	10%	223.710 €	0 €	223.710 €	559.274 €
 9 Université du Littoral Côte d'Opale	219.985 €	60%	6%	146.656 €	0 €	146.656 €	366.641 €
 10 Centre d'études et d'Expertise sur les Risques, l'Environnement, la Mobilité et l'Aménagement	149.400 €	60%	4%	99.600 €	0 €	99.600 €	249.000 €
 11 Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux	162.600 €	60%	5%	108.400 €	0 €	108.400 €	271.000 €
 12 MULTI N.V.	227.638 €	60%	7%	151.758 €	0 €	151.758 €	379.396 €
 14 Kommunenes Internationale Miljøorganisation	201.960 €	60%	6%	134.640 €	0 €	134.640 €	336.600 €
 15 Lemvig Vand A/S	231.375 €	60%	7%	154.250 €	0 €	154.250 €	385.625 €
<b>Sub-total for beneficiaries outside (the Union part of) the programme area</b>	- €	60%	%	- €	- €	- €	- €
<b>EU Partners Total</b>	<b>3.470.824 €</b>	<b>60%</b>	<b>100%</b>	<b>2.313.883 €</b>	<b>0 €</b>	<b>2.313.883 €</b>	<b>5.784.707 €</b>

#### Norwegian beneficiaries – ERDF-equivalent

Partner	Funding	Co-financing rate (%)	% of total Funding	Public contribution	Private contribution	Total contribution	TOTAL ELIGIBLE BUDGET
<b>Norway Total</b>	- €	50%	0%	- €	- €	- €	- €

### D.3 Spending plan

#### D.3 Project budget – overview per partner / per period

Partner	Preparation	Year #1 (05/2023- 12/2023)	Year #2 (01/2024- 12/2024)	Year #3 (01/2025- 12/2025)	Year #4 (01/2026- 04/2026)	TOTAL ELIGIBLE BUDGET
 1 Carl von Ossietzky Universität Oldenburg	40.000 €	196.555 €	294.834 €	294.834 €	98.277 €	924.500 €
 1.1 Amt für regionale Landesentwicklung Weser-Ems	0 €	12.587 €	18.885 €	18.885 €	6.290 €	56.647 €
 2 Hoogheemraadschap Hollands Noorderkwartier	0 €	47.736 €	63.648 €	63.648 €	15.912 €	190.944 €
 3 Stichting De Noordzee	0 €	85.300 €	127.950 €	127.950 €	42.650 €	383.850 €
 4 IVN Natuureducatie	0 €	162.776 €	117.035 €	97.035 €	34.259 €	411.105 €
 5 Vlaams Instituut voor de Zee	- €	153.762 €	205.017 €	205.017 €	51.254 €	615.050 €
 6 Noria Sustainable Innovators	0 €	260.000 €	180.000 €	55.000 €	22.575 €	517.575 €
 7 International Marine and Dredging Consultants NV	0 €	103.125 €	34.375 €	0 €	0 €	137.500 €

 8 Societe d'Exploitation du Centre national de la Mer	0 €	143.228 €	191.425 €	179.725 €	44.896 €	559.274 €
 9 Université du Littoral Côte d'Opale	0 €	107.660 €	113.214 €	113.214 €	32.553 €	366.641 €
 10 Centre d'études et d'Expertise sur les Risques, l'Environnement, la Mobilité et l'Aménagement	0 €	62.500 €	82.500 €	82.500 €	21.500 €	249.000 €
 11 Centre de documentation, de recherche et d'expérimentations sur les pollutions accidentelles des eaux	0 €	65.000 €	98.000 €	98.000 €	10.000 €	271.000 €
 12 MULTI N.V.	0 €	379.396 €	0 €	0 €	0 €	379.396 €
 14 Kommunenes Internationale Miljøorganisation	0 €	84.150 €	112.200 €	112.200 €	28.050 €	336.600 €
 15 Lemvig Vand A/S	0 €	75.000 €	143.063 €	143.062 €	24.500 €	385.625 €
<b>Total</b>	40.000 €	1.938.775 €	1.782.146 €	1.591.070 €	432.716 €	5.784.707 €
<b>% of Total budget</b>	1 %	34 %	31 %	28 %	7 %	100 %
<b>ERDF</b>	24.000 €	1.163.265 €	1.069.288 €	954.642 €	259.630 €	3.470.824 €
<b>Norwegian funding</b>	- €	- €	- €	- €	- €	- €

The planning of the Lead Partner includes a lump sum of 40.000€ as the preparation costs option has been selected.

## E. Submission

### Annex

Title	File
<b>Living lab structure / list of supporters &amp; associated partners</b>	<a href="#">20221114130...REAnnex.pdf</a>

### Project Owner

Antonia Krebs @ University of Oldenburg

### Date of submission

14/11/2022 13:42:14

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