1. Identification

Call	Date of submission
C1	25/04/2022

1.1. Full name of the project

Strategies for favorable mass balance of micropollutants – remove micropollutants from waters

93 / 250 characters

1.2. Short name of the project

ReNoWate

8 / 20 characters

1.3. Programme priority

2. Water-smart societies

1.4. Programme objective

2.1 Sustainable waters

1.6. Project duration

Contracting start	22/09/2022	**Contracting end**	31/12/2022
Implementation start	01/01/2023	**Implementation end**	31/12/2025
		Duration of implementation phase (months)	36
Closure start	01/01/2026	**Closure end**	31/03/2026

1.7. Project summary

The micropollutants (MP) should be controlled at source. The challenge is to control them effectively or prevent their release into the environment. ReNoWate provides solutions to prevent the release of micropollutants into the environment solving problems for waste water treatment plant operators and municipalities. They cannot work on solutions alone, they understand the problem only fragmentarily and need support from other stakeholders.
ReNoWate focuses on developing successful solutions that can be replicated thanks to the cross-border cooperation between municipalities, industry, and research. The solution for this challenge is to identify pollutants from municipal and industrial sources in local catchments heavily influenced by the industry for future central or decentralized treatment. We test 4 groups of solutions:
1. Sustainable GAC-based removal of micropollutants,
2. Nature-based solutions (NBS) pilot station for stormwater treatment,
3. Energy-efficient removal of PFAS from wastewater
4. Energy and parameters' optimization of pharmaceuticals removal in SBR
As a result of 7 pilots, solutions will be created that can be copied in other regions.
The project will build a network of aware stakeholders who share solutions with municipalities, and regional and national authorities.
In addition, involving regional and national authorities will provide them with knowledge about the problem and remedies.

1,434 / 1,500 characters

1.8. Summary of the partnership

Infrastructure and public service providers are the largest group of partners. They are the main target group. Urban (municipal) ww treatment plants are usually not adapted to remove PFAS and pharmaceuticals. However, operators will more and more often have to analyze their catchments looking for pollution sources and, where necessary, also develop technologies to remove micropollutant that flowed into the WWTP. The infrastructure and public service providers come from three countries (DK, PL, SE), but the solutions will be directed to all countries participating in the project. Higher education and scientific institutions are an important group of partners because they have the competencies needed to lead pilots and improve solutions. They are the source of the current state of knowledge and have a supporting role. Their knowledge of leading pilots, and managing the process of improving solutions will be used. Interest groups and NGOs act as a network of contacts in the BSR on which the transfer of solutions will be based (WP3). The problem of PFAS in the environment is still poorly known and unregulated. Hence, the target groups being local, regional, and national authorities will be covered by the project. The pilots developed during the project will provide them with ready-made solutions, which will be indicated by the effective technologies refined in WP2. Thanks to the development of guidelines in WP1 and the development of the Handbook, it will be possible to transfer knowledge to local, regional and national authorities.

1,555 / 3,000 characters

1.11. Project Budget Summary

Financial resources [in EUR]		Preparation costs	Planned project budget
ERDF	ERDF co-financing	0.00	3,265,625.36
	Own contribution ERDF	0.00	816,406.34
	ERDF budget	0.00	4,082,031.70
NO	NO co-financing	0.00	0.00
	Own contribution NO	0.00	0.00
	NO budget	0.00	0.00
NDICI	NDICI co-financing	0.00	0.00
	Own contribution NDICI	0.00	0.00
	NDICI budget	0.00	0.00
RU	RU co-financing	0.00	0.00
	Own contribution RU	0.00	0.00
	RU budget	0.00	0.00
TOTAL	**Total Programme co-financing**	0.00	3,265,625.36
	Total own contribution	0.00	816,406.34
	Total budget	0.00	4,082,031.70

2. Partnership

2.1. Overview: Project Partnership

2.1.1 Project Partners

No.	LP/PP	Organisation (English)	Organisation (Original)	Country	Type of partner	Legal status	Partner budget in the project	Active/inactive	
								Status	from
1	LP	Chamber of Economy Polish Waterworks	Izba Gospodarcza Wodociągi Polskie	PL	Interest group	a)	330,852.00 €	Active	22/09/2022
2	PP	Gdansk Water Foundation	Gdańska Fundacja Wody	PL	NGO	b)	129,400.00 €	Active	22/09/2022
3	PP	Stockholm water and waste	Stockholm Vatten och Avfall AB	SE	Infrastructure and public service provider	a)	64,500.00 €	Active	22/09/2022
4	PP	Norrvatten	Kommunalförbundet Norrvatten	SE	Infrastructure and public service provider	a)	29,691.50 €	Active	22/09/2022
5	PP	Aarhus University	Aarhus Universitet	DK	Higher education and research institution	a)	629,280.80 €	Active	22/09/2022
6	PP	Aarhus Water	Aarhus Vand A/S	DK	Infrastructure and public service provider	a)	283,730.00 €	Active	22/09/2022
7	PP	Institute of Food Safety, Animal Health and Environment „BIOR”	Pārtikas drošības, dzīvnieku veselības un vides zinātniskais institūts „BIOR”	LV	Higher education and research institution	a)	299,000.00 €	Active	22/09/2022
8	PP	Estonian Waterworks Association	Eesti Vee-ettevõtete Liit	EE	Interest group	a)	127,160.00 €	Active	22/09/2022
9	PP	Gdansk Water Ltd.	Gdańskie Wody Sp. z o.o.	PL	Infrastructure and public service provider	a)	199,500.00 €	Active	22/09/2022
10	PP	Hillerød Utility	Hillerød Forsyning	DK	Infrastructure and public service provider	a)	190,500.00 €	Active	22/09/2022
11	PP	Helsinki Region Environmental Services Authority	Helsingin seudun ympäristöpalvelut - kuntayhtymä (HSY)	FI	Infrastructure and public service provider	a)	91,360.00 €	Active	22/09/2022
12	PP	Berlin Centre of Competence for Water GmbH	KWB Kompetenzzentrum Wasser Berlin gGmbH	DE	Higher education and research institution	b)	166,492.00 €	Active	22/09/2022
13	PP	Riga Technical university	Rīgas Tehniskā universitāte	LV	Higher education and research institution	a)	300,000.00 €	Active	22/09/2022
14	PP	Swedish University of Agricultural Sciences (SLU)	Sveriges lantbruksuniversitet (SLU)	SE	Higher education and research institution	a)	318,940.80 €	Active	22/09/2022
15	PP	Gdansk University of Technology	Politechnika Gdańska	PL	Higher education and research institution	a)	566,826.10 €	Active	22/09/2022
16	PP	Lake Malarens Water Conservation Association	Mälarens vattenvårdsförbund	SE	NGO	a)	91,500.00 €	Active	22/09/2022
17	PP	Fredericia Wasterwater and Energy Ltd	Frederica Spildevand og Energi A/S	DK	Infrastructure and public service provider	a)	165,830.30 €	Active	22/09/2022
18	PP	Water and Sewerage Company STAR - WIK	Przedsiębiorstwo Wodociągów i Kanalizacji STAR - WiK Spółka z o.o.	PL	Infrastructure and public service provider	a)	97,468.20 €	Active	22/09/2022

2.1.2 Associated Organisations

No.	Organisation (English)	Organisation (Original)	Country	Type of Partner
AO 1	Latvian water and wastewater works association	LATVIJAS ŪDENSAPGĀDES UN KANALIZĀCIJAS UZŅĒMUMU ASOCIĀCIJA	LV	Interest group
AO 2	“TALSU ŪDENS” Ltd	SIA “TALSU ŪDENS”	LV	Infrastructure and public service provider
AO 3	Ādažu ūdens, Ltd.	"Ādažu ūdens" SIA	LV	Infrastructure and public service provider
AO 4	Jurmala Water Ltd	SIA "Jūrmalas ūdens"	LV	Infrastructure and public service provider
AO 5	Jelgava Water Ltd	SIA "Jelgavas ūdens"	LV	Infrastructure and public service provider
AO 6	Riga Water Ltd.	SIA "Rīgas ūdens"	LV	Infrastructure and public service provider
AO 7	WWF Poland	WWF Polska	PL	NGO
AO 8	Køge Municipality	Køge Kommune	DK	Local public authority
AO 9	Fredericia Municipality	Fredericia Kommune	DK	Local public authority
AO 10	Baltic Marine Environment Protection Commission Helsinki Commission – HELCOM	Baltic Marine Environment Protection Commission Helsinki Commission – HELCOM	FI	International governmental organisation
AO 11	EurEau	EurEau	BE	Interest group
AO 12	Gdańsk Municipality	Urząd Miasta Gdańsk	PL	Local public authority

2.2 Project Partner Details - Partner 1

LP/PP Lead Partner

Partner Status Active

Active from 22/09/2022 **Inactive from**

Partner name:

Organisation in original language Izba Gospodarcza Wodociągi Polskie
34 / 250 characters

Organisation in English Chamber of Economy Polish Waterworks
36 / 250 characters

Department in original language n/a
3 / 250 characters

Department in English n/a
3 / 250 characters

Partner location and website:

Address Kasprowicza 2
13 / 250 characters

Postal Code 85-073
6 / 250 characters

Town Bydgoszcz
9 / 250 characters

Website www.igwp.org.pl
15 / 100 characters

Country Poland

NUTS1 code Makroregion północny

NUTS2 code Kujawsko-pomorskie

NUTS3 code Bydgosko-toruński

Partner ID:

Organisation ID type	Tax identification number (NIP)
Organisation ID	5540312444
VAT Number Format	PL + 10 digits
VAT Number	N/A ☐ PL5540312444 (12 / 50 characters)
PIC	n/a (3 / 9 characters)

Partner type:

Legal status	a) Public	
Type of partner	Interest group	Trade union, foundation, charity, voluntary association, club, etc. other than NGOs
Sector (NACE)	94.12 - Activities of professional membership organisations	

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities?	No

Role of the partner organisation in this project:

The Chamber is the project leader. It will participate in all the Work Plans. WP3 will require the most work. The Chamber will also be a leader in the collection of all materials to elaborate and complete the Output. The project Output will be constructed from all deliverables. So it will be created throughout the project. The Chamber will use its network of members and the cooperation at EurEaui WWF for transferring solutions during workshops and conferences and via its own media channels and different networks.

519 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ○ No

2.2 Project Partner Details - Partner 2

LP/PP	Project Partner		
Partner Status	Active		
	Active from	22/09/2022	**Inactive from**

Partner name:

Organisation in original language	Gdańska Fundacja Wody (21 / 250 characters)
Organisation in English	Gdansk Water Foundation (23 / 250 characters)
Department in original language	n/a (3 / 250 characters)
Department in English	n/a (3 / 250 characters)

Partner location and website:

Address	Ul. Równa 19/21 Budynek B (25 / 250 characters)	**Country**	Poland
Postal Code	80-067 (6 / 250 characters)	**NUTS1 code**	Makroregion północny
Town	Gdansk (6 / 250 characters)	**NUTS2 code**	Pomorskie
Website	www.gfw.pl (10 / 100 characters)	**NUTS3 code**	Gdański

Partner ID:

Organisation ID type	Tax identification number (NIP)
Organisation ID	5831018554
VAT Number Format	PL + 10 digits
VAT Number	**N/A** ☐ PL5831018554 (12 / 50 characters)
PIC	984366186 (9 / 9 characters)

Partner type:

Legal status	b) Private	
Type of partner	NGO	Non-governmental organisations, such as Greenpeace, WWF, etc.
Sector (NACE)	85.59 - Other education n.e.c.	

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities? Partly

VAT explanation

Gdansk Water Foundation is an active VAT taxpayer with identification number PL5831018554.
Due to the fact that in training activity which is main activity of GFW one part of sales services is charged 23% VAT and another one is exempt from tax (sales mixed), GFW is required to calculate the proportion of sales for a given tax year.
On basis of the proportion ratio GFW shall deduct VAT from the sale invoices. Ineligible to be deducted VAT amount is added to the net value.
The legal footing: VAT Act of 11.03.2004 (Dz.U. 2011 nr 177 poz. 1054). Articles: 90 and 91 define the principles of the deductibility of VAT.

620 / 1,000 characters

Financial data

Reference period	01/01/2020	–	31/12/2020
Staff headcount [in annual work units (AWU)]			4.9
Employees [in AWU]			4.9
Persons working for the organisation being subordinated to it and considered to be employees under national law [in AWU]			0.0
Owner-managers [in AWU]			0.0
Partners engaged in a regular activity in the organisation and benefiting from financial advantages from the organisation [in AWU]			0.0
Annual turnover [in EUR]			95,626.90
Annual balance sheet total [in EUR]			57,715.64
Operating profit [in EUR]			19,123.43

Role of the partner organisation in this project:

Sub-leader od WP3. Preparation of project communication strategy, graphic templates for the project internal and external communication. Coordination of the communication strategy realisation and workhops.

206 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ○ No

2.2 Project Partner Details - Partner 3

LP/PP Project Partner

Partner Status Active

Active from 22/09/2022 **Inactive from**

Partner name:

Organisation in original language Stockholm Vatten och Avfall AB

30 / 250 characters

Organisation in English Stockholm water and waste

25 / 250 characters

Department in original language Vatten och Avlopp

17 / 250 characters

Department in English Water and Sewerage

18 / 250 characters

Partner location and website:

Address Lovö vattenverk, Strömdalsvägen 71

34 / 250 characters

Postal Code 173 93 Drottningholm

20 / 250 characters

Town Stockholm

9 / 250 characters

Website www.stockholmvattenochavfall.se

31 / 100 characters

Country Sweden

NUTS1 code Östra Sverige

NUTS2 code Stockholm

NUTS3 code Stockholms län

Partner ID:

Organisation ID type Organisation number (Organisationsnummer)

Organisation ID 556210-6855

VAT Number Format SE + 12 digits

VAT Number N/A ☐ SE556210685501

14 / 50 characters

PIC N/A

3 / 9 characters

Partner type:

Legal status a) Public

Type of partner Infrastructure and public service provi — Public transport, utility company (water supply, electricity supply, sewage, gas, waste collection, airport, port, railway, etc.)

Sector (NACE) 36.00 - Water collection, treatment and supply

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities? Yes

Role of the partner organisation in this project:

Stockholm vatten och Avfall (SVOA) provides drinking water to approx. 1,5 million people in the Stockholm region from two drinking water treatment plants (DWTP) using raw water from lake Mälaren. SVOA will mainly be involved in WP1, which will focus on source tracing PFAS upstream SVOA's DWTP:s by using mass flow calculations and hydrodynamic models of Mälaren. As of today many sources of PFAS, both point and diffuse, are known but it is difficult to know their relative contribution to Mälaren due to lack of data, both spatially and temporal. Mapping PFAS mass flow is a key in finding those sources or places, both known and unknown, which poses the greatest risk to Mälaren and should be prioritized by municipalities. The results from this project is important for drinking water producers and municipalities of Mälaren in their work of improving the water quality and water safety in the Stockholm region, and in the bigger picture the Baltic Sea.

957 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ○ No

2.2 Project Partner Details - Partner 4

LP/PP Project Partner

Partner Status Active

Active from 22/09/2022 **Inactive from**

Partner name:

Organisation in original language Kommunalförbundet Norrvatten

28 / 250 characters

Organisation in English Norrvatten

10 / 250 characters

Department in original language Kvalitet och utveckling

23 / 250 characters

Department in English Quality and development

23 / 250 characters

Partner location and website:

Address BOX 2093

8 / 250 characters

Postal Code 16902

5 / 250 characters

Town Solna

5 / 250 characters

Website www.norrvatten.se

17 / 100 characters

Country Sweden

NUTS1 code Östra Sverige

NUTS2 code Stockholm

NUTS3 code Stockholms län

Partner ID:

Organisation ID type	Organisation number (Organisationsnummer)
Organisation ID	222000-0158
VAT Number Format	SE + 12 digits
VAT Number	N/A ☐ SE222000015801 (14 / 50 characters)
PIC	887579586 (9 / 9 characters)

Partner type:

Legal status	a) Public	
Type of partner	Infrastructure and public service provi	Public transport, utility company (water supply, electricity supply, sewage, gas, waste collection, airport, port, railway, etc.)
Sector (NACE)	36.00 - Water collection, treatment and supply	

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities? Yes

Role of the partner organisation in this project:

PFAS expertise in drinking water production, collect data of polluted site, PFAS source tracing and source apportionment of PFAS upstream the drinking water plant, In hydrodynamic models, PFAS risk analysis and analysing PFAS in water and sediment samples

255 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ○ No

2.2 Project Partner Details - Partner 5

LP/PP	Project Partner		
Partner Status	Active		
	Active from	22/09/2022	**Inactive from**

Partner name:

Organisation in original language	Aarhus Universitet (18 / 250 characters)
Organisation in English	Aarhus University (17 / 250 characters)
Department in original language	Institut for Miljøvidenskab (27 / 250 characters)
Department in English	Department for Environmental Science (36 / 250 characters)

Partner location and website:

Address	Frederiksborgvej 399 (20 / 250 characters)	**Country**	Denmark
Postal Code	4000 (4 / 250 characters)	**NUTS1 code**	Danmark
Town	Roskilde (8 / 250 characters)	**NUTS2 code**	Sjælland
Website	www.envs.au.dk (14 / 100 characters)	**NUTS3 code**	Østsjælland

Partner ID:

Organisation ID type	Civil registration number (CPR)
Organisation ID	31119103
VAT Number Format	DK + 8 digits
VAT Number	**N/A** ☐ DK31 11 91 03 (13 / 50 characters)
PIC	999997736 (9 / 9 characters)

Partner type:

Legal status	a) Public	
Type of partner	Higher education and research instituti	University faculty, college, research institution, RTD facility, research cluster, etc.
Sector (NACE)	72.19 - Other research and experimental development on natural sciences and engineering	

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities? Yes

Financial data

Reference period	01/01/2020 –	31/12/2020
Staff headcount [in annual work units (AWU)]		8,005.0
Employees [in AWU]		8,005.0
Persons working for the organisation being subordinated to it and considered to be employees under national law [in AWU]		0.0
Owner-managers [in AWU]		0.0
Partners engaged in a regular activity in the organisation and benefiting from financial advantages from the organisation [in AWU]		0.0
Annual turnover [in EUR]		900,043,414.00
Annual balance sheet total [in EUR]		-31,845.00
Operating profit [in EUR]		-31,845.00

Role of the partner organisation in this project:

Lead WP 2
Provide knowledge on processes that can be used for micropollutant removal from wastewater.
Conduct target analysis for pharmaceuticals and non target analysis of micropollutant in wastewater

202 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ○ No

State aid relevance

For the partner type selected, the Programme sees a medium to high risk for implementing State aid relevant activities. If the partner is of the opinion that its activities are not State aid relevant, it can ask the MA/JS for a plausibility check on the State aid relevance. Does the partner want to do this?

○ Yes ○ No

2.2 Project Partner Details - Partner 6

LP/PP	Project Partner		
Partner Status	Active		
Active from	22/09/2022	**Inactive from**	

Partner name:

Organisation in original language	Aarhus Vand A/S (15 / 250 characters)
Organisation in English	Aarhus Water (12 / 250 characters)
Department in original language	Produktion (10 / 250 characters)
Department in English	Production (10 / 250 characters)

Partner location and website:

Address	Gunnar Clausensvej 34 (21 / 250 characters)	**Country**	Denmark
Postal Code	8260 (4 / 250 characters)	**NUTS1 code**	Danmark
Town	Viby J (6 / 250 characters)	**NUTS2 code**	Midtjylland
Website	www.aarhusvand.dk/international (31 / 100 characters)	**NUTS3 code**	Østjylland

Partner ID:

Organisation ID type	Civil registration number (CPR)
Organisation ID	32562361
VAT Number Format	DK + 8 digits
VAT Number	**N/A** ☐ DK32 56 23 61 (13 / 50 characters)
PIC	N/A (3 / 9 characters)

Partner type:

Legal status	a) Public	
Type of partner	Infrastructure and public service provi	Public transport, utility company (water supply, electricity supply, sewage, gas, waste collection, airport, port, railway, etc.)

Sector (NACE) 36.00 - Water collection, treatment and supply

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities? No

Role of the partner organisation in this project:

WP2, Activity 3.1. Do a pilot in Aarhus with two different type og activated carbon.

84 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ○ No

2.2 Project Partner Details - Partner 7

LP/PP Project Partner

Partner Status Active

Active from 22/09/2022 **Inactive from**

Partner name:

Organisation in original language Pārtikas drošības, dzīvnieku veselības un vides zinātniskais institūts „BIOR”

77 / 250 characters

Organisation in English Institute of Food Safety, Animal Health and Environment „BIOR”

62 / 250 characters

Department in original language Ķīmijas laboratorija

20 / 250 characters

Department in English Chemistry Laboratory

20 / 250 characters

Partner location and website:

Address Lejupes street 3

16 / 250 characters

Postal Code LV-1076

7 / 250 characters

Town Riga

4 / 250 characters

Website www.bior.lv

12 / 100 characters

Country Latvia

NUTS1 code Latvija

NUTS2 code Latvija

NUTS3 code Vidzeme

Partner ID:

Organisation ID type	Unified registration number (Vienotais reģistrācijas numurs)
Organisation ID	90009235333
VAT Number Format	LV + 11 digits
VAT Number	N/A ☐ LV90009235333 (13 / 50 characters)
PIC	(0 / 9 characters)

Partner type:

Legal status	a) Public
Type of partner	Higher education and research instituti — University faculty, college, research institution, RTD facility, research cluster, etc.
Sector (NACE)	72.19 - Other research and experimental development on natural sciences and engineering

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities? No

Role of the partner organisation in this project:

BIOR will contribute to (WP1) by development and validation of analytical methods for the determination of PFAS in waters and applying of developed methods to real samples (wastewater, pilot samples) for the occurrence data generation (WP2). In addition, suspect target analytical protocols will be developed for the unknown contaminants.
The BIOR hosts extensive facilities for conducting analytical research in the field of food contaminants, including different types of chromatographic and mass spectrometric instrumentation (tandem MS, TOF, Orbitrap, FT-ICR-MS). These advanced instrumental techniques are complemented by the highly trained staff ensuring the great expertise in food contaminant analysis and data treatment. BIOR scientists are highly experienced in realization of scientific projects and their familiarity in contemporary food safety topics gained by involvement in relevant networks (EFSA and EURL-POP working groups).

943 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ○ No

State aid relevance

For the partner type selected, the Programme sees a medium to high risk for implementing State aid relevant activities. If the partner is of the opinion that its activities are not State aid relevant, it can ask the MA/JS for a plausibility check on the State aid relevance. Does the partner want to do this?

○ Yes ○ No

2.2 Project Partner Details - Partner 8

LP/PP	Project Partner		
Partner Status	Active		
Active from	22/09/2022	**Inactive from**	

Partner name:

Organisation in original language	Eesti Vee-ettevõtete Liit (26 / 250 characters)
Organisation in English	Estonian Waterworks Association (31 / 250 characters)

Department in original language	n/a (3 / 250 characters)
Department in English	n/a (3 / 250 characters)

Partner location and website:

Address	Järvevana tee 3 (15 / 250 characters)	**Country**	Estonia
Postal Code	10132 (5 / 250 characters)	**NUTS1 code**	Eesti
Town	Tallinn (8 / 250 characters)	**NUTS2 code**	Eesti
Website	www.evel.ee (11 / 100 characters)	**NUTS3 code**	Põhja-Eesti

Partner ID:

Organisation ID type	Registration code (Registrikood)
Organisation ID	80091146
VAT Number Format	EE + 9 digits
VAT Number	N/A ☐ EE101398666 (11 / 50 characters)
PIC	890676796 (9 / 9 characters)

Partner type:

Legal status	a) Public	
Type of partner	Interest group	Trade union, foundation, charity, voluntary association, club, etc. other than NGOs
Sector (NACE)	94.12 - Activities of professional membership organisations	

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities? Yes

Role of the partner organisation in this project:

EVELwill participate in non-target screening cooperating with Fredericia's WWTP. Non-target and suspect screening in effluent water will be offered to other utilities and municipalities in the consortium. EVEL will participate in developing the guidelines for technologies as well as recommendations for national conditions based on the pilot results for the ReNoWate (WP1 and WP2). It will participate in WP3 supporting the elaboration of the Output (Handbook).

466 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ○ No

2.2 Project Partner Details - Partner 9

LP/PP	Project Partner

Partner Status	Active		
Active from	22/09/2022	**Inactive from**	

Partner name:

Organisation in original language	Gdańskie Wody Sp. z o.o. (24 / 250 characters)
Organisation in English	Gdansk Water Ltd. (17 / 250 characters)
Department in original language	n/a (3 / 250 characters)
Department in English	n/a (3 / 250 characters)

Partner location and website:

Address	5 Andruszkiewicza Street (24 / 250 characters)	**Country**	Poland
Postal Code	80-601 (6 / 250 characters)	**NUTS1 code**	Makroregion północny
Town	Gdańsk (6 / 250 characters)	**NUTS2 code**	Pomorskie
Website	www.gdanskiewody.pl (19 / 100 characters)	**NUTS3 code**	Trójmiejski

Partner ID:

Organisation ID type	Tax identification number (NIP)
Organisation ID	5830010823
VAT Number Format	PL + 10 digits
VAT Number	N/A ☐ PL5830010823 (12 / 50 characters)
PIC	913968436 (9 / 9 characters)

Partner type:

Legal status	a) Public	
Type of partner	Infrastructure and public service provi	Public transport, utility company (water supply, electricity supply, sewage, gas, waste collection, airport, port, railway, etc.)
Sector (NACE)	37.00 - Sewerage	

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities?	Yes

Role of the partner organisation in this project:

Gdansk Water Ltd. took part in the Interreg BSR 2014-2020 project, Fanplesstics-sea, from January 2019 to December 2021. One of the main task of the Gdansk Water company in the range of this project was the installation of the pilot station to verify the efficiency of microplastics removal from urban stormwater. The pilot is an artificial wetland (constructed wetland), using Nature Based Solutions in the form of aquatic plants (common reed) and filtration beds (gravel of suitably selected grain size). It is located about 800 meters from the place where stormwater from a stormwater collector is directed to the Baltic sea. The stormwater collector, on which the pilot was installed, discharges stormwater from a catchment area of approximately 1740 hectares (i.e. 17.4 square kilometers). It's a highly urbanized catchment area.
The partner is going to adjust the existing installation to test its efficiency towards the most problematic MPs in the rang of the ReNoWate project.

985 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ○ No

2.2 Project Partner Details - Partner 10

LP/PP Project Partner

Partner Status Active

Active from 22/09/2022 **Inactive from**

Partner name:

Organisation in original language Hillerød Forsyning

18 / 250 characters

Organisation in English Hillerød Utility

16 / 250 characters

Department in original language Hillerød Spildevand A/S

23 / 250 characters

Department in English Hillerød Sewage

15 / 250 characters

Partner location and website:

Address Solrødgårds Allé 1

18 / 250 characters

Postal Code 3400

4 / 250 characters

Town Hillerød

8 / 250 characters

Website www.hillerodforsyning.dk

24 / 100 characters

Country Denmark

NUTS1 code Danmark

NUTS2 code Hovedstaden

NUTS3 code Nordsjælland

Partner ID:

Organisation ID type Civil registration number (CPR)

Organisation ID 32768024

VAT Number Format DK + 8 digits

VAT Number **N/A** ☐ DK32 76 80 24

13 / 50 characters

PIC n/a

3 / 9 characters

Partner type:

Legal status	a) Public	
Type of partner	Infrastructure and public service provi	Public transport, utility company (water supply, electricity supply, sewage, gas, waste collection, airport, port, railway, etc.)
Sector (NACE)	37.00 - Sewerage	

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities? No

Role of the partner organisation in this project:

HFORS will be involved in WP 2 and indeed lead activity 1: HFORS will conduct trials for decreaseing dosing of ozone in combination with operating GAC filters while at the same time enhance the liftime of the GAC. HFORS will participate in WP2 task 3 and study the possibilities for removal of PFAS at low levels by means of foam fractionation in various places in the activated sludge plant.

392 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ○ No

2.2 Project Partner Details - Partner 11

LP/PP	Project Partner		
Partner Status	Active		
Active from	22/09/2022	**Inactive from**	

Partner name:

Organisation in original language	Helsingin seudun ympäristöpalvelut -kuntayhtymä (HSY)
	53 / 250 characters
Organisation in English	Helsinki Region Environmental Services Authority
	48 / 250 characters
Department in original language	Jätevedenpuhdistus
	18 / 250 characters
Department in English	Wastewater treatment
	20 / 250 characters

Partner location and website:

Address	Ilmalantori 1	**Country**	Finland
	13 / 250 characters		
Postal Code	00240	**NUTS1 code**	Manner-Suomi
	5 / 250 characters		
Town	Helsinki	**NUTS2 code**	Helsinki-Uusimaa
	8 / 250 characters		
Website	www.hsy.fi	**NUTS3 code**	Helsinki-Uusimaa
	10 / 100 characters		

Partner ID:

Organisation ID type	Business Identity Code (Y-tunnus)
Organisation ID	2274241-9
VAT Number Format	FI + 8 digits
VAT Number	N/A ☐ FI22742419 (10 / 50 characters)
PIC	986046420 (9 / 9 characters)

Partner type:

Legal status	a) Public
Type of partner	Infrastructure and public service provi — Public transport, utility company (water supply, electricity supply, sewage, gas, waste collection, airport, port, railway, etc.)
Sector (NACE)	37.00 - Sewerage

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities? Yes

Role of the partner organisation in this project:

Activity 2.1: Piloting combined phosphorus and micropollutant removal in a technical scale (two treatment lines with max 400 l/h capacity) pilot

144 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ○ No

2.2 Project Partner Details - Partner 12

LP/PP	Project Partner		
Partner Status	Active		
	Active from 22/09/2022	**Inactive from**	

Partner name:

Organisation in original language	KWB Kompetenzzentrum Wasser Berlin gGmbH (40 / 250 characters)
Organisation in English	Berlin Centre of Competence for Water GmbH (42 / 250 characters)
Department in original language	Prozessinnovation (17 / 250 characters)
Department in English	Process innovation (18 / 250 characters)

Partner location and website:

Address	Cicerostraße 24 (15 / 250 characters)	**Country**	Germany

Postal Code	10709 (5 / 250 characters)	**NUTS1 code**	Berlin
Town	Berlin (6 / 250 characters)	**NUTS2 code**	Berlin
Website	www.kompetenz-wasser.de/en (26 / 100 characters)	**NUTS3 code**	Berlin

Partner ID:

Organisation ID type	Tax (identification) number (Steuer(identifikations)nummer)
Organisation ID	27/029/36145 (12 / 50 characters)
VAT Number Format	DE + 9 digits
VAT Number	N/A ☐ DE221139990 (11 / 50 characters)
PIC	998307123 (9 / 9 characters)

Partner type:

Legal status	b) Private	
Type of partner	Higher education and research instituti	University faculty, college, research institution, RTD facility, research cluster, etc.
Sector (NACE)	72.19 - Other research and experimental development on natural sciences and engineering	

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities? No

Financial data	**Reference period**	01/01/2021 –	31/12/2021
	Staff headcount [in annual work units (AWU)]		27.4
	Employees [in AWU]		27.4
	Persons working for the organisation being subordinated to it and considered to be employees under national law [in AWU]		0.0
	Owner-managers [in AWU]		0.0
	Partners engaged in a regular activity in the organisation and benefiting from financial advantages from the organisation [in AWU]		0.0
	Annual turnover [in EUR]		2,899,276.00
	Annual balance sheet total [in EUR]		2,773,479.00
	Operating profit [in EUR]		193,800.00

Role of the partner organisation in this project:

KWB supports the project partners in work package 2 with technical expertise as well as with the assessment of the performance and environmental profile of selected technologies.

179 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ○ No

State aid relevance

For the partner type selected, the Programme sees a medium to high risk for implementing State aid relevant activities. If the partner is of the opinion that its activities are not State aid relevant, it can ask the MA/JS for a plausibility check on the State aid relevance. Does the partner want to do this?

○ Yes ○ No

2.2 Project Partner Details - Partner 13

LP/PP	Project Partner		
Partner Status	Active		
Active from	22/09/2022	**Inactive from**	

Partner name:

Organisation in original language	Rīgas Tehniskā universitāte (27 / 250 characters)
Organisation in English	Riga Technical university (25 / 250 characters)
Department in original language	Ūdens pētniecības un vides biotehnoloģiju laboratorija (54 / 250 characters)
Department in English	Water Research and Environmental Biotechnology Laboratory (57 / 250 characters)

Partner location and website:

Address	Paula Valdena street 1-303 (26 / 250 characters)	**Country**	Latvia
Postal Code	LV-1048 (7 / 250 characters)	**NUTS1 code**	Latvija
Town	Riga (4 / 250 characters)	**NUTS2 code**	Latvija
Website	www.rtu.lv (10 / 100 characters)	**NUTS3 code**	Vidzeme

Partner ID:

Organisation ID type	Unified registration number (Vienotais reģistrācijas numurs)
Organisation ID	90000068977
VAT Number Format	LV + 11 digits
VAT Number	**N/A** ☐ LV90000068977 (13 / 50 characters)
PIC	999920718 (9 / 9 characters)

Partner type:

Legal status	a) Public	
Type of partner	Higher education and research instituti	University faculty, college, research institution, RTD facility, research cluster, etc.
Sector (NACE)	72.11 - Research and experimental development on biotechnology	

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities? No

Role of the partner organisation in this project:

To achieve the objective and generate practical results, the following tasks have been set up by RTU:
Determination of preconditions for piloting (RTU/BIOR) to identify the most significant sources of hazardous micropollutant (WP1). Development of the scheme of combined foam and SBR reactor (WP2) in collaboration with SLU. Construction of the pilot reactors and evaluation of their efficiency in real WWTP (WP2). Dissemination of the project results (WP3) through demonstration of pilot-scale technology for hazardous micropollutant removal.
Dissemination activities for members of municipal water utilities, local/regional permitting and monitoring authorities and industrial companies discharging effluents to the municipal WWTP to jointly assess the current situation, existing practices and possible challenges on local level, plan and implement the most efficient activities as well as hazardous micropollutant management also after the project lifetime.

964 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ○ No

State aid relevance

For the partner type selected, the Programme sees a medium to high risk for implementing State aid relevant activities. If the partner is of the opinion that its activities are not State aid relevant, it can ask the MA/JS for a plausibility check on the State aid relevance. Does the partner want to do this?

○ Yes ○ No

2.2 Project Partner Details - Partner 14

LP/PP Project Partner

Partner Status Active

Active from 22/09/2022 **Inactive from**

Partner name:

Organisation in original language Sveriges lantbruksuniversitet (SLU)

35 / 250 characters

Organisation in English Swedish University of Agricultural Sciences (SLU)

49 / 250 characters

Department in original language Institutionen för vatten och miljö

34 / 250 characters

Department in English Department of Aquatic Sciences and Assessment

45 / 250 characters

Partner location and website:

Address Gerda Nilssons väg 5

20 / 250 characters

Postal Code 756 51

6 / 250 characters

Town Uppsala

7 / 250 characters

Website www.slu.se

10 / 100 characters

Country Sweden

NUTS1 code Östra Sverige

NUTS2 code Östra Mellansverige

NUTS3 code Uppsala län

Partner ID:

Organisation ID type	Organisation number (Organisationsnummer)
Organisation ID	202100-2817
VAT Number Format	SE + 12 digits
VAT Number	N/A ☐ SE202100281701 (14 / 50 characters)
PIC	999887350 (9 / 9 characters)

Partner type:

Legal status	a) Public
Type of partner	Higher education and research instituti — University faculty, college, research institution, RTD facility, research cluster, etc.
Sector (NACE)	72.19 - Other research and experimental development on natural sciences and engineering

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities? Yes

Role of the partner organisation in this project:

SLU will be dedicated to identify sources for PFAS contamination at the selected locations using target, suspect and nontarget analysis methods (WP1). SLU will also contribute in WP2 to validate innovative treatment techniques for removal of PFAS and other hazardous compounds in water and lead the activity on energy efficient removal of PFAS from wastewater.

360 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ○ No

State aid relevance

For the partner type selected, the Programme sees a medium to high risk for implementing State aid relevant activities. If the partner is of the opinion that its activities are not State aid relevant, it can ask the MA/JS for a plausibility check on the State aid relevance. Does the partner want to do this?

○ Yes ○ No

2.2 Project Partner Details - Partner 15

LP/PP	Project Partner		
Partner Status	Active		
Active from	22/09/2022	**Inactive from**	

Partner name:

Organisation in original language	Politechnika Gdańska (20 / 250 characters)
Organisation in English	Gdansk University of Technology (31 / 250 characters)
Department in original language	Wydział inżynierii Lądowej i Środowiska oraz Wydział Chemiczny (62 / 250 characters)

Department in English FACULTY OF CIVIL AND ENVIRONMENTAL ENGINEERING, FACULTY OF CHEMISTRY

69 / 250 characters

Partner location and website:

Address Narutowicza 11/12

17 / 250 characters

Postal Code 80-233

6 / 250 characters

Town Gdańsk

6 / 250 characters

Website www.pg.edu.pl

13 / 100 characters

Country Poland

NUTS1 code Makroregion północny

NUTS2 code Pomorskie

NUTS3 code Gdański

Partner ID:

Organisation ID type Tax identification number (NIP)

Organisation ID 5840203593

VAT Number Format PL + 10 digits

VAT Number N/A ☐ PL5840203593

12 / 50 characters

PIC 999588784

9 / 9 characters

Partner type:

Legal status a) Public

Type of partner Higher education and research instituti — University faculty, college, research institution, RTD facility, research cluster, etc.

Sector (NACE) 85.42 - Tertiary education

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities? No

Role of the partner organisation in this project:

Lider of the WP1, lider in activity A.2.2. and A.2.4, partner in WP 3

70 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ○ No

State aid relevance

For the partner type selected, the Programme sees a medium to high risk for implementing State aid relevant activities. If the partner is of the opinion that its activities are not State aid relevant, it can ask the MA/JS for a plausibility check on the State aid relevance. Does the partner want to do this?

○ Yes ○ No

2.2 Project Partner Details - Partner 16

LP/PP Project Partner

Partner Status	Active		
Active from	22/09/2022	**Inactive from**	

Partner name:

Organisation in original language	Mälarens vattenvårdsförbund (27 / 250 characters)
Organisation in English	Lake Malarens Water Conservation Association (44 / 250 characters)
Department in original language	Mälarens vattenvårdsförbund (27 / 250 characters)
Department in English	Lake Malarens Water Conservation Association (44 / 250 characters)

Partner location and website:

Address	C/O Länsstyrelsen i Västmanlands län (36 / 250 characters)	**Country**	Sweden
Postal Code	721 86 (6 / 250 characters)	**NUTS1 code**	Östra Sverige
Town	Västerås (8 / 250 characters)	**NUTS2 code**	Östra Mellansverige
Website	www.malaren.org (15 / 100 characters)	**NUTS3 code**	Västmanlands län

Partner ID:

Organisation ID type	Organisation number (Organisationsnummer)
Organisation ID	168780-0240
VAT Number Format	SE + 12 digits
VAT Number	N/A ☐ SE878002409001 (14 / 50 characters)
PIC	893554301 (9 / 9 characters)

Partner type:

Legal status	a) Public	
Type of partner	NGO	Non-governmental organisations, such as Greenpeace, WWF, etc.
Sector (NACE)	94.99 - Activities of other membership organisations n.e.c.	

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities?	Yes

Role of the partner organisation in this project:

We will be involved in the dissemination activities. We will inform our members of the project and communicate the results to our members. We are gathering members from regional government, municipalities, drinking water plants, sewage plant and the are all working with the question how to deal with the problems of organic micropollutants.

341 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ○ No

2.2 Project Partner Details - Partner 17

LP/PP	Project Partner
Partner Status	Active
Active from	22/09/2022
Inactive from	

Partner name:

Organisation in original language	Frederica Spildevand og Energi A/S (34 / 250 characters)
Organisation in English	Fredericia Wasterwater and Energy Ltd (37 / 250 characters)
Department in original language	Fredericia Spildevand og Energi A/S (35 / 250 characters)
Department in English	n/a (3 / 250 characters)

Partner location and website:

Address	Røde Banke16 (12 / 250 characters)	**Country**	Denmark
Postal Code	7000 (4 / 250 characters)	**NUTS1 code**	Danmark
Town	Fredericia (10 / 250 characters)	**NUTS2 code**	Syddanmark
Website	www.frse.dk (11 / 100 characters)	**NUTS3 code**	Sydjylland

Partner ID:

Organisation ID type	Civil registration number (CPR)
Organisation ID	32659365
VAT Number Format	DK + 8 digits
VAT Number	N/A ☐ DK32 65 93 65 (13 / 50 characters)
PIC	900903506 (9 / 9 characters)

Partner type:

Legal status	a) Public	
Type of partner	Infrastructure and public service provi	Public transport, utility company (water supply, electricity supply, sewage, gas, waste collection, airport, port, railway, etc.)

Sector (NACE) 37.00 - Sewerage

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities? Yes

Role of the partner organisation in this project:

Role of the partner organization in this project
What is the role of this organisation in the project implementation?
Please note that each partner should have a clear role and be actively involved in particular activities in at least one work package. Fredericia's WWTP will act as host for the sampling of compounds. This will be conducted in parallel by passive samplers and conventional 24 h sampling. In the succession, passive samplers will be used to monitor the catchment to enable geographical localization of the respective sources. Together with Fredericia municipality we will identify on chemicals used in their catchment making a logic connection between compounds emitted, geographical allocation and use will be made to identify emitters consortium.
Frederica ´Spildevand og Energy will participate in WP1.

822 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ○ No

2.2 Project Partner Details - Partner 18

LP/PP Project Partner

Partner Status Active

Active from 22/09/2022 **Inactive from**

Partner name:

Organisation in original language
Przedsiębiorstwo Wodociągów i Kanalizacji
STAR - WiK Spółka z o.o.

66 / 250 characters

Organisation in English
Water and Sewerage Company STAR - WIK

37 / 250 characters

Department in original language
n/a

3 / 250 characters

Department in English
n/a

3 / 250 characters

Partner location and website:

Address
ul. Lubichowska 128

19 / 250 characters

Postal Code
83-200

7 / 250 characters

Town
Starogard Gdański

17 / 250 characters

Website
www.star-wik.pl

15 / 100 characters

Country Poland

NUTS1 code Makroregion północny

NUTS2 code Pomorskie

NUTS3 code Starogardzki

Partner ID:

Organisation ID type	Tax identification number (NIP)
Organisation ID	5920202957
VAT Number Format	PL + 10 digits
VAT Number	N/A ☐ PL5920202957 (12 / 50 characters)
PIC	n/a (3 / 9 characters)

Partner type:

Legal status	a) Public	
Type of partner	Infrastructure and public service provi	Public transport, utility company (water supply, electricity supply, sewage, gas, waste collection, airport, port, railway, etc.)
Sector (NACE)	37.00 - Sewerage	

Partner financial data:

Is your organisation entitled to recover VAT related to the EU funded project activities? Yes

Role of the partner organisation in this project:

The partner provides infrastructure under WP2, and participates in research and information exchange with other partners. In addition, it provides a laboratory for wastewater testing under WP1 and WP2. As part of WP3, he participates in the dissemination of knowledge about the pilot (local conferences and workshops).

318 / 1,000 characters

Has this organisation ever been a partner in the project(s) implemented in the Interreg Baltic Sea Region Programme?

○ Yes ◉ No

2.3 Associated Organisation Details - AO 1

Associated organisation name and type:

Organisation in original language
LATVIJAS ŪDENSAPGĀDES UN KANALIZĀCIJAS UZŅĒMUMU ASOCIĀCIJA
58 / 250 characters

Organisation in English
Latvian water and wastewater works association
47 / 250 characters

Department in original language
LATVIJAS ŪDENSAPGĀDES UN KANALIZĀCIJAS UZŅĒMUMU ASOCIĀCIJA
58 / 250 characters

Department in English
Latvian water and wastewater works association
47 / 250 characters

Legal status
b) Private

Type of associated organisation
Interest group
Trade union, foundation, charity, voluntary association, club, etc. other than NGOs

Associated organisation location and website:

Address
Lielirbes iela 1
16 / 250 characters

Country
Latvia

Postal Code
LV-1046
7 / 250 characters

Town
Riga
4 / 250 characters

Website
https://www.lwwwwa.lv/en/
25 / 100 characters

Role of the associated organisation in this project:

Partner for communication, information sharing, organisation of meeting with public and industrial companies
108 / 1,000 characters

2.3 Associated Organisation Details - AO 2

Associated organisation name and type:

Organisation in original language
SIA “TALSU ŪDENS”
17 / 250 characters

Organisation in English
“TALSU ŪDENS” Ltd
17 / 250 characters

Department in original language
SIA “TALSU ŪDENS”
17 / 250 characters

Department in English
“TALSU ŪDENS” Ltd
17 / 250 characters

Legal status
a) Public

Type of associated organisation
Infrastructure and public service provi
Public transport, utility company (water supply, electricity supply, sewage, gas, waste collection, airport, port, railway, etc.)

Associated organisation location and website:

Address
Raiņa iela 17
13 / 250 characters

Country
Latvia

Postal Code
LV-3201
7 / 250 characters

Town
Talsi
5 / 250 characters

Website
https://www.talsuudens.lv/kontakti/
35 / 100 characters

Role of the associated organisation in this project:

The entity will make its infrastructure available to conduct research on solutions. It will consult the results and participate in workshops
140 / 1,000 characters

2.3 Associated Organisation Details - AO 3

Associated organisation name and type:

Organisation in original language
"Ādažu ūdens" SIA
17 / 250 characters

Organisation in English
Ādažu ūdens, Ltd.
17 / 250 characters

Department in original language
"Ādažu ūdens" SIA
17 / 250 characters

Department in English
Ādažu ūdens, Ltd.
17 / 250 characters

Legal status
a) Public

Type of associated organisation
Infrastructure and public service provi
Public transport, utility company (water supply, electricity supply, sewage, gas, waste collection, airport, port, railway, etc.)

Associated organisation location and website:

Address
Gaujas 16
9 / 250 characters

Country
Latvia

Postal Code
LV-2164
7 / 250 characters

Town
Ādaži
5 / 250 characters

Website
http://adazuudens.lv/
21 / 100 characters

Role of the associated organisation in this project:

The entity will make its infrastructure available to conduct research on solutions. It will consult the results and participate in workshops
140 / 1,000 characters

2.3 Associated Organisation Details - AO 4

Associated organisation name and type:

Organisation in original language: SIA "Jūrmalas ūdens" (20 / 250 characters)

Organisation in English: Jurmala Water Ltd (17 / 250 characters)

Department in original language: SIA "Jūrmalas ūdens" (20 / 250 characters)

Department in English: Jurmala Water Ltd (17 / 250 characters)

Legal status: a) Public

Type of associated organisation: Infrastructure and public service provi

Public transport, utility company (water supply, electricity supply, sewage, gas, waste collection, airport, port, railway, etc.)

Associated organisation location and website:

Address: Promenādes iela 1A (18 / 250 characters)

Country: Latvia

Postal Code: LV-2015 (7 / 250 characters)

Town: Jurmala (7 / 250 characters)

Website: https://www.jurmalasudens.lv/ (29 / 100 characters)

Role of the associated organisation in this project:

The entity will make its infrastructure available to conduct research on solutions. It will consult the results and participate in workshops (140 / 1,000 characters)

2.3 Associated Organisation Details - AO 5

Associated organisation name and type:

Organisation in original language
SIA "Jelgavas ūdens"
20 / 250 characters

Organisation in English
Jelgava Water Ltd
18 / 250 characters

Department in original language
SIA "Jelgavas ūdens"
20 / 250 characters

Department in English
Jelgava Water Ltd
18 / 250 characters

Legal status
a) Public

Type of associated organisation
Infrastructure and public service provi
Public transport, utility company (water supply, electricity supply, sewage, gas, waste collection, airport, port, railway, etc.)

Associated organisation location and website:

Address
Ūdensvada iela 4
16 / 250 characters

Country
Latvia

Postal Code
LV-3001
7 / 250 characters

Town
Jelgava
7 / 250 characters

Website
https://www.ju.lv/
18 / 100 characters

Role of the associated organisation in this project:

The entity will make its infrastructure available to conduct research on solutions. It will consult the results and participate in workshops
140 / 1,000 characters

2.3 Associated Organisation Details - AO 6

Associated organisation name and type:

Organisation in original language
SIA "Rīgas ūdens"
17 / 250 characters

Organisation in English
Riga Water Ltd.
15 / 250 characters

Department in original language
Wastewater treatment plant "Daugavgriva"
40 / 250 characters

Department in English
Wastewater treatment plant «Daugavgriva»
40 / 250 characters

Legal status
a) Public

Type of associated organisation
Infrastructure and public service provi
Public transport, utility company (water supply, electricity supply, sewage, gas, waste collection, airport, port, railway, etc.)

Associated organisation location and website:

Address
Dzintara iela 60
16 / 250 characters

Country
Latvia

Postal Code
LV-1016
7 / 250 characters

Town
Riga
4 / 250 characters

Website
https://www.rigasudens.lv/
26 / 100 characters

Role of the associated organisation in this project:

The entity will make its infrastructure available to conduct research on solutions. It will consult the results and participate in workshops
140 / 1,000 characters

2.3 Associated Organisation Details - AO 7

Associated organisation name and type:

Organisation in original language: WWF Polska
10 / 250 characters

Organisation in English: WWF Poland
10 / 250 characters

Department in original language: n/a
3 / 250 characters

Department in English: n/a
3 / 250 characters

Legal status: b) Private

Type of associated organisation: NGO — Non-governmental organisations, such as Greenpeace, WWF, etc.

Associated organisation location and website:

Address: Usypiskowa 11
13 / 250 characters

Country: Poland

Postal Code: 02-386
6 / 250 characters

Town: Warsaw
6 / 250 characters

Website: www.wwf.pl
10 / 100 characters

Role of the associated organisation in this project:

WWF is ready to exchange knowledge about environmental treats of miscropollutants
81 / 1,000 characters

2.3 Associated Organisation Details - AO 8

Associated organisation name and type:

Organisation in original language: Køge Kommune
12 / 250 characters

Organisation in English: Køge Municipality
17 / 250 characters

Department in original language: Miljø&Affald
12 / 250 characters

Department in English: Environment@Waste
17 / 250 characters

Legal status: a) Public

Type of associated organisation: Local public authority — Municipality, city, etc.

Associated organisation location and website:

Address: Torvet 1
8 / 250 characters

Country: Denmark

Postal Code: 4600
4 / 250 characters

Town: Køge
4 / 250 characters

Website: www.koege.dk
12 / 100 characters

Role of the associated organisation in this project:

The municipality of Koege will participate in the discussions on sources of pollution in wastewater (WP1 activity 1), and solutions to removing this pollution from wastewater (WP2 activity 1). Køge Kommune is developing together with their utility approaches to remove pharmaceuticals from wastewater.municipality
313 / 1,000 characters

2.3 Associated Organisation Details - AO 9

Associated organisation name and type:

Organisation in original language: Fredericia Kommune
18 / 250 characters

Organisation in English: Fredericia Municipality
23 / 250 characters

Department in original language: Natur og Miljø
14 / 250 characters

Department in English: Nature and Environment
22 / 250 characters

Legal status: a) Public

Type of associated organisation: Local public authority — Municipality, city, etc.

Associated organisation location and website:

Address: Gothersgade 20
14 / 250 characters

Country: Denmark

Postal Code: 7000
4 / 250 characters

Town: Fredericia
10 / 250 characters

Website: www.fredericia.dk
17 / 100 characters

Role of the associated organisation in this project:

Fredericia Municipality will support WP 1 activity 1 by identifying known environmentally hazardous substances in the wastewater based on existing wastewater discharge permits and comparing found compounds with relevant industries to identify individual sources of pollutants as a basis for decisions on the source or central treatment.

336 / 1,000 characters

2.3 Associated Organisation Details - AO 10

Associated organisation name and type:

Organisation in original language
Baltic Marine Environment Protection Commission
Helsinki Commission – HELCOM
76 / 250 characters

Organisation in English
Baltic Marine Environment Protection Commission
Helsinki Commission – HELCOM
76 / 250 characters

Department in original language
Helsinki Commission – HELCOM
28 / 250 characters

Department in English
Helsinki Commission – HELCOM
28 / 250 characters

Legal status
a) Public

Type of associated organisation
International governmental organisatio

HELCOM, BSSSC, CBSS, VASAB, etc.

Associated organisation location and website:

Address
Katajanokanlaituri 6 B
23 / 250 characters

Country
Finland

Postal Code
FI-00160
9 / 250 characters

Town
Helsinki
8 / 250 characters

Website
www.helcom.fi
13 / 100 characters

Role of the associated organisation in this project:

Relevant HELCOM subsidiary bodies and the Secretariat will participate in the discussions on sources of pollution in wastewater (WP1 activity 1), and solutions in removing these pollution from wastewater (WP2 activity 1). HELCOM will focus on giving advice and feedback, ensuring that the outputs of RenoWate can be used in national and international policy making and ensuring the project work is taken into consideration when preparing implementation of the relevant 2021 BSAP actions.

488 / 1,000 characters

2.3 Associated Organisation Details - AO 11

Associated organisation name and type:

Organisation in original language: EurEau (6 / 250 characters)

Organisation in English: EurEau (6 / 250 characters)

Department in original language: n/a (3 / 250 characters)

Department in English: n/a (3 / 250 characters)

Legal status: b) Private

Type of associated organisation: Interest group — Trade union, foundation, charity, voluntary association, club, etc. other than NGOs

Associated organisation location and website:

Address: Rue du Luxembourg 47-51 (23 / 250 characters)

Country: Belgium

Postal Code: B-1050 (6 / 250 characters)

Town: Brussels (8 / 250 characters)

Website: www.eureau.org (14 / 100 characters)

Role of the associated organisation in this project:

The organization brings together water utilities from all over Europe and has a strong representation of the Baltic countries. The Working Group "Pollutants" operates at EurEau. She is interested in sharing knowledge. the group members will participate in consultations and workshops.

284 / 1,000 characters

2.3 Associated Organisation Details - AO 12

Associated organisation name and type:

Organisation in original language
Urząd Miasta Gdańsk
19 / 250 characters

Organisation in English
Gdańsk Municipality
19 / 250 characters

Department in original language
Wydział Środowiska
18 / 250 characters

Department in English
Enviroment Department
21 / 250 characters

Legal status
a) Public

Type of associated organisation
Local public authority
Municipality, city, etc.

Associated organisation location and website:

Address
Nowe Ogrody 8/12
16 / 250 characters

Country
Poland

Postal Code
80-803
6 / 250 characters

Town
Gdańsk
6 / 250 characters

Website
https://www.gdansk.pl/urzad-miejski
35 / 100 characters

Role of the associated organisation in this project:

Based on periodically commissioned by the Environmental Department of Gdansk Municipality "Assessment of the quality of surface waters in Gdansk - Monitoring of surface waters along with the calculation of the load of pollutants discharged from the Gdańsk Commune to the Gulf of Gdansk" and the Chemical Action Plan for Gdansk the most problematic substances in the surface waters (and stormwater) of the City of Gdańsk were identified. These substanses will be determine in this project.

488 / 1,000 characters

3. Relevance

3.1 Context and challenge

The problem of emerging micropollutants appears in the public debate more and more often. The European Zero Pollution Action Plan sets ambitious goals for local governments and wwtreatment plant operators. Pollutants that are not removed at the source or in a ww treatment plant will end up in the surface waters and the Baltic Sea.Waste water treatment plants are hot spots for micropollutants. Dangerous chemicals like pharmaceuticals and PFAS are causing serious damage to the ecosystem. Efficient technologies are needed to remove micropollutants. The challenge is therefore to reduce the mass of pollutants in selected areas, and develop solutions that will be understandable and easy to duplicate in municipal waste water treatment plants. Specific technologies are needed. It is known that the use of granulated active carbon (GAC) can be effective, but its production and regeneration are very energy-intensive and emits a lot of greenhouse gases. The solutions proposed in the pilots make it possible to combine GAC with other methods and thus increase its efficiency. Nature-based solutions can reduce micropollution and at the same time increase carbon storage in soil and the soil environment. Pilot research enables the development of methods of reducing pollution from rainwater and groundwater. PFAS are pollutants that spread very quickly in the environment. Any effective technology is extremely needed. Before any PFAS destruction, it is therefore very important to upconcentrate the PFAS. One very promising method to do upconcentration of PFAS is foam fractionation. This technology will be tested in combination with other classical solutions. The pilots' results will be the basis for sharing experiences and popularizing solutions among infrastructure and public service providers and municipalities.

1,823 / 2,000 characters

3.2 Transnational value of the project

Micropollutants know no borders and only international cooperation can lead to their reduction in the BSR. The different legal conditions in the BSR as well the different goals for surface water and waste water will fuel common technological advances and a broad understanding of micropollutant removal in the BSR. Work on controlling micropollutants must go beyond boundaries. Micropollutants do not respect boundaries and their sources are often unknown. Therefore, international cooperation is a key issue in the fight against micro-pollution of the environment. All countries have been invited to cooperate, but joining the project team is not always possible. The team is numerous, with the most important target group being infrastructure and public service providers. They represent entities of various sizes from SE, DK, LV, PL, and SE. Each pilot is tested by an international team with the active support of higher education and research institutions. We would like to have partners in each country, as this problem affects the entire BSR. However, we have partners from almost all countries, and we plan to use them to reach those who are missing. The international aspect of this project is crucial. That is why we invited a large group of Associated Organisations. Activities under WP3 will therefore have activities that inspire different countries to get involved.

1,380 / 2,000 characters

3.3 Target groups

Target group	Sector and geographical coverage	Its role and needs
Infrastructure and public service provid	Waste water treatment plant operators are responsible for removing pollutants from waste water. They are subordinate to local authorities (mainly municipalities). Even if testing the effectiveness of removing certain pollutants is not currently required by law, it is necessary to build awareness, responsibility, and knowledge about micropollutants in ww. This target group representatives come from DK, PL, SE and are represented by interest groups in EE and PL. 466 / 500 characters	Operators must have the tools to act efficiently and consciously. Urban waste water treatment plants are the main barrier to the release of micropollutants into the environment. They will constitute the infrastructure for the project pilots (testing solutions). There is a need to equip them with appropriate technologies because municipal ww treatment plants are not adapted to remove PFAS or pharmaceuticals. The knowledge about solutions will be transferred also to Associated Organizations like EurEeau 506 / 1,000 characters
Local public authority	Local public authorities are responsible for supervising the effective operation of the urban ww treatment plants. These are usually environmental departments. They consist an important part of Associated Organisations and will be informed about the activities in their wastewater treatment plants, and will be involved in activities in all WPs. 345 / 500 characters	Local public authorities are responsible for the welfare of residents. They should be aware of the new challenges related to environmental pollution. They need to expand their knowledge and closely cooperate with the operators of the urban ww treatment plants. In most cities, municipalities are owners of water utilities (infrastructure and public services providers), so, they need to be aware of the challenges faced by operators and to know the solutions to these problems. 478 / 1,000 characters

Target group	Sector and geographical coverage	Its role and needs
International governmental organisation	HELCOM is trying to coordinate the policy development in the BSR towards removal of micropollutants from wastewater to reach a cleaner Baltic Sea. 147 / 500 characters	HELCOM will be associated partner in RENOWATE and be invited to join and contribute to all central discussions to enable HELCOM to conduct knowledge based policy development. 175 / 1,000 characters
National public authority	The National Environmental Protection agencies and -ministries are developing their own policies towards removal of micropollutants from wastewater. - this is very pronounced the case in DE, DK, SE, but upcoming in FL, PL, EE, LT 229 / 500 characters	Members of the respective agencies and ministries will be invited to join and contribute to all central discussions to enable these authorities to conduct knowledge-based policy development. This group needs solutions that will help to organize the requirements for pollutants migrating in waters. Through the guidelines (WP1) and handbook (WP2, WP3), they will learn about source control and end of pipe solutions. 415 / 1,000 characters
Regional public authority	Regional Authorities such as the German Federal countries are developing their own policies on micropollutant management 121 / 500 characters	Regional authorities are often very well versed in regional contexts. Reaching out to them with solutions will enable them to solve their problems 146 / 1,000 characters

3.4 Project objective

Your project objective should contribute to:

Sustainable waters

Sustainable waters mean that they are protected and clean. Sustainable use of water is based on its return to the environment in the state in which it was collected. This challenge is becoming more and more difficult due to pollutants that are persistent, mobile, and toxic. The project covers inland, coastal, and sea waters to improve their state in the BSR. The project will provide target groups with appropriate, tested, and tailored technological solutions. The project will also show how to choose the appropriate technology based on the elaborated guidelines. Thanks to a large group of infrastructure and public service providers, it is possible to carry out pilot tests and adjust them to the requirements. Unfortunately, it can be assumed that all municipal waste water treatment plants are already facing or will face in the future the challenge of reducing micropollutants. They will have ready, tested technologies facilitating the reduction of micropollutants. The implementation of pilots in such a large group of partners also enables better dissemination of knowledge and experience. An efficient waste water treatment plant makes the task of local authorities easier.

1,186 / 2,000 characters

3.5 Project's contribution to the EU Strategy for the Baltic Sea Region

Please indicate whether your project contributes to the implementation of the Action Plan of the EU Strategy for the Baltic Sea Region (EUSBSR).

(•) Yes ( ) No

Please select which Policy Area of the EUSBSR your project contributes to most.

PA Hazards

Please list the action of this Policy Area that your project contributes to and explain how.

The project contributes to Action 1 "Prevent pollution and reduce the use of hazardous substances" because it shows how to reduce the release of micropollutants into the environment preventing pollution. Thanks to the detection of sources of pollution and control at the source, it contributes to the reduction of the mass of pollutants penetrating into water resources. In addition, it identifies effective technologies that eliminate the most mobile, persistent and toxic substances (like PFAS) in the treated waste water. Baltic Sea pollution prevention includes guidance for industry on more effective treatment of industrial waste water (Pharma). The project contributes to the achievement of the overall goal of "Save the Sea" thanks to the cooperation of public and private companies and organizations, as well as academia. The project contributes to one of the key area policies which are awareness-raising related to PFAS in the BSR. It supports the development of suitable measures, and practical solutions for the reduction of hazardous substances, from point sources.

1,079 / 1,500 characters

If applicable, please describe which other Policy Areas of the EUSBSR your project contributes to and how.

The project contributes to the PA Bio-economy Action 3 strengthening multiple uses of resources through cross-cutting and cross-sectorial approaches to release potential and accelerate the development of a sustainable circular bioeconomy. It strengthens transnational cooperation on issues that one Member State cannot solve alone and develops new sustainable solutions. Stakeholders become involved to commonly improve the environment quality and facilitate the development of efficient solutions.

498 / 1,500 characters

3.6 Other political and strategic background of the project

Strategic documents
European Green Deal's aim is to improve the well-being and health of citizens by providing clean water. One of the actions is the EU Zero pollution action plan aims to reduce pollution to levels no longer considered harmful. The project helps to achieve this goal by 2050 by identifying effective and easy to duplicate solutions. It also contributes to the precautionary principle and complies with the zero pollution reverse pyramid of action tackling pollution and improving the well-being in BSR 499 / 500 characters
The Marine Strategy Framework Directive 2008/56/EC aims to avoid hazards being transferred from one area to another. The project reduces inputs in the marine environment by phasing out pollution in rivers and lakes. Thanks to the support provided to the WWTPs operators and local authorities in the detection of pollution sources, the project will contribute to reducing the mass of micropollutants flowing into the sea. 420 / 500 characters
Chemicals Strategy for Sustainability. Towards a Toxic-Free Environment (COM 2020 667 final) focuses on the reduction of chemical pollutants with special attention to PFAS in waters. The project will contribute to this goal. In addition, it will indicate the possibilities of reducing PFAS in order to protect water resources in accordance with the new drinking water directive (2020/2184) 389 / 500 characters

3.7 Seed money support

Please indicate whether your project is based on a seed money project implemented in the Interreg Baltic Sea Region Programme 2014-2020.

( ) Yes (•) No

3.8 Other projects: use of results and planned cooperation

Full name of the project	Funding Source	Use of the project outcomes and/or planned cooperation
En-masse mapping of PFAS in wastewater treatment plant effluents for reuse strategies in the Baltic Sea Region - EMPEREST 121 / 200 characters	Interreg Baltic Sea Region 27 / 200 characters	The project provided an overview of the current situation regarding sources and pathways of PFAS in the Baltic Sea region to create viable solutions. This seed money project attempted to gather stakeholders, to provide an overview of the current situation regarding sources and pathways of polyfluoroalkyl substances in the BSR. We used this project outcome to prepare actions during the WP1. We will also contact the project partners to exchange ideas and invite them to cooperate. 482 / 1,000 characters

Full name of the project	Funding Source	Use of the project outcomes and/or planned cooperation
Clear Waters from Pharmaceuticals - CWPharma 44 / 200 characters	Interreg Baltic Sea Region 26 / 200 characters	CWPharma mapped the current situation and compiled data on pharmaceutical sales, concentrations, and removal rates during advanced waste water treatment. RenoWater will use the results of an action plan where suggestions on policy-orientated measures to enable the reduction of pharmaceuticals emissions to the Baltic Sea are presented. The project piloted different removal technologies and summarised the main findings as well as a compilation of relevant practical aspects for planning, implementation, and operation in the guidelines. The results of piloting of advanced waste water treatment for pharmaceuticals elimination were used to prepare WP1 and WP2 Renowate pilots (ozone, activated carbon). The results of the integration of such technologies into existing WWTPs will be analyzed. Some project partners will be invited to exchange ideas during workshops and piloting. 883 / 1,000 characters
PERFluorinated Organics in Our Diet - PERFOOD 45 / 200 characters	7th Framework Programme for Research 36 / 200 characters	The project assessed the origin of perfluorinated alkylated substances in the human diet including water. The research results show the possible routes of human exposure to PFAS via the diet. We used the results of testing different technologies for drinking water treatment. Although the program ended a few years ago, the articles based on research are still up-to-date and useful in the preparatory work of the Renowate project. PERFOOD evaluated the effectiveness of many technologies that can be used not only in drinking water treatment, but also in waste water treatment. 579 / 1,000 characters
FanpLESStic-sea - Initiatiatives to remove microplastics before they enter the sea 82 / 200 characters	Interreg Baltic Sea Region 27 / 200 characters	The project partners worked together to map flows and pathways of microplastic in their regions to better understand how microplastics travel and enter the ecosystem from different sources. What is more, the project partners evaluated and piloted methods for filtering microplastics away, removing microplastics from stormwater, and implementing sustainable drainage solutions.One of the main task of the Gdansk Water company in the range of FanpLESStic-sea project was the installation of the pilot station (artificial wetland) to verify the efficiency of microplastics removal from the urban stormwater. Gdansk Water is going to adjust the existing installation to test its efficiency towards the most problematic MPs in the range of the ReNoWate project (WP2). All the stormwater quality data obtained from the project will be the backround for the activities planned in the range of the WP1 and WP2. 904 / 1,000 characters

Full name of the project	Funding Source	Use of the project outcomes and/or planned cooperation
PERFORCE3 European Training Network (ETN) 41 / 200 characters	H2020-MSCA-ITN-2019 19 / 200 characters	The PERFORCE3 European Training Network (ETN) is a multi-partner joint doctoral student research training network with the overall aims of educating 15 Early Stage Researchers and improving the understanding, and eliminating the risks associated with, per- and polyfluoroalkyl substances (PFASs). PERFORCE3 brings together world leaders in a range of disciplines (physical, synthetic, environmental and analytical chemistry, pharmacokinetics, epidemiology, toxicology, remediation science and chemical policy) with state-of-the-art technologies, to provide high quality training and research environments. The WPs include analytical tools and exposure science (WP1), toxicology and epidemiology (WP2), as well as green chemistry, remediation and policy in a WP focusing on solutions to PFAS contamination problems (WP3). The results of PERFORCE3 will greatly improve the understanding of a globally ubiquitous contaminant class, leading to improved environmental and human health risk assessments. 999 / 1,000 characters

3.10 Horizontal principles

Horizontal principles	Projects's direct impact
Sustainable development	positive
Non-discrimination including accessibility	neutral
Equality between men and women	neutral

4. Management

Allocated budget 10%

4.1 Project management

☑ **Please confirm that the lead partner and all project partners will comply with the rules for the project management as described in the Programme Manual.**

If relevant, please indicate any other important aspects of the project management, e.g. external entity supporting the lead partner in the management of the project, advisory board, steering committee, any other relevant working groups, etc.

All partners are aware and will comply. The lead partner will update the knowledge of the partners on the different aspects of the manual whenever needed, but especially during the startup meeting and the final meeting.

220 / 500 characters

4.2 Project financial management

☑ **Please confirm that the lead partner and all project partners will comply with the rules for the financial management and control as described in the Programme Manual.**

If relevant, please indicate any other important aspects of the financial management, e.g. external entity supporting the lead partner, positions planned for financial management, involvement of special financial experts (e.g. for public procurement), etc.

All partners are aware and will comply. The lead partner will update the knowledge of the partners on the different aspects of the manual whenever needed, but especially during the startup meeting and the final meeting.

220 / 500 characters

4.3 Input to Programme communication

☑ **Please confirm that you are aware of the obligatory inputs to Programme communication that must be submitted along the pre-defined progress reports, as described in the Programme Manual.**

If relevant, please describe other important aspects of project communication that you plan to introduce, e.g. a communication plan, opening and closing events, social media channel(s) etc.

0 / 500 characters

4.4 Cooperation criteria

Please select the cooperation criteria that apply to your project. In your project you need to apply at least three cooperation criteria. Joint development and joint implementation are the obligatory ones you need to fulfill in your project.

Cooperation criteria	
Joint Development	☑
Joint Implementation	☑
Joint Staffing	☑
Joint Financing	☑

5. Work Plan

Number	Work Package Name
1	WP1 Preparing solutions

Number	Group of Activity Name
1.1	Determination of preconditions for piloting
1.2	Joint elaborating of technologies for piloting
1.3	Joint elaboration of methodological framework for strategies to mitigate at source and treat the MPs

Number	Work Package Name
2	WP2 Piloting and evaluating solutions

Number	Group of Activity Name
2.1	Sustainable GAC- based removal of micropollutants
2.2	Nature based solutions (NBS) pilot station for stormwater treatment
2.3	Energy efficient removal of PFAS from wastewater
2.4	Optimization of processes in pharmaceuticals removal in SBR and SBR-IFAS

Number	Work Package Name
3	WP3 Transferring solutions

Number	Group of Activity Name
3.1	Communication
3.2	Conducting an awareness survey
3.3	Collection of results and Guidelines elaboration

Work plan overview

Period: 1 2 3 4 5 6	Leader
WP.1: WP1 Preparing solutions	**PP15**
A.1.1: Determination of preconditions for piloting D.1.1: Preconditions for piloting - report (D)	PP15
A.1.2: Joint elaborating of technologies for piloting D.1.2: SMART report for pilots (D)	PP14
A.1.3: Joint elaboration of methodological framework for strategies to mitigate at source and treat the MPs D.1.3: Guidelines for local basins strategies (D)	PP16
WP.2: WP2 Piloting and evaluating solutions	**PP5**
A.2.1: Sustainable GAC- based removal of micropollutants O.2.1: Guideline on sustainabilty of different operation modes of GAC filters for micropollutant removal (O)	PP10
A.2.2: Nature based solutions (NBS) pilot station for stormwater treatment D.2.2: Report on how to implement NBS systems for MP removal successfully (D)	PP15
A.2.3: Energy efficient removal of PFAS from wastewater D.2.3: Reports on the feasibility of foam fractionation for PFAS removal in WWTPs (D)	PP14
A.2.4: Optimization of processes in pharmaceuticals removal in SBR and SBR-IFAS D.2.4: Report on optimal process conditions (D)	PP15
WP.3: WP3 Transferring solutions	**PP1**
A.3.1: Communication D.3.1: Solutions transferred- report (D)	PP2
A.3.2: Conducting an awareness survey D.3.2: Description of specific local needs of different stakeholders (D)	PP1
A.3.3: Collection of results and Guidelines elaboration O.3.3: Handbook for Tailoring Solutions to Local Needs (O)	PP1

Outputs and deliverables overview

Code	Title	Description	Contribution to the output	Output/ deliverable contains an investment

D 1.1	Preconditions for piloting - report	Based on the exchange of knowledge about local needs, detailing the weak points of planned pilots, the conditions for joining the pilots as wellas methodology for settling the system (catchment) boundaries will be determined. Report will contain among others: systematization of the analysis of the impact of substantial elements will allow to define the limits for the assessment of the benefits of the pilots implementation in a comparative analysis, hierarchical list of pollutants depending on their harmfulness and the degree of difficulty in removing, charcteristics of local conditions with indentification of sources of MPs in the basins, and finally a relationship matrix: source, local conditions, threat.	Handbook for Tailoring Solutions to Local Needs	
D 1.2	SMART report for pilots	Report will include: internal list of target MPs to be removed in pilots, description of SMART technologies for target MPs, as well as technical and technological description and operational and efficiency tests scenarios for pilots.	Handbook for Tailoring Solutions to Local Needs	
D 1.3	Guidelines for local basins strategies	Framework document with guidelines for constituting the basis for the preparation of MPs management plans in the catchment area. The document will include: critical PFAS-mass and MPs flow locations in the environment, mapping of PFAS-hot and MPs, significance table of methodology gaps , martix showing different conditions (various basins determining the selection of technology of mitigation or/and removal.	Handbook for Tailoring Solutions to Local Needs	
O 2.1	Guideline on sustainabilty of different operation modes of GAC filters for micropollutant removal	The guidline will consist of the following elements: 1) Report on fluidised bed GAC (AV) covering efficiency and process optimisation of the fluidised bed biofilm GAC in a big pilot in line with a fullscale WWTP. This dataset will be supplemented by detailed studies allowing to separate sorption (GAC) and degradation(biofilm). this report will also take into consideration several compounds for which AV got limits and where no data are available. 2) Report on Ozone-GAC at HFORS. This report will take into consideration a) a multistage optimisation for the interplay of optimised ozone dosage and increasing lifetime of GAC and b) increased sustainablity by utilising sewage sludge as a source for GAC production and GAC recycling by an possible onsite GAC regeneration plant. 3) Report on packed bed GAC at HSY (PP-11) with integrated phosphorus and micropollutant removal covering process optimisation, removal rates for micropollutants and phosphate and comparing sustainability of different GAC sources. The report will also determine the effects of sorption and Fenton reactions on the micropollutants.		
D 2.2	Report on how to implement NBS systems for MP removal successfully	The GoA 2.2 report will cover design, removal and mechanisms of removal in the constructed wetland. The design will be compared with hydraulic loading and removal rates to give clear design background to serve as a design guideline and blueprint for systems to be built in future.	Handbook for Tailoring Solutions to Local Needs	
D 2.3	Reports on the feasibility of foam fractionation for PFAS removal in WWTPs	The GoA2.3 report will cover 1) FF/SBR process optimisation and removal rates for PFAS at RTU. A special focus will be the removal of the shorter chain PFAS using FF by optimizing the retention time and bubble size. 2) At HFORS we will asses placing of FF for removing PFAS from WWTP effluent in combination with ozone and GAC.	Handbook for Tailoring Solutions to Local Needs	
D 2.4	Report on optimal process conditions	In report the optimal process conditions based on conducted research will be presented. They will include e.g. aeration rates as well as additional substances that can support the process for the integrated removal of organic compounds, nitrogen and phosphorus commonly used in municipal wastewater treatment plants, taking into account the conditions necessary for the effective removal of pharmaceuticals and their degradation products -while diclofenac will be taken as key parameter to be analysed with higher frequency than other 50 pharmaceuticals and their degradation products. The results will be compared to treatment with classical activated sludge in respect to removal rates and energy demand.	Handbook for Tailoring Solutions to Local Needs	
D 3.1	Solutions transferred-report	The workshops expand the knowledge of the issue among stakeholders, but also provide feedback to partners working on pilots. The workshops will be held at pilot sites and remotely, and will focus on infrastructure and public service providers and municipalities. They will provide them with knowledge about the proposed solutions. The workshops will enrich the knowledge of the consortium, enabling better matching of pilots and the development of output more suited to the needs.	Guidelines for matching technology to local needs	
D 3.2	Description of specific local needs of different stakeholders	The aim of the survey is to match the WP2 results to target groups. We plan to conduct a wide online survey thanks to which we will build awareness, but also expand the number of stakeholders. In the survey, we will indicate the output (guidelines) as a tool that meets many local group needs. The survey results will allow for the adaptation of the solutions tested during WP2. Deliverable is the cumulative and analyzed results of an online survey. Deliverable will include indications of the target group's awareness of micropollutants, will provide information about gaps in knowledge, and which pilots (WP2) correspond to specific local needs. The survey will also indicate which local authorities, infrastructure operators and other stakeholders should cooperate in the implementation of pilots in new locations. Thanks to the survey, it will be possible to make international comparisons and identify opportunities for the exchange of experiences between BSR countries.	Handbook "Adapting technology to the needs"	

O 3.3	Handbook for Tailoring Solutions to Local Needs	The Handbook-Guidelines will be a study divided into parts: - description of the problem of micropollutants flowing into the Baltic Sea, - why is it important for target groups, - what target groups can do, - what solutions are ready for implementation, - how to adjust the solution to local needs, - who to involve, - how to establish cooperation with stakeholders from other locations, - how to inform about the implementation of solutions, - what experiences we have gathered during the pilots, - recommendations for decissionmakers and authorities of all levels (from local to international). The Handbook purpose is to gather results from the RENOWATE project and disseminate it within target groups to provide mature and concrete sulutions to prevent the release of micropollutants into the environment and to show how to choose the appropriate technology and decission. Only a small group of stakeholders participate in EU projects and similar activities. The purpose of developing the Handbook as provide a summary of the entire work of the RENOWATE team. On the one hand - to reach with this knowledge and experiences to those who otherwise would not have access to such answers (WWTPs) and, on the other hand, to present decisionmakers needs and opportunities that they can create for operators by proper legal regulations. The Handbook will be provided in English and widely dissemminated e-version. The transnational value will be achieved through the cooperation of an international group of specialists / institutions (project partners, target groups, other projects coopertation, etc.). In addition, an inter-border (geographically) will be achieved, because micropollutants know no borders, so activities undertaken in one place will positively affect other places.		
Work package 1				
5.1 WP1 Preparing solutions				
5.2 Aim of the work package				

The aim of this work package is to prepare solutions to help address the identified challenge. You can either develop entirely new solutions or adapt existing solutions to the needs of your target groups. Prepare your solutions in a way that you can pilot them in Work Package 2. Consider how you involve your target groups in preparation of the solutions.
Organise your activities in up to five groups of activities to present the actions you plan to implement. Describe the deliverables and outputs as well as present the timeline.

5.3 Work package leader

Work package leader 1	PP 15 - Gdansk University of Technology
Work package leader 2	PP 16 - Lake Malarens Water Conservation Association

5.4 Work package budget

Work package budget	20%

5.5 Target groups

	Target group	How do you plan to reach out to and engage the target group?
1	Infrastructure and public service provider Waste water treatment plant operators are responsible for removing pollutants from waste water. They are subordinate to local authorities (mainly municipalities). Even if testing the effectiveness of removing certain pollutants is not currently required by law, it is necessary to build awareness, responsibility, and knowledge about micropollutants in ww. This target group representatives come from DK, PL, SE and are represented by interest groups in EE and PL. 466 / 500 characters	All partners from public institutions will be involved in WP1 preparing solutions in order to develop the best pilot solutions. This will be achieved through networking on-line WP members meetings and consultations with ERA EU members. 236 / 1,000 characters
2	Local public authority Local public authorities are responsible for supervising the effective operation of the urban ww treatment plants. These are usually environmental departments. They consist an important part of Associated Organisations and will be informed about the activities in their wastewater treatment plants, and will be involved in activities in all WPs. 345 / 500 characters	Local public authorities will be also invited to consult on the achievements and strategies developed under WP1 during local meetings. 134 / 1,000 characters
3	International governmental organisation HELCOM is trying to coordinate the policy development in the BSR towards removal of micropollutants from wastewater to reach a cleaner Baltic Sea. 147 / 500 characters	The creation of document entitled: "Guidelines for local basins strategies" will be consulted on the different stages of elaboration with HELCOM. 148 / 1,000 characters
4	National public authority The National Environmental Protection agencies and -ministries are developing their own policies towards removal of micropollutants from wastewater. - this is very pronounced the case in DE, DK, SE, but upcoming in FL, PL, EE, LT 229 / 500 characters	none as this will be done in WP1 33 / 1,000 characters
5	Regional public authority Regional Authorities such as the German Federal countries are developing their own policies on micropollutant management 121 / 500 characters	Regional public authorities will be also invited to consult on the achievements and strategies developed under WP1 during local meetings. 137 / 1,000 characters

5.6 Activities, deliverables, outputs and timeline

No.	Name
1.1	**Determination of preconditions for piloting**
1.2	**Joint elaborating of technologies for piloting**
1.3	**Joint elaboration of methodological framework for strategies to mitigate at source and treat the MPs**

WP 1 Group of activities 1.1

5.6.1 Group of activities leader

Group of activities leader PP 15 - Gdansk University of Technology

A 1.1

5.6.2 Title of the group of activities

Determination of preconditions for piloting

44 / 100 characters

5.6.3 Description of the group of activities

Aim is to set up the final conditions for piloting in WP 2.

Challenge to be addressed: In the BSR wastewater treatment operators expect discharge limits and removal targets on organic micropollutants (if they have not already gotten those). However, to be able to chose suitable technologies it is precondition, that the utilities (and municipalities) are aware which compounds are indeed present in the wastewater and which ones might turn out to be problematic, implying need for removal. As well where from which processes these compounds originate from.

Describtion:
In this activity following issues will be taking into consideratios:
- Analytical methods for the trace determination of MPs (WP1 will start in the laboratory with the development and validation of methodology for determination of micropollutants (e.g. PFAS, flame retardants, pharmaceuticals) in wastewater (influent/effluent), sludge and foam samples to ensure accurate testing during the case study)
- Analytical methods for determination of suspect target MPs (e.g. unknown PFAS)(The overall objective is to provide tools and a workflow to detect MPs (e.g. PFAS) groups based on chemical properties and their effects, and identify, quantify and prioritize unknown contaminants.)
As a precondition for implementing and allocating solutions, in difficult catchments RENOWATE will:
- Conduct Non-Target Screening with geographical source allocation which will be compared with the individual discharge permits - this activity will be conducted exemplarily in the sewage system of Fredericia (DK), Star-WIK (PL) as well as Kołobrzeska collector (Gdańk, PL). In RENOWATE we will perform non target screening in inflow and outflow of Fredericia's WWTP and Starogard WWTP (Star-WIK, Poland) as well as stormwater from Kołobrzeska collector– this will be conducted in parallel by passive samplers and conventional 24 h sampling. In the succession, passive samplers will be used to monitor the catchment to enable geographical localization of the respective sources. Together with Fredericia municipality that operates the discharge permits of chemicals used in their catchment a logic connection between compounds emitted, geographical allocation and use will be made to identify emitters. Non target and suspect screening in effluent water will be offered to other utilities and municipalities in the consortium. Once the methods and approaches are tested similar tests will be conducted at other partners. (GUT, GW, Star-WIK, AU, FRSE, Fredericia Municipality).
- Determine the most important inputs of PFAS in two basins: Lake Mälaren (SE) and Kołobrzeska stormwater collector to enable to establish at-source solutions (mitigation and/or treatment) (GUT, GW, SLU, Mälarens vattenvårdsförbund, Norrvatten)

Involved all Partners.

2,817 / 3,000 characters

5.6.4 This group of activities leads to the development of a deliverable ✔

D 1.1

Title of the deliverable

Preconditions for piloting - report

35 / 100 characters

Description of the deliverable

Based on the exchange of knowledge about local needs, detailing the weak points of planned pilots, the conditions for joining the pilots as wellas methodology for settling the system (catchment) boundaries will be determined. Report will contain among others: systematization of the analysis of the impact of substantial elements will allow to define the limits for the assessment of the benefits of the pilots implementation in a comparative analysis, hierarchical list of pollutants depending on their harmfulness and the degree of difficulty in removing, charcteristics of local conditions with indentification of sources of MPs in the basins, and finally a relationship matrix: source, local conditions, threat.

718 / 2,000 characters

Which output does this deliverable contribute to?

Handbook for Tailoring Solutions to Local Needs

47 / 100 characters

5.6.6 Timeline

Period:	1	2	3	4	5	6
WP.1: WP1 Preparing solutions						
A.1.1: Determination of preconditions for piloting						
D.1.1: Preconditions for piloting - report						

5.6.7 This deliverable/output contains productive or infrastructure investment

☐

WP 1 Group of activities 1.2

5.6.1 Group of activities leader

Group of activities leader PP 14 - Swedish University of Agricultural Sciences (SLU)

A 1.2

5.6.2 Title of the group of activities

Joint elaborating of technologies for piloting

46 / 100 characters

5.6.3 Description of the group of activities

Aim: Development of details concerning technical and technological parameters of pilot installations, technical drawings, selection of the scale, selection of reagents and their doses, flow rates, retention time, needs for equipment and tenders. Development of operational and efficiency tests scenarios for pilots.

Challenge to be addressed : tailored to the needs and tailored to the requirements and boundaries of the system, technical solutions in accordance with SMART.

Description:
Final selection of target MPs to be removed in the pilot will be done
Prioritization of MPs (Developed analytical methods will be applied to detect MP pollution supporting the WP2 as well as to find currently unknown PFAS in environmental matrices. Screening of the pilot region in WP1 will be performed in a close cooperation of research teams from BIOR)
Characterization of the inputs will provide data for the proper pilot technology selection and will allow to implement optimal operational conditions of a specific pilot.
It will enable to compare the adaptability of the analyzed catchments. Transfer of knowledge and experience.
Evaluation of latest SMART ('SMART' stands for Specific, Measurable, Attainable, Relevant, and Timely) technologies for priority MPs removal in pilots.
Development of details concerning technical and technological parameters of pilot installations, technical drawings, selection of the scale, selection of reagents and their doses, flow rates, retention time, needs for equipment and tenders. Development of operational and efficiency tests scenarios for pilots

Involved all Partners.

1,616 / 3,000 characters

5.6.4 This group of activities leads to the development of a deliverable

☑

D 1.2

Title of the deliverable

SMART report for pilots

23 / 100 characters

Description of the deliverable

Report will include: internal list of target MPs to be removed in pilots, description of SMART technologies for target MPs, as well as technical and technological description and operational and efficiency tests scenarios for pilots.

237 / 2,000 characters

Which output does this deliverable contribute to?

Handbook for Tailoring Solutions to Local Needs

47 / 100 characters

5.6.6 Timeline

Period:	1	2	3	4	5	6
WP.1: WP1 Preparing solutions						
A.1.2: Joint elaborating of technologies for piloting						
D.1.2: SMART report for pilots						

5.6.7 This deliverable/output contains productive or infrastructure investment

☐

WP 1 Group of activities 1.3

5.6.1 Group of activities leader

Group of activities leader PP 16 - Lake Malarens Water Conservation Association

A 1.3

5.6.2 Title of the group of activities

Joint elaboration of methodological framework for strategies to mitigate at source and treat the MPs

100 / 100 characters

5.6.3 Description of the group of activities

Aim : creating a frame for strategical document for HELCOM to help the local and regional authorities to set up their own strategies for mitigation and management of MPs in catchment .

Challenge to be addressed: creating a coherent framework for a document taking into account the point of view of local activists and their needs and the current state of knowledge, taking into account future development in the conditions of a circular economy and scenarios of climate change identifying potential differences and tools when switching from a pilot scale to a full scale and the differences between the expectations of operators and scientists, identification of tools for measures of how effective and how green is treatment option for local catchment conditions .

Description:
Determination of critical PFAS-mass and MPs flow locations in the environment will be done.
Receive representative MPs and PFAS data at relevant locations in the environment (i.e. river outlets point sources, areal sources , sounds between basins)
Mapping of PFAS-hot and MPs spots using mass flow calculation and hydrodynamic models
Determine the boundaries and identification of potential issues of going from investigation to efficient treatments of polluted sites- from pilot to full scale.
Provide a list PFAS-sources that should be prioritize, and suggest suitable treatment methods at these sites
Identification of methodology gaps between problem owners and researchers to determine the boundaries and identification of potential issues of going from investigation to efficient treatments of polluted sites- from pilot to full scale.
Identification of different conditions between various catchment determining the selection of technology of removal to create a tool measures for resolving the different catchment characteristic

Involved all Partners.

1,856 / 3,000 characters

5.6.4 This group of activities leads to the development of a deliverable ✔

D 1.3

Title of the deliverable

Guidelines for local basins strategies

39 / 100 characters

Description of the deliverable

Framework document with guidelines for constituting the basis for the preparation of MPs management plans in the catchment area. The document will include: critical PFAS-mass and MPs flow locations in the environment, mapping of PFAS-hot and MPs, significance table of methodology gaps , martix showing different conditions (various basins determining the selection of technology of mitigation or/and removal.

416 / 2,000 characters

Which output does this deliverable contribute to?

Handbook for Tailoring Solutions to Local Needs

47 / 100 characters

5.6.6 Timeline

	Period: 1	2	3	4	5	6
WP.1: WP1 Preparing solutions						
A.1.3: Joint elaboration of methodological framework for strategies to mitigate at source and treat the MPs						
D.1.3: Guidelines for local basins strategies						

5.6.7 This deliverable/output contains productive or infrastructure investment ☐

Work package 2

5.1 WP2 Piloting and evaluating solutions

5.2 Aim of the work package

The aim of this work package is to pilot, evaluate and adjust solutions. Plan one or several pilots to validate the usefulness of the solutions prepared in Work Package 1. Start Work Package 2 early enough to have time to pilot, evaluate and adjust solutions, together with your target groups. By the end of this work package implementation the solutions should be ready to be transferred to your target groups in Work Package 3.
The piloted and adjusted solution should be presented in one project output.
Organise your activities in up to five groups of activities. Describe the deliverables and outputs as well as present the timeline.

5.3 Work package leader

Work package leader 1	PP 5 - Aarhus University
Work package leader 2	PP 6 - Aarhus Water

5.4 Work package budget

Work package budget	50%

5.4.1 Number of pilots

Number of pilots	8

5.5 Target groups

	Target group	How do you plan to reach out to and engage the target group?
1	Infrastructure and public service provider Waste water treatment plant operators are responsible for removing pollutants from waste water. They are subordinate to local authorities (mainly municipalities). Even if testing the effectiveness of removing certain pollutants is not currently required by law, it is necessary to build awareness, responsibility, and knowledge about micropollutants in ww. This target group representatives come from DK, PL, SE and are represented by interest groups in EE and PL. 466 / 500 characters	In WP 2 four utilities (Aarhus Vand, Hillerød Utility, Helsinki Utility, and Gdansk Water) are working together with universities to achieve the respective goals. Additionally five Latvian utilities have joined the consortium as associated partners to ensure good dessimination into the Latvian WWTP communities. The WP is planning 3 Webinars with about 100 participants. The invitations will be distributed through the different national wastewater utilities organisations as well as through the vast personal network that the partners maintain. All utilities and research institutes will reach out to their fellow organisations in their national and international meetings and conferences. 697 / 1,000 characters
2	Local public authority Local public authorities are responsible for supervising the effective operation of the urban ww treatment plants. These are usually environmental departments. They consist an important part of Associated Organisations and will be informed about the activities in their wastewater treatment plants, and will be involved in activities in all WPs. 345 / 500 characters	Several municipalities are joining on an associated partner level (Køge and Fredericia municipality). The municipalities and other authorities will be reached via the webinars. Also Polish Municipalities like Gdansk Municipality indicated high interest to communicate and discuss with Renowate. 294 / 1,000 characters
3	International governmental organisation HELCOM is trying to coordinate the policy development in the BSR towards removal of micropollutants from wastewater to reach a cleaner Baltic Sea. 147 / 500 characters	RENOWATE will discus the results with HELCOM in individual e-meetings and during the final webinars and ensure the output is done in a way that HELCOM can use it for policy making. 180 / 1,000 characters
4	National public authority The National Environmental Protection agencies and -ministries are developing their own policies towards removal of micropollutants from wastewater. - this is very pronounced the case in DE, DK, SE, but upcoming in FL, PL, EE, LT 229 / 500 characters	RENOWATE will built on the good processes in CWPharma and discus the results with National Authorities in individual meetings and during the webinars and ensure the output is generated in a for it can be used use it for policy making. 234 / 1,000 characters
5	Regional public authority Regional Authorities such as the German Federal countries are developing their own policies on micropollutant management 121 / 500 characters	RENOWATE will built on the good processes in CWPharma and discus the results with Regional Authorities in e-meetings and during the webinars and ensure the output is generated in a for it can be used use it for policy making. In Denmark it is the regional authorities (regions) that are responsible for groundwater (very important for PFAS) and the hospitals. RenoWate will reach out to these for the dissemination activities. 426 / 1,000 characters

5.6 Activities, deliverables, outputs and timeline

No.	Name
2.1	**Sustainable GAC- based removal of micropollutants**
2.2	**Nature based solutions (NBS) pilot station for stormwater treatment**
2.3	**Energy efficient removal of PFAS from wastewater**
2.4	**Optimization of processes in pharmaceuticals removal in SBR and SBR-IFAS**

WP 2 Group of activities 2.1

5.6.1 Group of activities leader

Group of activities leader PP 10 - Hillerød Utility

A 2.1

5.6.2 Title of the group of activities

Sustainable GAC- based removal of micropollutants

49 / 100 characters

5.6.3 Description of the group of activities

Challenge: Currently cleaning with water is possible but not very sustainable, as production of GAC is emitting a lot of greenhouse gasses. Furthermore, the operation conditions are only known for limited number of compounds.
Description:
Different GAC operation modes will be tested for efficiency to remove pharmaceuticals and their metabolites including hitherto unstudied pharmaceuticals as well as for sustainablity in different pilots:

1) Fluidised bed GAC (AV) will be integrated in a polishing rapid sandfilter and tested for a) how hitherto untested compounds that AV received a discharge limit for can be removed, b) what influence the biofilm (fluidised bed biofilm-GAC has on the removal of MPs. the results in the big pilot at AV will be supplemented by in depths process studies at AU to ensure the correct interpretation of the data.
2) An Ozone-GAC combination with a packed bed GAC filter at HFORS (PP-10) will be tested for a) whether the sustainability can be improved by utilizing GAC produced from sludge (biochar). b) whether GAC operation in intelligent combination with ozone dosing can result in more cost efficient operation as the discharge demands for HFORS implies using both ozone and GAC anyway. It will be tested whether low dose pre-ozonation might increase the lifetime of the GAC and thus its sustainability.
3) Whether packed bed GAC (HSY) can be performed for integrated phosphorus and micropollutant removal by iron dosing into the GAC filter. It is possible the phosphate removal will start a secondary Fenton-like reaction increasing the removal of micropollutants.

KWB supports the pilots (1-3) with technical expertise and compares the performance and environmental profile (e.g. carbon footprint, primary energy demand, other indirect emissions) of the biochar vs. conventional GAC.

Partners: AV (PP-6), AU (PP-5), KWB (PP-12), HSY, (PP-11) HFORS (PP-10)

1,920 / 3,000 characters

5.6.4 This group of activities leads to the development of a deliverable ☐

O 2.1

Title of the output

Guideline on sustainabilty of different operation modes of GAC filters for micropollutant removal

97 / 100 characters

Description of the output

The guidline will consist of the following elements:

1) Report on fluidised bed GAC (AV) covering efficiency and process optimisation of the fluidised bed biofilm GAC in a big pilot in line with a fullscale WWTP. This dataset will be supplemented by detailed studies allowing to separate sorption (GAC) and degradation(biofilm). this report will also take into consideration several compounds for which AV got limits and where no data are available.
2) Report on Ozone-GAC at HFORS. This report will take into consideration a) a multistage optimisation for the interplay of optimised ozone dosage and increasing lifetime of GAC and b) increased sustainablity by utilising sewage sludge as a source for GAC production and GAC recycling by an possible onsite GAC regeneration plant.
3) Report on packed bed GAC at HSY (PP-11) with integrated phosphorus and micropollutant removal covering process optimisation, removal rates for micropollutants and phosphate and comparing sustainability of different GAC sources.
The report will also determine the effects of sorption and Fenton reactions on the micropollutants.

1,120 / 3,000 characters

Target groups and uptake of the solution presented in this output

Target groups	How will this target group apply the output in its daily work?
Target group 1 Infrastructure and public service provider Waste water treatment plant operators are responsible for removing pollutants from waste water. They are subordinate to local authorities (mainly municipalities). Even if testing the effectiveness of removing certain pollutants is not currently required by law, it is necessary to build awareness, responsibility, and knowledge about micropollutants in ww. This target group representatives come from DK, PL, SE and are represented by interest groups in EE and PL.	In GoA 2.1 four utilities (Aarhus Vand, Hillerød Utility, Helsinki Utility, and Gdansk Water) are working together with universities to achieve the respective goals. Additionally five Latvian utilities have joined the consortium as associated partners to ensure good dessimination into the Latvian WWTP communities. The WP is planning 3 Webinars with about 100 participants. The invitations will be distributed through the different national wastewater utilities organisations as well as through the vast personal network that the partners maintain. All utilities and research institutes will reach out to their fellow organisations in their national and international meetings and conferences. 700 / 1,000 characters
Target group 2 Local public authority Local public authorities are responsible for supervising the effective operation of the urban ww treatment plants. These are usually environmental departments. They consist an important part of Associated Organisations and will be informed about the activities in their wastewater treatment plants, and will be involved in activities in all WPs.	Several municipalities are joining on an associated partner level (Køge and Fredericia municipality). The municipalities and other authorities will be reached via the webinars. Also Polish Municipalities like Gdansk Municipality indicated high interest to communicate and discuss with Renowate. 294 / 1,000 characters
Target group 3 International governmental organisation HELCOM is trying to coordinate the policy development in the BSR towards removal of micropollutants from wastewater to reach a cleaner Baltic Sea.	RENOWATE will discus the results with HELCOM in individual e-meetings and during the final webinars and ensure the output is done in a way that HELCOM can use it for policy making. 180 / 1,000 characters
Target group 4 Regional public authority Regional Authorities such as the German Federal countries are developing their own policies on micropollutant management	RENOWATE will built on the good processes in CWPharma and discus the results with Regional Authorities in e-meetings and during the webinars and ensure the output is generated in a for it can be used use it for policy making. In Denmark it is the regional authorities (regions) that are responsible for groundwater (very important for PFAS) and the hospitals. RenoWate will reach out to these for the dissemination activities. 427 / 1,000 characters

Durability of the output

WWTPs will be equipped with micropollutant removal in the BSR in the next two decades. It is expected that this output will significantly influence the design of the infrastucture during the next 10 years period. Infrastructure like this is operated with a lifetime of 10-20 years.

282 / 1,000 characters

5.6.6 Timeline

Period:	1	2	3	4	5	6
WP.2: WP2 Piloting and evaluating solutions						
A.2.1: Sustainable GAC- based removal of micropollutants						
O.2.1: Guideline on sustainabilty of different operation modes of GAC filters for micropollutant removal						

5.6.7 This deliverable/output contains productive or infrastructure investment ☐

WP 2 Group of activities 2.2

5.6.1 Group of activities leader

Group of activities leader PP 15 - Gdansk University of Technology

A 2.2

5.6.2 Title of the group of activities

Nature based solutions (NBS) pilot station for stormwater treatment

68 / 100 characters

5.6.3 Description of the group of activities

Aim of activity is using of NBS for treatment of stormwater to prevent the MPs migration to the Baltic Sea.

Challenge to be addressed: Based on periodically commissioned by the Environmental Department of Gdansk Municipality "Assessment of the quality of surface waters in Gdansk - Monitoring of surface waters along with the calculation of the load of pollutants discharged from the Gdańsk Commune to the Gulf of Gdansk" and the Chemical Action Plan for Gdansk, which was created in the range of the NonHazCity project, the most problematic substances in the surface waters (and stormwater) of the City of Gdańsk are: cadmium, mercury, PAHs (especially benzo(a)pyrene), BPA, phthalates (especially DEP, BEHP) and PFAS.
Based on the results of the analyzes carried out as part of the Fanplesstic-sea project, it seems appropriate to continue the analysis of biogenic compounds, metals, PAHs, microbiological contaminants, phthalates (including DEHP, DIBP).

Description:
NBS (Nature based solutions) can be attractive in water treatment, but their removal efficiency for organic micropollutants is unclear.
Gdansk Water Ltd. took part in the Interreg BSR 2014-2020 project, Fanplesstics-sea, from January 2019 to December 2021. One of the main task of the Gdansk Water company in the range of this project was the installation of the pilot station to verify the efficiency of microplastics removal from urban stormwater. The pilot station consists of 5 steel tanks (including a multi-stage wetland system) constituting elements of the filtration system through which stormwater supplied to the system gradually flows. The one tank contains probes that are used to measure basic parameters and plays the role of a sedimentation tank. Two more tanks are filled with a filter bed in which the common reed (Phragmites australis) has been planted. They are built as vertical flow (VF-CW) and horizontal flow (HF-CW) beds. Two other tanks are used for further treatment of stormwater plats role of ponds. This system allows for different configuration of tanks. This configuration will be checked and changed after target micropollutants will be specified to find the most optimal one.

The system is located about 800 meters from the place where stormwater from a stormwater collector is directed to the Baltic sea. The stormwater collector, on which the pilot was installed, discharges stormwater from a catchment area of approximately 1740 hectares (i.e. 17.4 square kilometers). It's a highly urbanized catchment area.
The partner is going to adjust the existing installation to test its efficiency towards the most problematic micropollutants in the range of the project. AU will focus on determining transformation processes.

KWB will contribute with engineering expertise and perform an environmental friendliness assessment.

GUT will perform an analysis on ecosystem services of the NBS.

Partners:GW, (PP-9), GUT (PP-15), KWB (PP-12), SLU (PP-14), AU (PP-5)

2,982 / 3,000 characters

5.6.4 This group of activities leads to the development of a deliverable ✔

D 2.2

Title of the deliverable

Report on how to implement NBS systems for MP removal successfully

66 / 100 characters

Description of the deliverable

The GoA 2.2 report will cover design, removal and mechanisms of removal in the constructed wetland. The design will be compared with hydraulic loading and removal rates to give clear design background to serve as a design guideline and blueprint for systems to be built in future.

282 / 2,000 characters

Which output does this deliverable contribute to?

Handbook for Tailoring Solutions to Local Needs

47 / 100 characters

5.6.6 Timeline

Period:	1	2	3	4	5	6
WP.2: WP2 Piloting and evaluating solutions						
A.2.2: Nature based solutions (NBS) pilot station for stormwater treatment						
D.2.2: Report on how to implement NBS systems for MP removal successfully						

5.6.7 This deliverable/output contains productive or infrastructure investment ☐

WP 2 Group of activities 2.3

5.6.1 Group of activities leader

Group of activities leader PP 14 - Swedish University of Agricultural Sciences (SLU)

A 2.3

5.6.2 Title of the group of activities

Energy efficient removal of PFAS from wastewater

48 / 100 characters

5.6.3 Description of the group of activities

Challenge: PFAS are a rising problem, there are a lot of emergency fixes, but not (yet) established good sustainable solutions. PFAS are very resistent to degradation and it has to be either incinerated at high temperature or oxidized with applying high energy or in supercritical water to be destroyed. Both processes are expensive and the amount of PFAS containing material should be minimized. Before any PFAS destruction, it is therefore very important to up-concentrate the PFAS. One very promising method to do upconcentration of PFAS is surface active foam fractionation (FF). FF has shown to be extremely efficient in concentrating PFAS in various aqueous matrices. The advantage is that it is cost-efficient and uses simple technology (i.e. injection of air; separation of foam) which are established technologies in wastewater treatment.
Within RenoWate, a pilot consiting of a combined foam (FF) and a sequencing batch reactor (SBR) will be used to develop an enhanced technology for the removal of hazardous micropollutant (e.g., PFAS, flame retardands, pharmaceuticals). To achieve the aim, a micropollutant reduction technology for the wastewater treatment process will be demonstrated at the selected existing (WP1) wastewater treatment plant (WWTP).

Description:
1) In this treatment train, FF will remove PFAS by separation of the foam (concentration factor >1 000 000). The concentrated foam will be destructed using established electrochemical treatment.
The treated water will be further processed in SBR. A small-scale SBR, that was developed by RTU (during the WATERCHAIN Pilot watersheds as a practical tool to reduce the harmful inflows into the Baltic Sea, Central Baltic Programme Interreg, CB50, 2015-2018 project) will be used in ReNoWaTe, adding FF as the pre-treatment stage. Two parallel SBR (with and without FF pre-treatment) with the operating flow rate range 5-10 m3 per day each will be used.
A comparison of SBR with and without FF pre-treatment will allow to evaluate efficiency of FF.

2) Foam fractionation (FF) will be assessed (efficiency, placing in the CAS-GAC-Ozone system) at HFORS (PP-10) using data from RTU.

The activity will have actions in the period after the deliverable, as it is expected that dismantling and collecting of the pilot infrastructure will need time/efforts and transportation costs.

Partners: RTU (PP-13), BIOR (PP-7), HFORS (PP-10), SLU (PP-14)

2,434 / 3,000 characters

5.6.4 This group of activities leads to the development of a deliverable ☑

D 2.3

Title of the deliverable

Reports on the feasibility of foam fractionation for PFAS removal in WWTPs

74 / 100 characters

Description of the deliverable

The GoA2.3 report will cover 1) FF/SBR process optimisation and removal rates for PFAS at RTU. A special focus will be the removal of the shorter chain PFAS using FF by optimizing the retention time and bubble size. 2) At HFORS we will asses placing of FF for removing PFAS from WWTP effluent in combination with ozone and GAC.

331 / 2,000 characters

Which output does this deliverable contribute to?

Handbook for Tailoring Solutions to Local Needs

47 / 100 characters

5.6.6 Timeline

Period:	1	2	3	4	5	6
WP.2: WP2 Piloting and evaluating solutions						
A.2.3: Energy efficient removal of PFAS from wastewater						
D.2.3: Reports on the feasibility of foam fractionation for PFAS removal in WWTPs						

5.6.7 This deliverable/output contains productive or infrastructure investment ☐

WP 2 Group of activities 2.4

5.6.1 Group of activities leader

Group of activities leader PP 15 - Gdansk University of Technology

A 2.4

5.6.2 Title of the group of activities

Optimization of processes in pharmaceuticals removal in SBR and SBR-IFAS

73 / 100 characters

5.6.3 Description of the group of activities

Aim: Determination of the optimal process conditions for the integrated removal of phatrmaceuticals and nutrients in WWTPs, taking into account the conditions necessary for the effective removal of pharmaceuticals, mainly diclofenac, by the activated sludge using conventional SBR and a hybrid biofilm-sludge SBR (IFAS), with regards to energy demand.
Challenge:
Pharmaceuticals are an emerging environmental problem. Wastewater treatment plant (WWTP) effluent is the main source of pharmaceuticals in the watershed. The efficiency of pharmaceuticals removal from wastewater is very variable. Ibuprofen and naproxen are nearly completely removed from wastewater in conventional WWTPs but the lowest removal efficiency was found in the case of diclofenac. It was also found the release of this pharmaceutical and its higher concentration in effluent than in influent. It was assumed that SBR will remove more diclofenac or any other organic micropollutant than a conventional activated sludge system because in SBR there is a possibility to better control oxygen conditions than in flow systems. The individual stages can be freely shortened or lengthened and this may result in better MPs removal. The biofilm part of the IFAS (integrated fixed-film-activated sludge) have been described as being able to degrade pharmaceuticals.
Description:1. The determination of optimal technological parameters for the biodegradation of selected pharmaceuticals (mostly diclofenac) in the 2 systems of activated sludge chambers: (1) conventional SBR reactor and (2) an IFAS-SBR will be carried out in laboratory with use of synthetic sewage. The IFAS will will be equipped with biofilm carriers (provided by AU). Both systems will be operated at controlled temperature. The content of the reactor will be mixed with a mechanical agitator and aerated and basic parameters will be determined and documented in the data archiving system. Pharmaceuticals will be added and their concentrations as well as their metabolites be analysed additionally nontarget omics analysis will be conducted for selected samples from well defined reactor processes (AU). BIOR will analye other parameters such as PFAS.
2. The better performing solution will be installed in WWTP (STAR-WIK) as a pilot and further research will be carried out using real sewage. In order to transfer the selected technological parameters to the activated sludge chambers of the WWTP in Starogard (STAR-WIK), it will be necessary to supplement the measurement system and control their operation. In the STAR-WIK treatment plant, there are two parallel lines, which will allow the validation of the parameters set on the pilot-scale on one of the lines and the other will remain as control and comparative line for the assessment of environmental impact.
Partners: STAR-WIK (PP-18), GUT, (PP-15), RU (PP-13), BIOR (PP-7), AU (PP-5)

2,899 / 3,000 characters

5.6.4 This group of activities leads to the development of a deliverable ✔

D 2.4

Title of the deliverable

Report on optimal process conditions

36 / 100 characters

Description of the deliverable

In report the optimal process conditions based on conducted research will be presented. They will include e.g. aeration rates as well as additional substances that can support the process for the integrated removal of organic compounds, nitrogen and phosphorus commonly used in municipal wastewater treatment plants, taking into account the conditions necessary for the effective removal of pharmaceuticals and their degradation products -while diclofenac will be taken as key parameter to be analysed with higher frequency than other 50 pharmaceuticals and their degradation products. The results will be compared to treatment with classical activated sludge in respect to removal rates and energy demand.

710 / 2,000 characters

Which output does this deliverable contribute to?

Handbook for Tailoring Solutions to Local Needs

47 / 100 characters

5.6.6 Timeline

Period:	1	2	3	4	5	6
WP.2: WP2 Piloting and evaluating solutions						
A.2.4: Optimization of processes in pharmaceuticals removal in SBR and SBR-IFAS						
D.2.4: Report on optimal process conditions						

5.6.7 This deliverable/output contains productive or infrastructure investment ☐

Work package 3

5.1 WP3 Transferring solutions

5.2 Aim of the work package

In Work Package 3, communicate and transfer the ready solutions to your target groups. Plan at least one year for this work package to transfer your solutions to the target groups, considering their respective needs. Select suitable activities to encourage your target groups to use the solutions in their daily work.
Organise your activities in up to five groups of activities. Describe the deliverables and outputs as well as present the timeline.

5.3 Work package leader

Work package leader 1	PP 1 - Chamber of Economy Polish Waterworks
Work package leader 2	PP 2 - Gdansk Water Foundation

5.4 Work package budget

Work package budget	20%

5.5 Target groups

	Target group	How do you plan to reach out to and engage the target group?
1	Infrastructure and public service provider Waste water treatment plant operators are responsible for removing pollutants from waste water. They are subordinate to local authorities (mainly municipalities). Even if testing the effectiveness of removing certain pollutants is not currently required by law, it is necessary to build awareness, responsibility, and knowledge about micropollutants in ww. This target group representatives come from DK, PL, SE and are represented by interest groups in EE and PL. 466 / 500 characters	From the beginning, we will focus on cooperation with a wide group of Infrastructure and public service providers and municipalities. Thanks to the involvement of interest groups (Poland, Estonia) and the implementation of the communication plan, we will reach operators of all sizes in almost all Baltic countries. The aim of the survey is to enable the stakeholders to self-assess and compare them with others. Articles in the specialized magazines, presentations, and free workshops will help expand knowledge about pilots. By consulting the results of the work, we will convince them of the effectiveness of the solutions used. Awareness will create a need to respond and react to the new challenges. 704 / 1,000 characters
2	Local public authority Local public authorities are responsible for supervising the effective operation of the urban ww treatment plants. These are usually environmental departments. They consist an important part of Associated Organisations and will be informed about the activities in their wastewater treatment plants, and will be involved in activities in all WPs. 345 / 500 characters	Operators need to be understood by local governments. Reaching out to them will allow them to understand the problem and recognize the need to respond to it. It is local governments that often have to agree to technological changes and investments realized by urban ww treatment plant operators. Without understanding from local governments, it will be difficult for operators to introduce changes. Therefore, it is equally important to reach local governments through interest groups or associated partners. 508 / 1,000 characters
3	International governmental organisation HELCOM is trying to coordinate the policy development in the BSR towards removal of micropollutants from wastewater to reach a cleaner Baltic Sea. 147 / 500 characters	RENOWATE will discus the results with HELCOM in individual e-meetings and during the final webinars and ensure the output is done in a way that HELCOM can use it for policy making. (together with WP 2) 201 / 1,000 characters
4	National public authority The National Environmental Protection agencies and -ministries are developing their own policies towards removal of micropollutants from wastewater. - this is very pronounced the case in DE, DK, SE, but upcoming in FL, PL, EE, LT 229 / 500 characters	RENOWATE will built on the good processes in CWPharma and discus the results with National Authorities in individual meetings and during the webinars and ensure the output is generated in a for it can be used use it for policy making. (together with WP 2) 255 / 1,000 characters
5	Regional public authority Regional Authorities such as the German Federal countries are developing their own policies on micropollutant management 121 / 500 characters	RENOWATE will built on the good processes in CWPharma and discus the results with Regional Authorities in e-meetings and during the webinars and ensure the output is generated in a for it can be used use it for policy making. (together with WP 2) 246 / 1,000 characters

5.6 Activities, deliverables, outputs and timeline

No.	Name
3.1	**Communication**
3.2	**Conducting an awareness survey**
3.3	**Collection of results and Guidelines elaboration**

WP 3 Group of activities 3.1

5.6.1 Group of activities leader

Group of activities leader PP 2 - Gdansk Water Foundation

A 3.1

5.6.2 Title of the group of activities

Communication

14 / 100 characters

5.6.3 Description of the group of activities

This group of activities in the most part will start with WP2. Thanks to it we will have enough time to raise awareness among stakeholders - mainly municipalities and iWWTP operators. The communication plan will allow us to define the schedule and actions of approaching, informing, and involving target groups. The communication plan will include a schedule of activities, a list of stakeholders we will reach, presentations, activities on social media, articles in magazines and portals in water sector.
An online survey conducted in most countries will make them possible to realize the essence of the threat and make operators and municipalities consider whether they are affected by this problem. The results of the survey will allow us to select entities and regions where the situation requires the greatest concentration on proposing developed solutions. The survey will also help infrastructure and public service providers to pre-adjust a specific technological solution to the local needs.
Within the actiivity partners meetings and open workhops will be provided. The workshops will enable municipalities and operators to analyze specific cases in more detail. During the workshops, interested stakeholders (WWTP operators, and municipalities) will receive more detailed answers to their dilemmas. A strong representation of Higher education and research institutions in the consortium will facilitate the approach to specific problems.
Moreover, the developed information materials will help to broaden the knowledge on the possibilities of pollution control at the source, which should be always a fundamental measure.
Each pilot in WP2 will involve several partners from several countries around him. This will enable the understanding of local needs and the development of solutions, on the one hand, responding to local challenges, and on the other hand, universal enough to be implemented in many places. Thanks to the participation of partners from 7 countries, we will be in contact with UWWTP operators in most BSR countries.
Visual identification of the project will be prepared: logo, rollup graphic design,graphic posters for social media needs, etc.
Partners responsible for the WP3 have extensive international network of contacts. With including the rest of PPs in disseminaton activities the output and other project results will have real international range.

2,394 / 3,000 characters

5.6.4 This group of activities leads to the development of a deliverable ✔

D 3.1

Title of the deliverable

Solutions transferred- report

29 / 100 characters

Description of the deliverable

The workshops expand the knowledge of the issue among stakeholders, but also provide feedback to partners working on pilots. The workshops will be held at pilot sites and remotely, and will focus on infrastructure and public service providers and municipalities. They will provide them with knowledge about the proposed solutions. The workshops will enrich the knowledge of the consortium, enabling better matching of pilots and the development of output more suited to the needs.

480 / 2,000 characters

Which output does this deliverable contribute to?

Guidelines for matching technology to local needs

49 / 100 characters

5.6.6 Timeline

Period:	1	2	3	4	5	6
WP.3: WP3 Transferring solutions						
A.3.1: Communication						
D.3.1: Solutions transferred- report						

5.6.7 This deliverable/output contains productive or infrastructure investment ☐

WP 3 Group of activities 3.2

5.6.1 Group of activities leader

Group of activities leader PP 1 - Chamber of Economy Polish Waterworks

A 3.2

5.6.2 Title of the group of activities

Conducting an awareness survey

31 / 100 characters

5.6.3 Description of the group of activities

The survey will be developed bearing in mind the poor knowledge of some stakeholders about micropollutants (local authorities). The survey will be a collection of simple questions dedicated to representatives of local public authorities in order to raise their awareness (asking the question makes us think about the problem). Questions for WWTP operators will be more complex. The aim of the survey is to provide more detailed knowledge about local problems with special needs and a more precise number of interested entities. The survey will allow stakeholders to assess their own knowledge and situation. Self-assessment questions will help representatives of the target group scale up and adapt the solutions. The survey results will be used to provide more precise output guidelines.
Thanks to the survey, we plan to contact 200 local authorities and 200 infrastructure and public service providers.

904 / 3,000 characters

5.6.4 This group of activities leads to the development of a deliverable ✔

D 3.2

Title of the deliverable

Description of specific local needs of different stakeholders

61 / 100 characters

Description of the deliverable

The aim of the survey is to match the WP2 results to target groups. We plan to conduct a wide online survey thanks to which we will build awareness, but also expand the number of stakeholders. In the survey, we will indicate the output (guidelines) as a tool that meets many local group needs. The survey results will allow for the adaptation of the solutions tested during WP2.
Deliverable is the cumulative and analyzed results of an online survey. Deliverable will include indications of the target group's awareness of micropollutants, will provide information about gaps in knowledge, and which pilots (WP2) correspond to specific local needs. The survey will also indicate which local authorities, infrastructure operators and other stakeholders should cooperate in the implementation of pilots in new locations. Thanks to the survey, it will be possible to make international comparisons and identify opportunities for the exchange of experiences between BSR countries.

976 / 2,000 characters

Which output does this deliverable contribute to?

Handbook "Adapting technology to the needs"

43 / 100 characters

5.6.6 Timeline

Period:	1	2	3	4	5	6
WP.3: WP3 Transferring solutions						
A.3.2: Conducting an awareness survey						
D.3.2: Description of specific local needs of different stakeholders						

5.6.7 This deliverable/output contains productive or infrastructure investment ☐

WP 3 Group of activities 3.3

5.6.1 Group of activities leader

Group of activities leader PP 1 - Chamber of Economy Polish Waterworks

A 3.3

5.6.2 Title of the group of activities

Collection of results and Guidelines elaboration

48 / 100 characters

5.6.3 Description of the group of activities

The goal of action is to collect all partial reports and results of WP2 as well as the results of the survey carried out in WP3. This group of activities is to lead to a guideline based on WP2 pilots. The Guidelines will describe the pollution problem in the Baltic Sea, focusing on the problems of the target groups. Next, we will describe the results of the pilots. Thanks to the gradual development of guidelines, we will keep our stakeholders informed. We will also collect data from workshops and meetings at pilots' sites. The Guidelines will be divided into sections to encourage stakeholders to use them. Those interested will be able to reach for the next parts if they are interested in more details. The Guidelines will also describe how to implement solutions developed in WP2, who to contact and how to establish international cooperation.
The guidelines will highlight specific local features that will prove challenging for pilots.
The entire activity of WP3 is aimed at knowledge transfer successively described in the guidelines. Therefore, they will be created together with stakeholders who will be encouraged to share their experiences and describe case studies.

1,182 / 3,000 characters

5.6.4 This group of activities leads to the development of a deliverable ☐

O 3.3

Title of the output

Handbook for Tailoring Solutions to Local Needs

47 / 100 characters

Description of the output

The Handbook-Guidelines will be a study divided into parts:
- description of the problem of micropollutants flowing into the Baltic Sea,
- why is it important for target groups,
- what target groups can do,
- what solutions are ready for implementation,
- how to adjust the solution to local needs,
- who to involve,
- how to establish cooperation with stakeholders from other locations,
- how to inform about the implementation of solutions,
- what experiences we have gathered during the pilots,
- recommendations for decissionmakers and authorities of all levels (from local to international).

The Handbook purpose is to gather results from the RENOWATE project and disseminate it within target groups to provide mature and concrete sulutions to prevent the release of micropollutants into the environment and to show how to choose the appropriate technology and decission.

Only a small group of stakeholders participate in EU projects and similar activities. The purpose of developing the Handbook as provide a summary of the entire work of the RENOWATE team. On the one hand - to reach with this knowledge and experiences to those who otherwise would not have access to such answers (WWTPs) and, on the other hand, to present decisionmakers needs and opportunities that they can create for operators by proper legal regulations.

The Handbook will be provided in English and widely dissemminated e-version.

The transnational value will be achieved through the cooperation of an international group of specialists / institutions (project partners, target groups, other projects coopertation, etc.).
In addition, an inter-border (geographically) will be achieved, because micropollutants know no borders, so activities undertaken in one place will positively affect other places.

1,791 / 3,000 characters

Target groups and uptake of the solution presented in this output

Target groups	How will this target group apply the output in its daily work?
Target group 1 Infrastructure and public service provider Waste water treatment plant operators are responsible for removing pollutants from waste water. They are subordinate to local authorities (mainly municipalities). Even if testing the effectiveness of removing certain pollutants is not currently required by law, it is necessary to build awareness, responsibility, and knowledge about micropollutants in ww. This target group representatives come from DK, PL, SE and are represented by interest groups in EE and PL.	The Guidelines were developed to provide ready-made solutions to operators. Based on the described results of the pilots, they can implement ready-made solutions by selecting the solution and its implementation. Thanks to the guidelines they will know which solutions are most appropriate for a specific location. They will also know which higher education and scientific institutions are competent to engage in implementation aid. Operators can partner with other operators to share experiences. The list of operators who have declared their interest will be available in the Guidelines. Operators can also benefit from the experience of the operator who led the pilot under WP2 679 / 1,000 characters
Target group 2 Local public authority Local public authorities are responsible for supervising the effective operation of the urban ww treatment plants. These are usually environmental departments. They consist an important part of Associated Organisations and will be informed about the activities in their wastewater treatment plants, and will be involved in activities in all WPs.	The Guidelines were developed to provide turnkey solutions to local authorities. Based on the described results of the pilots, they can implement ready-made solutions by selecting the solution and its implementation. Local governments are more difficult stakeholders than operators because of a different approach to the micropollutants issue. It is the operators who are supposed to be familiar with the technology, but local authorities must understand the problem and agree to support the operators. Thanks to the guidelines they will know which solutions are most appropriate for a specific location. They will also know which higher education and scientific institutions are competent to engage in implementation aid. Local authorities may cooperate with other operators to exchange experiences. A list of municipalities that have declared interest will be available in the Guidelines. Operators can also benefit from the experience of the operator who led the pilot under WP2 981 / 1,000 characters
Target group 3 Regional public authority Regional Authorities such as the German Federal countries are developing their own policies on micropollutant management	The Handbook-Guidelines will provide knowledge and recommendations for the target group to apply it in a daily work. 116 / 1,000 characters
Target group 4 National public authority The National Environmental Protection agencies and -ministries are developing their own policies towards removal of micropollutants from wastewater. - this is very pronounced the case in DE, DK, SE, but upcoming in FL, PL, EE, LT	The Handbook-Guidelines will provide knowledge and recommendations for the target group to apply it in a daily work. 116 / 1,000 characters
Target group 5 International governmental organisation HELCOM is trying to coordinate the policy development in the BSR towards removal of micropollutants from wastewater to reach a cleaner Baltic Sea.	The Handbook-Guidelines will provide knowledge and recommendations for the target group to apply it in a daily work. 116 / 1,000 characters

Durability of the output

Pilot solutions will operate with partners who are leaders in solutions and deliverables. These will be reference and demonstration sites that will serve as good examples of solutions implementation. Therefore, infrastructure operators who have knowledge and experience will play a key role. Significant support will be provided by higher education and scientific institutions, which will be at the disposal of the research results.
The material will be developed as e-version and disseminate via partners www, social media, mailing, etc. what can make it a kind of viral being forwarded between interested recipients. It guarantees indefinite durability.
Publication in English guarantees understanding by wide international audience. Popular e-translators will provide support if needed.

789 / 1,000 characters

5.6.6 Timeline

Period:	1	2	3	4	5	6
WP.3: WP3 Transferring solutions						
A.3.3: Collection of results and Guidelines elaboration						
O.3.3: Handbook for Tailoring Solutions to Local Needs						

5.6.7 This deliverable/output contains productive or infrastructure investment

6. Indicators

Indicators

Output indicators

Output indicators	Total target value in number	Project outputs	Please explain how the solution presented in this output serves the target group(s).
RCO 84 – Pilot actions developed jointly and implemented in projects	8	N/A	N/A
RCO 116 – Jointly developed solutions	2	O.2.1: Guideline on sustainabilty of different operation modes of GAC filters for micropollutant removal	The guideline will serve as blueprint for optimising GAC filters for micropollutant removal in the most sustainable way. It is expected that all WWTPs operating GAC will optimise their processes based on this guideline. (219 / 1,000 characters)
		O.3.3: Handbook for Tailoring Solutions to Local Needs	The handbook will serve as a blueprint for building full-scale advanced solutions to decrease pollution of receiving waters with organic micropollutants. It is thus the precondition of enabling water reuse in urban and agricultural contexts as well as to decrease pollution of the Baltic Sea and is thus precondition for a blue growth industry, i.e., producing value products and food in marine aquaculture systems. (419 / 1,000 characters)

Result indicators

Result indicator	Total target value in number	Please explain how organisations in the target groups within or outside the partnership will take up or upscale each solution.
RCR 104 - Solutions taken up or up-scaled by organisations	2	1) HFORS will base their expansion of the fullscal WWTP on the results of RENOWATE. - the plant is planned to be in operation in 2025. (O2.1 and O3.3) 2) partner AV is preparing for micropollutant removal in fullscale (with first step to be operationable in 2025) but needs help to develop verification for the specific micropollutants in their new discharge permit and needs to develop a sustainable approach for the expected second stage treatment (biologically activated GAC in the final sandfilter) that is expected to be needed (O3.3). 3) in the next 10 years 10 WWTPs in Denmark will be expanded with the aim to remove pharmaceuticals compounds – all of these will refer to the RenoWate handbook (O2.1 and O3.3). 4) in the next 10 years 15 WWTPs in Sweden will be expanded with the aim to remove pharmaceuticals compounds – all of these will refer to the RenoWate handbook (O2.1 and O3.3). 5) HSY is planning to expand at least one Helsinki WWTP with the aim of removing micropollutants in the next 5-10 years based on the handbook of RenoWate. It is highly probable that about 5 more plants will follow closely (O2.1). (1,133 / 2,000 characters)

Output indicators

Output indicator	Total target value in number
RCO 87 - Organisations cooperating across borders	30

Result indicators

Result indicator	Total target value in number	Please describe what types of organisations are planned to actively participate in the project. Explain how this participation will increase their institutional capacity. These types of organisations should be in line with the target groups you have defined for your project.	
PSR 1 - Organisations with increased institutional capacity due to their participation in cooperation activities across borders	136	Project partners and associated organisations	Partners in total 18: eight utilities/municipalities Associated partners in total11: two municipalities About 100 utilities will actively contribute to the fine tuning of the Guidelines for local basins strategies. (220 / 1,500 characters)
		Other organisations	The outcome of RENOWATE will be used by 4 national authorities (DK, SE, DE, FL) 2 regional authorities (DE-SH, and Norrwatten (SE) as well as Helcom for policy making (166 / 1,500 characters)

7. Budget

7.0 Preparation costs

Preparation Costs

Would you like to apply for reimbursement of the preparation costs?	Yes

Other EU support of preparatory cost

Did you receive any other EU funds specifically designated to the development of this project application?	No

7.1 Breakdown of planned project expenditure per cost category & per partner

No. & role	Partner name	Partner status	CAT0 - Preparation costs	CAT1 - Staff	CAT2 - Office & administration
1 - LP	Chamber of Economy Polish Waterworks	Active 22/09/2022	6,000.00	227,040.00	34,056.00
2 - PP	Gdansk Water Foundation	Active 22/09/2022	2,000.00	88,000.00	13,200.00
3 - PP	Stockholm water and waste	Active 22/09/2022	1,000.00	14,211.00	2,131.65
4 - PP	Norrvatten	Active 22/09/2022	0.00	7,455.00	1,118.25
5 - PP	Aarhus University	Active 22/09/2022	5,000.00	432,436.00	64,865.40
6 - PP	Aarhus Water	Active 22/09/2022	1,000.00	128,821.00	19,323.15
7 - PP	Institute of Food Safety, Animal Health and Environment „BIOR”	Active 22/09/2022	0.00	155,000.00	23,250.00
8 - PP	Estonian Waterworks Association	Active 22/09/2022	0.00	79,200.00	11,880.00
9 - PP	Gdansk Water Ltd.	Active 22/09/2022	1,000.00	95,000.00	14,250.00
10 - PP	Hillerød Utility	Active 22/09/2022	0.00	95,000.00	14,250.00
11 - PP	Helsinki Region Environmental Services Authority	Active 22/09/2022	0.00	52,200.00	7,830.00
12 - PP	Berlin Centre of Competence for Water GmbH	Active 22/09/2022	0.00	123,840.00	18,576.00
13 - PP	Riga Technical university	Active 22/09/2022	1,000.00	180,000.00	27,000.00
14 - PP	Swedish University of Agricultural Sciences (SLU)	Active 22/09/2022	3,000.00	208,416.00	31,262.40
15 - PP	Gdansk University of Technology	Active 22/09/2022	4,000.00	300,097.00	45,014.55
16 - PP	Lake Malarens Water Conservation Association	Active 22/09/2022	0.00	56,900.00	8,535.00
Total			24,000.00	2,418,461.00	362,769.15

No. & role	Partner name	Partner status	CAT0 - Preparation costs	CAT1 - Staff	CAT2 - Office & administration
17 - PP	Fredericia Wasterwater and Energy Ltd	Active 22/09/2022	0.00	118,331.00	17,749.65
18 - PP	Water and Sewerage Company STAR - WIK	Active 22/09/2022	0.00	56,514.00	8,477.10

No. & role	Partner name	CAT3 - Travel & accommodation	CAT4 - External expertise & services	CAT5 - Equipment	Total partner budget
1 - LP	Chamber of Economy Pol	34,056.00	24,000.00	5,700.00	330,852.00
2 - PP	Gdansk Water Foundatio	13,200.00	9,500.00	3,500.00	129,400.00
3 - PP	Stockholm water and wa	2,131.65	45,025.70	0.00	64,500.00
4 - PP	Norrvatten	1,118.25	20,000.00	0.00	29,691.50
5 - PP	Aarhus University	64,865.40	0.00	62,114.00	629,280.80
6 - PP	Aarhus Water	19,323.15	65,360.00	49,902.70	283,730.00
7 - PP	Institute of Food Safety.	23,250.00	0.00	97,500.00	299,000.00
8 - PP	Estonian Waterworks As	11,880.00	21,700.00	2,500.00	127,160.00
9 - PP	Gdansk Water Ltd.	14,250.00	67,500.00	7,500.00	199,500.00
10 - PP	Hillerød Utility	14,250.00	22,000.00	45,000.00	190,500.00
11 - PP	Helsinki Region Environm	7,830.00	13,000.00	10,500.00	91,360.00
12 - PP	Berlin Centre of Compete	18,576.00	5,500.00	0.00	166,492.00
13 - PP	Riga Technical university	27,000.00	50,000.00	15,000.00	300,000.00
14 - PP	Swedish University of Agr	31,262.40	0.00	45,000.00	318,940.80
15 - PP	Gdansk University of Tec	45,014.55	58,500.00	114,200.00	566,826.10
16 - PP	Lake Malarens Water Co	8,535.00	17,530.00	0.00	91,500.00
17 - PP	Fredericia Wasterwater	17,749.65	8,000.00	4,000.00	165,830.30
18 - PP	Water and Sewerage Co	8,477.10	0.00	24,000.00	97,468.20
Total		362,769.15	427,615.70	486,416.70	4,082,031.70

7.1.1 External expertise and services

Contracting partner	Group of expenditure	Item no.	Specification	Investment item?	Group of activities no.	Planned contract value
3. Stockholm water	Specialist support	CAT4-PP3-E-0	In hydrodynamic models, PFAS risk analysis and analysing PFAS in water and sediment samples (91 / 100 characters)	No	1.1 1.2 1.3 3.2	45,025.70
4. Norrvatten	Specialist support	CAT4-PP4-E-0	In hydrodynamic models, PFAS risk analysis and analysing PFAS in water and sediment samples (91 / 100 characters)	No	1.1 1.2 1.3 3.2	20,000.00
1. Chamber of Eco	Events/meetings	CAT4-PP1-A-0	closing seminar and workshops (31 / 100 characters)	No	3.1 3.2 3.3	10,000.00
1. Chamber of Eco	IT	CAT4-PP1-B-0	web-subsite arrangements, IT support (36 / 100 characters)	No	2.1 2.2 2.3 2.4 3.1 3.2 3.3	2,000.00
1. Chamber of Eco	Communication	CAT4-PP1-C-0	mailings, press articles, cooperation with media (48 / 100 characters)	No	2.1 2.2 2.3 2.4 3.1 3.2 3.3	2,000.00
1. Chamber of Eco	Project management	CAT4-PP1-D-0	Project management (18 / 100 characters)	No	1.1 1.2 1.3 2.1 2.2 2.3 2.4 3.1 3.2 3.3	10,000.00
9. Gdansk Water Lt	Other	CAT4-PP9-G-0	extending the warranty for devices, service support (pilot station) (67 / 100 characters)	No	1.1 1.2 1.3 2.2	35,000.00
	Total					427,615.70

Contracting partner	Group of expenditure	Item no.	Specification	Investment item?	Group of activities no.	Planned contract value	
9. Gdansk Water Lt	Other	CAT4-PP9-G-0	adaptation of the existing pilot installation 45 / 100 characters	No	1.1 1.2 1.3 2.2	10,000.00	
9. Gdansk Water Lt	Events/meetings	CAT4-PP9-A-0	study visit on the pilot installation 37 / 100 characters	No	2.2	4,000.00	
9. Gdansk Water Lt	Other	CAT4-PP9-G-1	expertises and trainings 24 / 100 characters	No	1.1 1.2 1.3 2.1 2.2 2.3 3.1 3.2 3.3	8,000.00	
9. Gdansk Water Lt	Communication	CAT4-PP9-C-1	dissemination of the results - partner media profile 52 / 100 characters	No	1.1 1.2 1.3 2.1 2.2 2.3 3.1 3.2 3.3	5,000.00	
9. Gdansk Water Lt	Communication	CAT4-PP9-C-1	translations 12 / 100 characters	No	1.1 1.2 1.3 2.1 2.2 2.3 3.1 3.2 3.3	1,500.00	
9. Gdansk Water Lt	Project management	CAT4-PP9-D-1	information boards near the pilot station 41 / 100 characters	No	2.2 3.1 3.2 3.3	4,000.00	
15. Gdansk Univers	Events/meetings	CAT4-PP15-A-	Conference fee 14 / 100 characters	No	3.1 3.2 3.3	1,500.00	
12. Berlin Centre of	National control	CAT4-PP12-F-	FLC audit 9 / 100 characters	No	2.2 2.4	5,500.00	
	Total					427,615.70	

Contracting partner	Group of expenditure	Item no.	Specification	Investment item?	Group of activities no.	Planned contract value	
8. Estonian Waterw	Other	CAT4-PP8-G-1	Sending samples for micropollutant analysis, translation, printing, bookkeeping service 87 / 100 characters	No	1.1 1.2 1.3 2.1 2.2 2.3 2.4 3.1 3.2 3.3	16,700.00	
8. Estonian Waterw	Communication	CAT4-PP8-C-1	Organizing local seminar to introduce the results of the project 65 / 100 characters	No	3.1 3.2	5,000.00	
17. Fredericia Wast	Events/meetings	CAT4-PP17-A-	Organizing local seminar, communication and dessimination of the project 72 / 100 characters	No	3.1 3.2	8,000.00	
15. Gdansk Univers	Other	CAT4-PP15-G-	Qualitative analyses, rental of analytical equipment, calibration and repairs, validation 90 / 100 characters	No	1.1	11,000.00	
15. Gdansk Univers	Events/meetings	CAT4-PP15-A-	Preparing kick-off meeting in Gdańsk 36 / 100 characters	No	1.3	7,000.00	
6. Aarhus Water	Specialist support	CAT4-PP6-E-2	Support for setup of pilot, GAC, Electronic work, accountant 60 / 100 characters	No	2.1	65,360.00	
11. Helsinki Region	Other	CAT4-PP11-G-	sending samples for micropollutant analysis; additional analysis (e,g, P, DOC), financial audits 97 / 100 characters	No	2.1	13,000.00	
10. Hillerød Utility	Other	CAT4-PP10-G-	sampling and transportation of samples and technical support of pilot plant 75 / 100 characters	No	2.1	22,000.00	
	Total					427,615.70	

Contracting partner	Group of expenditure	Item no.	Specification	Investment item?	Group of activities no.	Planned contract value	
15. Gdansk Univers	Other	CAT4-PP15-G-	Rental of analytical equipment, qualitative analyses, interlaboratory validation 81 / 100 characters	No	2.2 2.4	8,000.00	
15. Gdansk Univers	Other	CAT4-PP15-G-	Construcion of pilot object for MPs removal on WWTP 51 / 100 characters	No	2.4	25,000.00	
2. Gdansk Water F	Communication	CAT4-PP2-C-2	preparation of e-version of gfaphic templates for project materials for internal and exter. commun. 99 / 100 characters	No	3.1 3.2 3.3	1,700.00	
2. Gdansk Water F	Communication	CAT4-PP2-C-2	translation of project materials 32 / 100 characters	No	3.1 3.2 3.3	1,400.00	
2. Gdansk Water F	Communication	CAT4-PP2-C-2	rollup, leaflets printing, notes,, pens, identifiers 52 / 100 characters	No	3.1 3.2 3.3	700.00	
2. Gdansk Water F	Communication	CAT4-PP2-C-2	cost of publishing inf. about project in Polish magazine Forum Eksploatatora and/or similar 91 / 100 characters	No	3.1 3.2 3.3	2,000.00	
16. Lake Malarens	Events/meetings	CAT4-PP16-A-	Workshops and translation 25 / 100 characters	No	3.1 3.2	17,530.00	
2. Gdansk Water F	Events/meetings	CAT4-PP2-A-3	Kick-off meeting in Gdansk 27 / 100 characters	No	3.1 3.2	3,700.00	
15. Gdansk Univers	Other	CAT4-PP15-G-	Proofreading and publication of papers 38 / 100 characters	No	3.1 3.2	5,500.00	
15. Gdansk Univers	Communication	CAT4-PP15-C-	Promotion materials 19 / 100 characters	No	3.1 3.2	500.00	
13. Riga Technical	Other	CAT4-PP13-G-	adaptation of the existing pilot installation, rent of equipment 64 / 100 characters	No	1.1 1.2 1.3 2.3	50,000.00	
	Total					427,615.70	

7.1.2 Equipment

Contracting partner	Group of expenditure	Item no.	Specification	Investment item?	Group of activities no.	Planned contract value	
1. Chamber of Eco	Furniture and fittings	CAT5-PP1-C-0	organisation of the project management office 45 / 100 characters	No	N/A	2,500.00	
1. Chamber of Eco	IT hardware and soft	CAT5-PP1-B-0	laptop and software 19 / 100 characters	No	1.1 1.2 1.3 2.1 2.2 2.3 2.4 3.1 3.2 3.3 N/A	3,200.00	
	Total					486,416.70	

Contracting partner	Group of expenditure	Item no.	Specification	Investment item?	Group of activities no.	Planned contract value	
9. Gdansk Water Lt	IT hardware and soft	CAT5-PP9-B-0	Laptop 7 / 100 characters	No	1.1 1.2 1.3 2.1 2.2 2.3 2.4 3.1 3.2 3.3	1,500.00	
9. Gdansk Water Lt	Other specific equip	CAT5-PP9-H-0	chemical reagents for the pilot station 40 / 100 characters	No	1.1 1.2 1.3 2.2	6,000.00	
5. Aarhus University	Laboratory equipmen	CAT5-PP5-D-0	laboratory chemicals, analytes, HPLC-MS replacement parts 58 / 100 characters	No	2.1 2.3	62,114.00	
2. Gdansk Water F	IT hardware and soft	CAT5-PP2-B-0	laptop and software, zoom platform license 42 / 100 characters	No	3.1 3.2	3,500.00	
13. Riga Technical	Laboratory equipmen	CAT5-PP13-D-	Sensors and glassware for field work, chemical reagents for the pilot station 78 / 100 characters	No	2.1 2.2 2.3 3.1 3.2 N/A	15,000.00	
7. Institute of Food	Laboratory equipmen	CAT5-PP7-D-0	laboratory chemicals, analytes, instruments (tandem MS, TOF, Orbitrap, FT-ICR-MS) replacement parts 100 / 100 characters	No	2.1 2.2 2.3 3.1 3.2 N/A	97,500.00	
11. Helsinki Region	Other specific equip	CAT5-PP11-H-	feed pumps and chemical feed pumps and filter materials for GAC pilot 69 / 100 characters	No	2.1	10,500.00	
6. Aarhus Water	Machines and instru	CAT5-PP6-E-1	Materials for a pilot, sampling Equipment, GAC materiale 56 / 100 characters	No	2.1	49,902.70	
	Total					486,416.70	

Contracting partner	Group of expenditure	Item no.	Specification	Investment item?	Group of activities no.	Planned contract value	
10. Hillerød Utility	Machines and instru	CAT5-PP10-E-	Rental of a pilot plant, GAC, and consumeables like Oxygen 58 / 100 characters	No	2.1	45,000.00	
15. Gdansk Univers	Tools or devices	CAT5-PP15-F-	Purchase of measuring probes for the model and for the wastewater treatment plant 83 / 100 characters	No	2.4	37,500.00	
15. Gdansk Univers	Laboratory equipmen	CAT5-PP15-D-	Purchase of reagents, cuvette tests and small laboratory equipment 66 / 100 characters	No	2.2 2.4	26,000.00	
15. Gdansk Univers	Office equipment	CAT5-PP15-A-	Purchase printer toners, paper, etc. 38 / 100 characters	No	1.1 1.2 1.3 2.2 2.4 3.1 3.2	3,500.00	
15. Gdansk Univers	Tools or devices	CAT5-PP15-F-	Evaporator, centrifuge, shaker, heating block, demineralizer, ultrasonic bath 77 / 100 characters	No	1.1	23,900.00	
15. Gdansk Univers	Laboratory equipmen	CAT5-PP15-D-	consumables for sampling and analysis, SPE mainfold 51 / 100 characters	No	1.1 1.2 1.3	19,500.00	
15. Gdansk Univers	Tools or devices	CAT5-PP15-F-	vacuum dryer 13 / 100 characters	No	2.2	3,800.00	
8. Estonian Waterw	IT hardware and soft	CAT5-PP8-B-1	Laptop with software or/and other IT items. 43 / 100 characters	No	1.1 1.2 1.3 2.1 2.2 2.3 2.4 3.1 3.2 3.3	2,500.00	
	Total					486,416.70	

Contracting partner	Group of expenditure	Item no.	Specification	Investment item?	Group of activities no.	Planned contract value	
14. Swedish Univer	Laboratory equipmen	CAT5-PP14-D-	consumables for sampling, SPE, chemicals, and analysis using LC-MS/MS and LC-HRMS 81 / 100 characters	No	1.1 1.2 1.3 2.1 2.2 2.3	45,000.00	
17. Fredericia Wast	Laboratory equipmen	CAT5-PP17-D-	Lab. equipment and consumables 30 / 100 characters	No	1.1 1.2 1.3 2.1	4,000.00	
18. Water and Sew	Laboratory equipmen	CAT5-PP18-D-	equipment to prepare testing in WP1 35 / 100 characters	No	1.1 1.2 1.3 2.4	24,000.00	
	Total					486,416.70	

7.1.3 Infrastructure and works

Contracting partner	Group of expenditure	Item no.	Specification	Investment item?	Group of activities no.	Planned contract value	
Please select	Please select	CAT6-PP--01	0 / 100 characters	Please select		0.00	
	Total					0.00	

7.2 Planned project budget per funding source & per partner

No. & role	Partner name	Partner status	Country	Funding source	Co-financing rate [in %]	Total [in EUR]	Programme co-financing [in EUR]	Own contribution [in EUR]	State aid instrument
1-LP	Chamber of Economy Polish Waterworks	Active 22/09/2022	PL	ERDF	80.00 %	330,852.00	264,681.60	66,170.40	For each partner, the State aid relevance and applied aid measure are defined in the **State aid section**
2-PP	Gdansk Water Foundation	Active 22/09/2022	PL	ERDF	80.00 %	129,400.00	103,520.00	25,880.00	
3-PP	Stockholm water and waste	Active 22/09/2022	SE	ERDF	80.00 %	64,500.00	51,600.00	12,900.00	
4-PP	Norrvatten	Active 22/09/2022	SE	ERDF	80.00 %	29,691.50	23,753.20	5,938.30	
5-PP	Aarhus University	Active 22/09/2022	DK	ERDF	80.00 %	629,280.80	503,424.64	125,856.16	
Total ERDF						4,082,031.70	3,265,625.36	816,406.34	
Total						4,082,031.70	3,265,625.36	816,406.34	

No. & role	Partner name	Partner status	Country	Funding source	Co-financing rate [in %]	Total [in EUR]	Programme co-financing [in EUR]	Own contribution [in EUR]	State aid instrument
6-PP	Aarhus Water	Active 22/09/2022	DK	ERDF	80.00 %	283,730.00	226,984.00	56,746.00	
7-PP	Institute of Food Safety, Animal Health and Environment „BIOR"	Active 22/09/2022	LV	ERDF	80.00 %	299,000.00	239,200.00	59,800.00	
8-PP	Estonian Waterworks Association	Active 22/09/2022	EE	ERDF	80.00 %	127,160.00	101,728.00	25,432.00	
9-PP	Gdansk Water Ltd.	Active 22/09/2022	PL	ERDF	80.00 %	199,500.00	159,600.00	39,900.00	
10-PP	Hillerød Utility	Active 22/09/2022	DK	ERDF	80.00 %	190,500.00	152,400.00	38,100.00	
11-PP	Helsinki Region Environmental Services Authority	Active 22/09/2022	FI	ERDF	80.00 %	91,360.00	73,088.00	18,272.00	
12-PP	Berlin Centre of Competence for Water GmbH	Active 22/09/2022	DE	ERDF	80.00 %	166,492.00	133,193.60	33,298.40	
13-PP	Riga Technical university	Active 22/09/2022	LV	ERDF	80.00 %	300,000.00	240,000.00	60,000.00	
14-PP	Swedish University of Agricultural Sciences (SLU)	Active 22/09/2022	SE	ERDF	80.00 %	318,940.80	255,152.64	63,788.16	
15-PP	Gdansk University of Technology	Active 22/09/2022	PL	ERDF	80.00 %	566,826.10	453,460.88	113,365.22	
16-PP	Lake Malarens Water Conservation Association	Active 22/09/2022	SE	ERDF	80.00 %	91,500.00	73,200.00	18,300.00	
17-PP	Fredericia Wasterwater and Energy Ltd	Active 22/09/2022	DK	ERDF	80.00 %	165,830.30	132,664.24	33,166.06	
18-PP	Water and Sewerage Company STAR - WIK	Active 22/09/2022	PL	ERDF	80.00 %	97,468.20	77,974.56	19,493.64	
Total ERDF						4,082,031.70	3,265,625.36	816,406.34	
Total						4,082,031.70	3,265,625.36	816,406.34	

7.3 Spending plan per reporting period

	EU partners (ERDF)		Total	
	Total	Programme co-financing	Total	Programme co-financing
Preparation costs	24,000.00	19,200.00	24,000.00	19,200.00
Period 1	500,000.00	400,000.01	500,000.00	400,000.01
Period 2	900,000.00	720,000.00	900,000.00	720,000.00
Period 3	865,500.00	692,400.00	865,500.00	692,400.00
Period 4	1,230,468.26	984,374.60	1,230,468.26	984,374.60
Period 5	440,063.44	352,050.75	440,063.44	352,050.75
Period 6	122,000.00	97,600.00	122,000.00	97,600.00
Total	4,082,031.70	3,265,625.36	4,082,031.70	3,265,625.36