1. Identification

Call	Date of submission
C1	26/04/2022

1.1. Full name of the project

Towards healthy and sustainable waters by holistic WaterShed Safety Plan (WSSP) operational model - novel approach to prevent diffuse pollution

143 / 250 characters

1.2. Short name of the project

WSSPlan

7 / 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

Point source pollution (e.g., centralised wastewater treatment and industry effluent) around the Baltic Sea is reasonably well controlled, but the same cannot be said for diffuse pollution (e.g., agricultural, forestry, urban run-offs). So far, diffuse pollution that consists of many small sources, have often been tackled randomly: landowners and various stakeholders have implemented solutions (e.g., wetlands) placed in catchments areas without considering where they are most needed. A holistic and catchment scale approach needs to consider topography and human activities as they affect the quality of run-off water.

The WaterShed Safety Plan (WSSP) operational model will be developed to tackle this challenge. It aims to address diffuse pollution from different land-use categories at catchment scale by proposing best solutions to prevent and reduce it.

The WSSP will include a toolbox to firstly identify catchment area diffuse pollution hotspots and then propose practical solutions to reduce the pollution load within applicable land-use. The toolbox provides a set of suitable management practices both for the identified locations and for reducing the load on the entire land-use class.

Currently, there is no effective holistic diffuse pollution management tool for water protection within the public and private sectors. Our purpose is to support multi-scalar decision-making and implementation practices to improve the qualities of water bodies across the Baltic region.

1,491 / 1,500 characters

1.8. Summary of the partnership

The consortium includes partners from Finland, Denmark, Estonia and Latvia.

Häme University of Applied Sciences (HAMK) is higher education and research institution in Southern Finland. HAMK will be the Lead Partner and consult the WSSP piloting in partner countries and lead WP3. HAMK will prepare diffuse pollution simulations with IT company. External service provider will consult with best practises in agricultural WSSP pilot catchment areas in Finland.

Finnish Institute for Health and Welfare (THL) is a national public health authority in Finland and one disseminator of the WSSP. Its expert microbiology laboratory, located in Eastern Finland, will conduct water microbiological investigations and human health risk assessment in the project.

Helsinki University's Lammi biological station (LBS) will pilot WSSP in one agricultural and forestry catchment area. LBS will act as the leader in WP2 and guide ecological risk assessments in the project.

PJI, Pyhäjärvi Institute is a non-profitable locally funded education and research foundation situated in Southwest Finland and end user of WSSP. PJI will pilot WSSP in agricultural sub-catchment area including testing and monitoring of new nutrient mitigation methods and lead WP1.

VIA, a Danish university college with strong applied research within water technology. VIA will perform tests for optimal removal of pollutants in urban run-off water by nature-based solutions according to identified needs for diffuse pollution, pilot WSSP in urban sub-catchment area in central region Denmark in collaboration with local target groups and act as the lead in WP1 with PJI.

Riga Technical University (RTU) together with WSSP end user partner Liepaja Water (LW) will pilot WSSP in a wastewater sludge composting site in Latvia and develop approaches to minimize pathogen transport in waters. RTU will lead WP3 together with HAMK.

Estonian University of Life Sciences (EULS) will pilot WSSP in several small watersheds with various urban and agricultural activities focusing on the aspect of event-based versus background (e.g., heavy rains) point source and diffuse pollution. The same aspect is guided by EULS throughout all other project pilot areas. EULS will lead WP2 with LBS.

We also have target groups as associated partners, one ministry responsible for water quality in relation to human health, three regional environmental agencies, one water protection association and environmental services covering three municipalities from Finland and Estonian Association of Water Engineers. From Denmark there will be local water utility as an associated partner.

In consortium, there are more partners from Finland compared to other countries because preliminary conceptualization of WSSP operational model is already ongoing there. Finnish partners will lead WSSP piloting and integration to target groups with help of partners and other Baltic Sea region countries.

2,945 / 3,000 characters

1.11. Project Budget Summary

Financial resources [in EUR]		Preparation costs	Planned project budget
ERDF	ERDF co-financing	0.00	1,899,706.72
	Own contribution ERDF	0.00	474,926.68
	ERDF budget	0.00	2,374,633.40
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	1,899,706.72
	Total own contribution	0.00	474,926.68
	Total budget	0.00	2,374,633.40

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	Häme University of Applied Sciences, HAMK	Hämeen ammattikorkeakoulu, HAMK	FI	Higher education and research institution	a)	397,420.20 €	Active	22/09/2022
2	PP	Finnish institute for health and welfare	Terveyden ja hyvinvoinnin laitos	FI	National public authority	a)	324,990.70 €	Active	22/09/2022
3	PP	University of Helsinki, Faculty of Biological and Environmental Sciences	Helsingin yliopisto, Bio- ja ympäristötieteellinen tiedekunta	FI	Higher education and research institution	a)	349,796.40 €	Active	22/09/2022
4	PP	Pyhäjärvi Institute	Pyhäjärvi-instituutti (Pyhäjärvi-instituuttisäätiö sr)	FI	Interest group	a)	328,138.40 €	Active	22/09/2022
5	PP	VIA University College	VIA University College	DK	Higher education and research institution	a)	277,303.70 €	Active	22/09/2022
6	PP	Riga Technical University	Rīgas Tehniskā universitāte	LV	Higher education and research institution	a)	354,984.00 €	Active	22/09/2022
7	PP	Estonian University of Life Sciences, EULS	Eesti Maaülikool, EMÜ	EE	Higher education and research institution	a)	300,000.00 €	Active	22/09/2022
8	PP	Liepaja Water	Liepājas ūdens	LV	Infrastructure and public service provider	b)	42,000.00 €	Active	22/09/2022

2.1.2 Associated Organisations

No.	Organisation (English)	Organisation (Original)	Country	Type of Partner
AO 1	Silkeborg Utility	Silkeborg Forsyning A/S	DK	Infrastructure and public service provider
AO 2	Ministry of Social Affairs and Health	Sosiaali- ja terveysministeriö	FI	National public authority
AO 3	Centre for Economic Development, Transport and the Environment of Southwest Finland	Varsinais-Suomen ELY-keskus	FI	Sectoral agency
AO 4	Centre for Economic Development, Transport and the Environment of Häme	Hämeen ELY-keskus	FI	Sectoral agency
AO 5	Municipalities of Eura, Säkylä and Huittinen	Euran, Säkylän ja Huittisten kunnat	FI	Local public authority
AO 6	Estonian Association of Water Engineers NGO	Eesti Veeinseneride Liit MTÜ	EE	NGO

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 Hämeen ammattikorkeakoulu, HAMK

31 / 250 characters

Organisation in English Häme University of Applied Sciences, HAMK

41 / 250 characters

Department in original language HAMK Bio tutkimusyksikkö

24 / 250 characters

Department in English HAMK Bio Research Unit

22 / 250 characters

Partner location and website:

Address Visamäentie 35 A

16 / 250 characters

Postal Code 13100

5 / 250 characters

Town Hämeenlinna

11 / 250 characters

Website www.hamk.fi

11 / 100 characters

Country Finland

NUTS1 code Manner-Suomi

NUTS2 code Etelä-Suomi

NUTS3 code Kanta-Häme

Partner ID:

Organisation ID type Business Identity Code (Y-tunnus)

Organisation ID 2617489-3

VAT Number Format FI + 8 digits

VAT Number N/A ☐ FI26174893

10 / 50 characters

PIC 949666473

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:

Häme University of Applied Sciences (HAMK) is higher education and research institution in Southern Finland. HAMK will be the Lead Partner and consult the WSSP piloting in partner countries and lead WP3. HAMK will prepare diffuse pollution simulations with IT company. External service provider will consult with best practices in agricultural WSSP pilot catchment areas in Finland.

383 / 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

Justification why the partner's activities are not State aid relevant

HAMK doesn't benefit economically from the project. Ordinary citizens around the Baltic Sea are able to benefited of the HAMK's project activities and results are disseminated publicly.

185 / 3,000 characters

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 Terveyden ja hyvinvoinnin laitos

32 / 250 characters

Organisation in English Finnish institute for health and welfare

40 / 250 characters

Department in original language Terveysturvallisuus

19 / 250 characters

Department in English Health Security

15 / 250 characters

Partner location and website:

Address Neulaniementie 4 (PO Box 95)

28 / 250 characters

Postal Code FI-70701

8 / 250 characters

Town Kuopio

6 / 250 characters

Website https://thl.fi/en/web/environmental-health

42 / 100 characters

Country Finland

NUTS1 code Manner-Suomi

NUTS2 code Pohjois- ja Itä-Suomi

NUTS3 code Pohjois-Savo

Partner ID:

Organisation ID type Business Identity Code (Y-tunnus)

Organisation ID 2229500-6

VAT Number Format FI + 8 digits

VAT Number N/A ☐ FI22295006

10 / 50 characters

PIC 996697893

9 / 9 characters

Partner type:

Legal status a) Public

Type of partner	National public authority	Ministry, 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:

Partner 2 (THL) will conduct water microbiological investigations and human health risk assessment in this project. Solutions developed in THL sub-project include fecal pollution source identification scheme for watersheds and water microbiological expert analyses in the pilot areas. THL studies run-offs with urban wastewater and animal manure and participates on transferring knowledge how to implement microbial source tracking tools in the Baltic Sea Region. THL is in charge for inclusion of quantitative microbial human health risk assessment compartment to the WaterShedSafetyPlans, performs the human infection risk calculations using different pollutant mitigation scenarios at the pilot study areas and participates in transferring knowledge how to measure human health effects in the changing environment. Verification the accuracy of on-site sensor data and calculation of microbial removal rates of nature-based solutions for emerging pathogens is part of the THL role too.

987 / 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	Helsingin yliopisto, Bio- ja ympäristötieteellinen tiedekunta (61 / 250 characters)
Organisation in English	University of Helsinki, Faculty of Biological and Environmental Sciences (72 / 250 characters)
Department in original language	Lammin biologinen asema (23 / 250 characters)
Department in English	Lammi Biological Station (24 / 250 characters)

Partner location and website:

Address	Pääjärventie 320 (16 / 250 characters)	**Country**	Finland
Postal Code	16900 (5 / 250 characters)	**NUTS1 code**	Manner-Suomi
Town	Lammi (5 / 250 characters)	**NUTS2 code**	Etelä-Suomi
Website	https://www2.helsinki.fi/en/research-stations/lammi-biological-station (70 / 100 characters)	**NUTS3 code**	Kanta-Häme

Partner ID:

Organisation ID type	Business Identity Code (Y-tunnus)
Organisation ID	0313471-7
VAT Number Format	FI + 8 digits
VAT Number	N/A ☐ FI03134717 (10 / 50 characters)
PIC	999994535 (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? No

Role of the partner organisation in this project:

Helsinki University's Lammi biological station (LBS) will pilot WSSP in one agricultural and forestry catchment area. LBS will act as the leader in WP2 and guide ecological risk assessments in the project.

205 / 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

Justification why the partner's activities are not State aid relevant

Lammi Biological station doesn't benefit economically from the project. Ordinary citizens around the Baltic Sea are able to benefited of project activities and results are disseminated publicly.

194 / 3,000 characters

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	Pyhäjärvi-instituutti (Pyhäjärvi-instituuttisäätiö sr) (54 / 250 characters)
Organisation in English	Pyhäjärvi Institute (19 / 250 characters)

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

Partner location and website:

Address	Sepäntie 7 (10 / 250 characters)	**Country**	Finland
Postal Code	27500 (5 / 250 characters)	**NUTS1 code**	Manner-Suomi
Town	Eura (4 / 250 characters)	**NUTS2 code**	Länsi-Suomi
Website	www.pyhajarvi-instituutti.fi (28 / 100 characters)	**NUTS3 code**	Satakunta

Partner ID:

Organisation ID type	Business Identity Code (Y-tunnus)
Organisation ID	0773351-4
VAT Number Format	FI + 8 digits
VAT Number	N/A ☐ FI07733514 (10 / 50 characters)
PIC	956874252 (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)	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:

Pyhäjärvi Institute is leader of WP2 and it parcipates in all WP's as a project implementor. PJI is implementing pilot actions in Eurajoki catchment. PJI has a long experience in project management in national and international projects e.g. Interreg Europe and Interreg Central Baltic. PJI has expertise in technologies, water protection, restoration applying novel water protection measures. PJI is involving close collaboration with farmers at pilots and field demonstrations by networking with water related stakeholders.

525 / 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	VIA University College (23 / 250 characters)
Organisation in English	VIA University College (22 / 250 characters)
Department in original language	Forskningscenter for Byggeri, Energi, Vand og Klima (51 / 250 characters)
Department in English	R&D Center for Build environment, Energy, Water & Climate (57 / 250 characters)

Partner location and website:

Address	Banegårdsgade 2, (17 / 250 characters)	**Country**	Denmark
Postal Code	8700 (5 / 250 characters)	**NUTS1 code**	Danmark
Town	Horsens (7 / 250 characters)	**NUTS2 code**	Midtjylland
Website	https://www.via.dk/forskning/byggeri-energi-vand-klima (54 / 100 characters)	**NUTS3 code**	Østjylland

Partner ID:

Organisation ID type	Civil registration number (CPR)
Organisation ID	30773047
VAT Number Format	DK + 8 digits
VAT Number	**N/A** ☐ DK30 77 30 47 (13 / 50 characters)
PIC	987834033 (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)	85.41 - Post-secondary non-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:

VIA University College will lead WP1, take active part in

58 / 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 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 Kipsalas 6A

11 / 250 characters

Postal Code LV-1048

7 / 250 characters

Town Riga

4 / 250 characters

Website https://wrebl.rtu.lv/

21 / 100 characters

Country Latvia

NUTS1 code Latvija

NUTS2 code Latvija

NUTS3 code Rīga

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 888638147

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? No

Role of the partner organisation in this project:

It is the only engineering university in Latvia and the largest university in the country – it educates and trains almost 15 thousand students. Within WSSPlan RTU will be represented by Water Research and Environmental Biotechnology Laboratory (WREBL) which will develop and implement pathogen monitoring system during sludge composting and perform composting efficiency tests at pilot site of Liepaja Water to facilitate implementation of the WSSPlan. WREBL has all necessary laboratory equipment to perform pathogen microbiology tests, collect and process biological samples, perform chemical analyses and assist in model validation. RTU has experience in fulfillment of Interreg BSR projects, lead in scientific projects and knowledge in transfer of new technologies to the end-users. Good cooperation with local municipalities and water service providers will allow to transfer WSSPlan concept to the non-consortium end-users.

931 / 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

Justification why the partner's activities are not State aid relevant

RTU is a public organisation

28 / 3,000 characters

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	Eesti Maaülikool, EMÜ
	21 / 250 characters
Organisation in English	Estonian University of Life Sciences, EULS
	42 / 250 characters
Department in original language	Maaehituse ja veemajanduse õppetool
	35 / 250 characters
Department in English	Chair of Rural Building and Water Management
	44 / 250 characters

Partner location and website:

Address	Fr. R. Kreutzwaldi 1	**Country**	Estonia
	20 / 250 characters		

Postal Code	51006 (5 / 250 characters)	**NUTS1 code**	Eesti
Town	Tartu (5 / 250 characters)	**NUTS2 code**	Eesti
Website	https://www.emu.ee/en/ (22 / 100 characters)	**NUTS3 code**	Lõuna-Eesti

Partner ID:

Organisation ID type	Registration code (Registrikood)
Organisation ID	74001086
VAT Number Format	EE + 9 digits
VAT Number	N/A ☐ EE100018015 (11 / 50 characters)
PIC	999857280 (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? No

Role of the partner organisation in this project:

It is the only university in Estonia that covers a broad range of water engineering on hydraulic structures. Within WSSPlan EULS will be presented by Chair of Rural Building and Water Management who will pilot one test watershed, will assess the usability of different models potentially implemented in WSSPlan Toolbox as well cover project dissemination among water engineers as this target group is directly involved in design and construction activities in order to reduce diffuse and point source pollution.

513 / 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

Justification why the partner's activities are not State aid relevant

EULS doesn't benefit economically from the project. Ordinary citizens around the Baltic Sea are able to benefited of the EULS's project activities and results are disseminated publicly.

185 / 3,000 characters

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	Liepājas ūdens (14 / 250 characters)
Organisation in English	Liepaja Water (13 / 250 characters)
Department in original language	- (1 / 250 characters)
Department in English	- (1 / 250 characters)

Partner location and website:

Address	K.Valdemara iela 12 (19 / 250 characters)	**Country**	Latvia
Postal Code	LV-3401 (7 / 250 characters)	**NUTS1 code**	Latvija
Town	Liepaja (7 / 250 characters)	**NUTS2 code**	Latvija
Website	https://www.liepajas-udens.lv/ (30 / 100 characters)	**NUTS3 code**	Kurzeme

Partner ID:

Organisation ID type	Unified registration number (Vienotais reģistrācijas numurs)
Organisation ID	42103000897
VAT Number Format	LV + 11 digits
VAT Number	N/A ☐ LV42103000897 (13 / 50 characters)
PIC	n/a (3 / 9 characters)

Partner type:

Legal status	b) Private	
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

Financial data				
	Reference period	01/01/2021	–	31/12/2021
	Staff headcount [in annual work units (AWU)]			145.0
	Employees [in AWU]			145.0
	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]			5,010,011.00
	Annual balance sheet total [in EUR]			56,423,425.00
	Operating profit [in EUR]			33,934.00

Role of the partner organisation in this project:

Liepaja Water (LW) is one of the WSSP operational model end users. LW is the biggest water and wastewater service provider in western part of Latvia for ~80 000 PE. Around 27 000 m3 of wastewater is treated daily and results in 4873 m3 of sludge compost that is currently used in agriculture. Within WSSPlan LW will jointly work with RTU WREBL to evaluate composting efficiency, identify potential run-off risks and introduce WSSPlan as potential tool for increased efficiency and better process control.

504 / 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
Silkeborg Forsyning A/S
23 / 250 characters

Organisation in English
Silkeborg Utility
17 / 250 characters

Department in original language
Silkeborg Forsyning Spildevand
30 / 250 characters

Department in English
Silkeborg Utility Wastewater
28 / 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
Tietgensvej 3
13 / 250 characters

Country
Denmark

Postal Code
8600
4 / 250 characters

Town
Silkeborg
9 / 250 characters

Website
https://www.silkeborgforsyning.dk/
34 / 100 characters

Role of the associated organisation in this project:

Silkeborg Utility Wastewater has the role as problem owner for implenting adaptive and mitigation measures in order to meet authority regulations on discharge water quality. Rising awareness on diffuse polutions in relation to rain-related urban discharge call for well documented methods for treatment of urban water run-off. Silkeborg Utility Wastewater will actively take part in the testing and evaluation of WSSP in relation to urban run off in WP1 and WP2.
462 / 1,000 characters

2.3 Associated Organisation Details - AO 2

Associated organisation name and type:

Organisation in original language: Sosiaali- ja terveysministeriö (30 / 250 characters)

Organisation in English: Ministry of Social Affairs and Health (37 / 250 characters)

Department in original language: Turvallisuus ja terveys -osasto (31 / 250 characters)

Department in English: Department for Safety, Security and Health (42 / 250 characters)

Legal status: a) Public

Type of associated organisation: National public authority — Ministry, etc.

Associated organisation location and website:

Address: Meritullinkatu 8 (16 / 250 characters)

Country: Finland

Postal Code: 00170 (5 / 250 characters)

Town: Helsinki (8 / 250 characters)

Website: https://stm.fi/en/department-for-safety-security-and-health (59 / 100 characters)

Role of the associated organisation in this project:

Ministry of Social Affairs and Health (STM) in Finland is responsible for implementation of Drinking Water Directive (DWD) in the national legislation (revised version including the requirements for watershed catchment level risk assessment in force from beginning of 2023). STM is also a manager of the current Finnish Water Safety Plan electronic tool. In the WSSPlan project, STM collaborates as a potential national level end user and moderator of the developed and verified WSSP tool. The aim of the collaboration is to include WSSP as a module into the existing WSP. STM will also act as one important contact point with connections to other relevant ministries and governmental expert organizations in charge of the water protection activities in Finland. They will participate particularly in group of activities of WP3.

828 / 1,000 characters

2.3 Associated Organisation Details - AO 3

Associated organisation name and type:

Organisation in original language: Varsinais-Suomen ELY-keskus (27 / 250 characters)

Organisation in English: Centre for Economic Development, Transport and the Environment of Southwest Finland (83 / 250 characters)

Department in original language: Ympäristönsuojelu (17 / 250 characters)

Department in English: Environmental protection (24 / 250 characters)

Legal status: a) Public

Type of associated organisation: Sectoral agency

Local or regional development agency, environmental agency, energy agency, employment agency, etc.

Associated organisation location and website:

Address: Itsenäisyydenaukio 2 (20 / 250 characters)

Country: Finland

Postal Code: 20800 (5 / 250 characters)

Town: Turku (5 / 250 characters)

Website: www.ely-keskus.fi/en/web/ely-en (31 / 100 characters)

Role of the associated organisation in this project:

This associated partner is potential end user of WSSP operational model and therefore will support and guide its development. Two WSSP sub-catchment areas of this project is located in their area. They will participate in all group of activities, but particularly in group of activities 1.1, 1.2, 1.3, 2.5, 3.1 and 3.1.

319 / 1,000 characters

2.3 Associated Organisation Details - AO 4

Associated organisation name and type:

Organisation in original language
Hämeen ELY-keskus
17 / 250 characters

Organisation in English
Centre for Economic Development, Transport and the Environment of Häme
70 / 250 characters

Department in original language
Ympäristönsuojelu
17 / 250 characters

Department in English
Environmental protection
24 / 250 characters

Legal status
a) Public

Type of associated organisation
Sectoral agency

Local or regional development agency, environmental agency, energy agency, employment agency, etc.

Associated organisation location and website:

Address
Kirkkokatu 12
13 / 250 characters

Country
Finland

Postal Code
15140
6 / 250 characters

Town
Lahti
5 / 250 characters

Website
www.ely-keskus.fi/en/web/ely-en
31 / 100 characters

Role of the associated organisation in this project:

This associated partner is potential end user of WSSP operational model and therefore will support and guide its development. One WSSP sub-catchment area of this project is located in their area. They will participate in all group of activities, but particularly in group of activities 1.1, 1.2, 1.3, 2.5, 3.1 and 3.2.
318 / 1,000 characters

2.3 Associated Organisation Details - AO 5

Associated organisation name and type:

Organisation in original language: Euran, Säkylän ja Huittisten kunnat (35 / 250 characters)

Organisation in English: Municipalities of Eura, Säkylä and Huittinen (44 / 250 characters)

Department in original language: Etelä-Satakunnan ympäristötoimisto (34 / 250 characters)

Department in English: Environmental Office of South Satakunta (39 / 250 characters)

Legal status: a) Public

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

Associated organisation location and website:

Address: Rantatie 268 (12 / 250 characters)

Country: Finland

Postal Code: 27800 (5 / 250 characters)

Town: Säkylä (6 / 250 characters)

Website: www.sakyla.fi/en/ (17 / 100 characters)

Role of the associated organisation in this project:

Environmental Office of South Satakunta is common to three municipalities called Eura, Säkylä and Huittinen. Those municipalities are potential end users of local WSSP operational model and participate actively to development of WSSP operational model and its piloting in their area. They will participate actively in all group of activities.

342 / 1,000 characters

2.3 Associated Organisation Details - AO 6

Associated organisation name and type:

Organisation in original language: Eesti Veeinseneride Liit MTÜ (28 / 250 characters)

Organisation in English: Estonian Association of Water Engineers NGO (43 / 250 characters)

Department in original language: Veemajandus (11 / 250 characters)

Department in English: Water Management (16 / 250 characters)

Legal status: a) Public

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

Associated organisation location and website:

Address: Fr. R. Kreutzwald 5, Tartu (27 / 250 characters)

Country: Estonia

Postal Code: 51006 (5 / 250 characters)

Town: Tartu (5 / 250 characters)

Website: http://www.veeinsener.ee/ (25 / 100 characters)

Role of the associated organisation in this project:

The aim of the association is to support and develop the field of hydraulic engineering and related activities, incl. participation and expression of opinion in the development of normative documents for research and education policy, legislation, and professional qualifications in the field of water management. Designers and civil engineers implement the necessary technical solutions. In this project, they will participate particularly in dissemination activities (WP3).

476 / 1,000 characters

3. Relevance

3.1 Context and challenge

The overall challenge is the current ecological and hygienic status of the waters in the Baltic Sea Region. Eutrophication, caused by high phosphorus and nitrogen load to surface waters, is the most serious problem. Climate change will cause this problem to become even more serious in future. Extreme weather conditions, e.g. heavy rains, has been the focus of recent research. However, there is a constant background load that poses increased risk of washing out pollutants into water bodies and the Baltic Sea. In addition to nutrients, discharges and runoffs from multiple sources may contain pathogens, hazardous chemicals and organic matter. Diffuse pollution is a significant source of pollution.
s
There is an urgent need for an effective water management solution to prevent and reduce water pollution to meet the targets of the EU Water Framework Directive (WFD). Further, the newly revised EU Drinking Water Directive (DWD) will require the EU Member States to apply a holistic risk-based approach from catchment to tap to prevent microbiological and chemical contamination of drinking water used for human consumption.

Currently many pollutant mitigation measures are chosen haphazardly, and holistic management of diffuse pollution is still too ineffective. The novel Watershed Safety Plan (WSSP) operational model including a practical toolbox is developed to investigate catchments in a systematic manner. By simulating occurrence and effects of various diffuse pollution sources within the catchments, authorities and other stakeholders can prioritize where and what mitigation actions are to be implemented first. The WSSP toolbox can also be utilised to evaluate the contributions from various industrial, agricultural and human operations on a catchment scale, and advise how these could be tailored to reduce diffuse pollution.

1,854 / 2,000 characters

3.2 Transnational value of the project

The fight against water pollution in the Baltic Sea and inland waters can only be successful with strong transnational and stakeholder cooperation. Only by applying best practises in countries around the Baltic Sea can we make a significant impact.

Water quality problems are the same in all countries around the Baltic Sea, but the circumstances varies – for example, catchment areas in Finland have mostly clay soils while sandy soils are dominating in Baltic countries. That is one of the reasons why the WSSP operational model should be piloted in multiple areas. Thus, results can be applied across the Baltic region while tailored to the local environment.

Participating countries were selected because they are located different sides Baltic Sea Region, and they have organisations that have competence to increase capacity of target groups to tackle diffuse pollution. In addition, it is desirable that in the EU, WFD and DWD implementations are designed and aligned to the principles of “Safe water for all” and “No one is left behind”.

We want to engage operators from several sectors, authorities, companies, advisories, and local communities to solve the challenges together. Involvement and dissemination are crucial to tackle this challenge.

WSSP operational model is selected to be one of the solutions to be applied to achieve good quality of watersheds, as envisioned in the recent Road Map to Circular Economy by 2030 in Kanta-Häme Region in Finland.

Our aim is to transfer the WSSP knowledge to all public authorities in the Baltic Sea Region. The collaborative WSSP operational model can be customized according to the specific needs in every country and disseminated through the extensive local networks of international project partners.

Only by implementing WSSP operational model and disseminating best practices in several countries at the same time, can we have the maximum impact of water protection.

1,947 / 2,000 characters

3.3 Target groups

Target group	Sector and geographical coverage	Its role and needs
Sectoral agency	Centers for Economic Development, Transport and the Environment that control and guide the implementation of WFD and sustainable water management activities in whole Finland (more intensive cooperation with Centers in Häme County and County of Southwest Finland) 262 / 500 characters	With holistic WSSP operational model, environmental agencies are able to control and guide land use activities and water management plans to prevent and reduce diffuse pollution (incl. urban, agricultural and forestry run-offs) to water bodies and the Baltic Sea. Current planning procedures lack tools to target sustainable water management on catchment level and our project will develop WSSP to meet this need. WSSP operational model is customised to their needs by developing it together with them in regional scale, during the project. 540 / 1,000 characters
Local public authority	Cities/municipalities (including strategic and land-use planning, environmental services etc.) from Finland, Denmark and Latvia. More intensive collaboration with one city from the central region of Denmark and Liepaja City from Latvia which is the third largest city in Latvia and located in the Baltic Sea shore and one local environmental office from Southern part of Satakunta County, Finland. 397 / 500 characters	WSSP operational model will be developed together with cities and municipalities that can use it to control diffuse pollution (incl. urban, agricultural and forestry run-offs) holistically and effectively in different catchment areas in their areas. WSSP approach and tool box will be customised in each city and municipality according to their needs. 352 / 1,000 characters
NGO	Estonian Association of Water Engineers 39 / 500 characters	WSSP operational model will be presented to the professional association in order to receive feedback on the applicability of the results from the perspective of designers and builders. 185 / 1,000 characters

3.4 Project objective

Your project objective should contribute to:

Sustainable waters

A significant proportion of pollution into the Baltic Sea comes from diffuse pollution. Agricultural runoff contains excess nutrients, but urban and forestry runoff are also problematic.

This project will develop a holistic planning tool WSSP to control diffuse pollution in the Baltic Sea and various natural water bodies, in collaboration with municipalities, cities, regional councils and environmental agencies. Developing, testing and validating WSSP together with end-users, the tool can be customised to fit their needs and systems. Since catchment areas and conditions vary across the region, WSSP will contain a toolbox allowing for the implementation of tailormade solution.

Currently, the mentioned target groups do not have an effective comprehensive tool for sustainable water management at catchment level and there is an urgent need to reduce and prevent diffuse pollution in water bodies and the Baltic Sea effectively.

By following the WSSP operational model, the most significant pollution source areas can be identified by utilizing for instance catchment-based GIS-data or novel pollutant tracing techniques, and then the best practises can be identified to prevent and reduce pollution. A holistic catchment analysis (WSSP) can be taken account in land-use planning to prohibit or restrict some polluting activities (e.g., construction, fertilization, tillage, logging etc.) in the most sensitive areas (e.g.. drinking water source waters, recreational areas etc.).

Ministries and agencies in participating countries responsible of water bodies and water quality are capable to promote WSSP into the legislation in national and transnational level. The aim of HELCOM and Water Europe is to protect water environment and make its management more sustainable and WSSP will help to achieve this goal. They have comprehensive networks to disseminate WSSP tool over the Baltic Sea and Europe and thus prevent water pollution and improve condition of water bodies.

1,993 / 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 Nutri

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

Our project will contribute most to Policy Area Nutri because we have same aim to reduce nutrient inputs to the Baltic Sea to mitigate eutrophication and help to achieve a good ecological status. Agriculture is still the significant source of nutrient emissions to the Baltic Sea. Therefore, we want to prevent and reduce diffuse pollution from agricultural areas but from other pollution sources as well. We will launch operational model called WSSP to help public authorities and other stakeholders working for the status of good water quality in the Baltic Sea Region to control diffuse pollution more effectively. The WSSP operational model will help in finding appropriate pollution mitigation measures to various locations and in guiding landowners and others working/living in catchment areas to work for improved water quality.

835 / 1,500 characters

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

Our project will also contribute PA Hazards because WSSP operational model is also be utilized to prevent and mitigate all kinds of pollution sources including hazardous chemical emissions to water bodies and the Baltic Sea as well

PA Health is also contributed by our project. The WSSP operational model includes all kinds of risk assessments and thus, microbiological risks concerning waters are taken into account when investigating catchments in systematic way.

466 / 1,500 characters

3.6 Other political and strategic background of the project

Strategic documents	
EU Water Framework Directive sets the target of good quality water bodies within Europe. Diffuse loading is one of the main obstacles that prevents surface waters and Baltic Sea to achieve a good or excellent status, which is the goal of water framework directive. Currently, water management processes, gives good tools to restrict point sources of external loading but we also need to identify the whole catchment area, where diffuse loading should be reduced to achieve good ecological status. 496 / 500 characters	
EU Drinking Water Directive requires the catchment areas serving as raw water resources for water utilities to be investigated thoroughly. This is to identify all possible risks which might affect quality of water delivered to consumers. The WSSP operational model is the one concrete and practical solution to fulfill this requirement. 338 / 500 characters	
Regionally, Kanta-Häme Region in Finland published the Road Map Toward Circular Economy by 2030 just in January 2022 that supports EU Circular Economy Action Plan. This regional plan has five lanes one being for waters. WSSP is recognized as a viable tool to achieve good quality surface and ground waters in the region. 321 / 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	

Full name of the project	Funding Source	Use of the project outcomes and/or planned cooperation
Häme region as a pioneer in a risk management of pathogens in watercourses 74 / 200 characters	European Regional Development Fund (ERDF) 41 / 200 characters	HAMK, THL, LBS and Luke were involved in implementing a project dealing with hygienic risks for people caused by run-off water and treated wastewater in Finland. Häme region as a pioneer in a risk management of pathogens in watercourses (2019-2021) project was funded by ERDF. The need for a WSSP operational model was identified during the project. All four of these Finnish organisations are also to participate in this project. HAMK will be the Lead Partner in this project, THL will offer microbiological analyses, tracing the sources of waterborne pathogens and implementing waterborne quantitative health risk assessments that are needed to test and validate the WSSP tools in practice. LBS will pilot WSSP operational model in lake sub-catchment and HAMK will buy Luke's expertise in implementing ecological risk assessments in pilot catchments. Existing health risk assessment online tools for bathing waters and drinking waters were improved and will be part of the WSSP toolbox. 990 / 1,000 characters
HULVATTU 8 / 200 characters	Ministry of the Environment in Finland 38 / 200 characters	HAMK started to conceptualise the WSSP operational model in a project called HULVATTU that is funded by Ministry of the Environment in Finland. The aim is to identify how a Water Safety Plan and Sanitation Safety Plan could be modified to serve the needs for stormwater management and risk assessment in urban watersheds. HULVATTU conceptualises the first prototype of WSSP process and tests it in few urban catchment areas. HULVATTU will end before the start of this project and, it is evident that WSSP should be further developed in different locations, in different operating environments and on different scales. 620 / 1,000 characters
WaterChain 10 / 200 characters	Interreg Central Baltic Programme 33 / 200 characters	The proposed WSSP is related to a former Interreg Central Baltic project WaterChain (2015-2018). In the project inflows of nutrients and hazardous substances ending up in the Baltic Sea was reduced. The project had two main focus areas. Raising awareness how everyday actions and interventions affect water quality in the Baltic Sea how it can reduce the chemical and nutrient load. The second focus area was on utilizing environmental technology to reduce the inflow of nutrients and hazardous substances. This Project's activities and themes partly overlap with this proposal's scope.The Pyhäjärvi Institute and Riga technical university were partners in the project. 674 / 1,000 characters

Full name of the project	Funding Source	Use of the project outcomes and/or planned cooperation
Protecting Baltic Sea from untreated wastewater spillages during flood events in urban areas (NOAH) 99 / 200 characters	Interreg Baltic Sea Region Programme 36 / 200 characters	WSSPlan will continue and supplement the work that has been done in previous Interreg Baltic Sea Region project called NOAH – Protecting Baltic Sea from untreated wastewater spillages during flood events in urban areas(2019-2021). The project has focused on holistic planning of urban stormwater runoffs and drainage systems. We will utilize the knowledge and results what that project produced related to urban stormwater management. The extreme Weather Layer (EWL) tool developed in NOAH will be part of the WSSP toolbox and improved if needed. We continue the dissemination of that tool that has started in the NOAH project. In addition, we also develop WSSP operational model for agricultural and forestry areas and focus on so called background diffuse pollution that is a significant source of pollution as well. 823 / 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 5%

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.

We will have a steering committee that will be supporting our project implementation. Representatives of target groups are invited to participate in the work of the steering committee to guarantee the applicability of project results. The target groups will be the end users of the project results and thus, sustainability of the results is secured.

349 / 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.

0 / 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.

There will be a well advertised opening event of the project. This is because the WSSP operational model is a totally new approach in mitigating diffuse pollution and the partners like to make sure as wide range of stakeholders as possible are aware of the project. Otherwise, project communication is described in WP3.

319 / 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 WSSP operational model
1.2	Information collection and other preparations for piloting of WSSP operational model
1.3	Preparing the toolbox for the WSSP operational model

Number	Work Package Name
2	WP2 Piloting and evaluating solutions

Number	Group of Activity Name
2.1	Identification of WSSP pilot catchment areas – basic characteristics
2.2	Detailed tracking of pollution sources and risk assessment
2.3	Selection and implementation of pollution mitigation measures
2.4	Expanded WSSP toolbox
2.5	Recommendation, evaluation and adaptation of WSSP

Number	Work Package Name
3	WP3 Transferring solutions

Number	Group of Activity Name
3.1	Instructions and training of WSSP and involvement of target groups in WSSP dissemination
3.2	Securing the future development and usage of WSSP operational model

Work plan overview

Period:	1	2	3	4	5	6	Leader
WP.1: WP1 Preparing solutions							**PP4**
A.1.1: Determination of WSSP operational model							PP1
D.1.1: WSSP operational model presentation document	D						
A.1.2: Information collection and other preparations for piloting of WSSP operational model							PP3
D.1.2: Premises for applicable WSSP operational model		D					
A.1.3: Preparing the toolbox for the WSSP operational model							PP5
D.1.3: Preliminary toolbox for WSSP operational model		D					
WP.2: WP2 Piloting and evaluating solutions							**PP3**
A.2.1: Identification of WSSP pilot catchment areas – basic characteristics							PP5
D.2.1: Good practices for implementation of WSSP			D				
A.2.2: Detailed tracking of pollution sources and risk assessment							PP2
D.2.2: Pollution source data and cloud deployed ecological and risk models of WSSP pilot areas			D	D	D		
A.2.3: Selection and implementation of pollution mitigation measures							PP6
D.2.3: Efficiency of pollutant mitigation measures selected by WSSP operational model				D	D		
A.2.4: Expanded WSSP toolbox							PP1
D.2.4: Expanded WSSP toolbox				D	D		
A.2.5: Recommendation, evaluation and adaptation of WSSP							PP7
D.2.5: Watershed Safety Plan operational model including the toolbox to reduce diffuse pollution				D	D	D	
WP.3: WP3 Transferring solutions							**PP1**
A.3.1: Instructions and training of WSSP and involvement of target groups in WSSP dissemination							PP2
D.3.1: Guide and training of WSSP operational model					D	D	
A.3.2: Securing the future development and usage of WSSP operational model							PP1
D.3.2: WSSP operational model Road Map and durability plan of WSSP					D	D	

Outputs and deliverables overview

Code	Title	Description	Contribution to the output	Output/ deliverable contains an investment
D 1.1	WSSP operational model presentation document	Because WSSP operational model is a new concept in sustainable surface water management on a catchment level scale, it is important to define the concept carefully before piloting. The deliverable of this group of activities is a document that includes definition WSSP operational model and its different stages. The opinions of target groups are considered in this document.	WSSP operational model	

D 1.2	Premises for applicable WSSP operational model	The deliverable of this group of activities is a detailed written plan how to implement the piloting of WSSP operational model in WP 2. All pilot sub-catchment areas differ by among the other things, water bodies, land use, soil, vegetation, settlements and implementation of WFD can also vary between the partner countries. Further, a list of most efficient and available diffuse pollutant removal techniques for water and sludge matrixes will be provided as a basis for work in WP2. Written plan also includes comparison of accessibility and quality of data relevant for WSSP in the different countries. Shortly, written plan consists of a list of premises for a WSSP how to pilot and disseminate it such way in each country in order to be useful and relevant with respect to local legal obligations and WFD implementations.	WSSP operating model	
D 1.3	Preliminary toolbox for WSSP operational model	The deliverable of this group of activities is preliminary toolbox of WSSP operational model that includes all tools that are to help in implementating a water protection project starting from open data, various GIS-tools, drone investigations, water analysis, risk assessments, etc. and ending to practical solutions in catchments like wetlands, various filters, etc. For example, the project will test some new methods, like novel fecal source identification tehniques together with quantitative microbial risk assessment (QMRA) that can be added to the WSSP toolbox. But, because mitigation of diffuse pollution needs actions by all stakeholders living or acting in the catchment the toolbox includes meetings, interwievs, workshops, posters, etc. as well. Aim is that the target groups in partner countries will have a clear idea about the usefulness of this WSSP operational model and toolbox. The WSSP operational model is to tailormade actions taken in each catchment because the circumstances are varying a lot. New tools that WSSPlan is going to create are still prototypes in this phase and will be finished in WP2. Also instructions will be finished in WP2.	WSSP operational model	
D 2.1	Good practices for implementation of WSSP	Each country will create a written report (includes maps and water quality data etc.) with respect to the format of identified good practices for implementation of WSSP.	WSSP operational model	
D 2.2	Pollution source data and cloud deployed ecological and risk models of WSSP pilot areas	This deliverable includes the written results of pollution source tracking and ecological and health risk assessments. Ecological risk assessment consists of precise field measurements of pollutant concentrations, discharge and turbidity in different discharge situations in selected sub-catchment areas that will be tested to locate hot spots of diffuse loading. Tracking pilots will be conducted at all WSSP pilot catchments. Inclusion of quantitative microbial human health risk assessment compartment to the WSSPs will be done performing the human infection risk calculations using different faecal pathogen pollution mitigation scenarios at the pilot areas of the study. Based on the WP1 models and WP2 piloting, a guidance/road map for health risk assessments from diffuse pollution sources will be produced to the stakeholders of the project to enable transferring knowledge how to implement microbial source tracking tools and how to measure human health effects of the changing environment in the future (in WP3). The health and environmental data will be included in predictive simulation models that take the interdependencies into account and that will produce risk measures. The interactive simulation models will be deployed to a cloud platform that stakeholders can access.	WSSP operational model	
D 2.3	Efficiency of pollutant mitigation measures selected by WSSP operational model	Report from each partner country: Results of pollution mitigation measures piloted with WSSP operational model	WSSP operational model	
D 2.4	Expanded WSSP toolbox	Expanded WSSP toolbox including cloud based simulation model incorporating mitigation measures. The exact specification of this deliverable will be developed based on the user requirements gathered in WP. We envision that the toolbox will contain Open data access Maps and GIS tools Risk Assessments Open cloud platform for running dynamic interactive simulations Drone investigations Water Analysis Reports Posters and graphics Stakeholder workshops and other events where persons and organizations are brought together to discuss about diffuse pollution and its mitigation Any other tools innovated within the project	WSSP operational model	
D 2.5	Watershed Safety Plan operational model including the toolbox to reduce diffuse pollution	So far, small water pollution sources (diffuse pollution) have been tackled more or less randomly: land owners or various stakeholders in water protection projects have proposed wetlands, sedimentation bonds, filters, etc. placed in catchments without considering where they are most needed. These decisions are often on the basis of other interests, e.g. a piece of land lacking any kind of economical use, need to improve scenery, interest to get birds for hunting. Therefore, we will make land use recommendations for WSSP pilot sub-catchment areas in order to provide examples how to utilize WSSP operational model. Watershed Safety Plan (WSSP) operational model is to tackle this problem. By investigating catchments carefully and systematically we can not only locate the small pollution sources but plan and design the most efficient water protection measures for these sites. This will guarantee the most efficient use of limited resources. After piloting the WSSP operational model in the five different catchments in four countries, we implement a comprehensive pilot evaluation of the WSSP operational model. In addition, we will provide preliminary guidelines how to adapt WSSP operational model to different scales and recommendations concerning its use, applicability in certain catchments and provide tools to be utilized in various cases. We will also make recommendations to include the WSSP operational model in legal statutes. A brief note for each country on challenges and benefits upon using WSSP with respect to WFD implementations. After applying the freely available WSSP operational model in number of catchments all around the Baltic Sea, pollution sources will be better controlled. Furthermore, the adverse effects of pollutants on human health will be mitigated, and we can expect a reduced eutrophication of the Baltic Sea.	WSSP operational model	

D 3.1	Guide and training of WSSP operational model	WSSP will be a totally new operational model in the fight against diffuse pollution. Making WSSP freely available to use on servers of the competent health/environmental authorities is not sufficient. To get maximum benefit, users need to be guided by clear and detailed instructions. Otherwise, the process of mitigating diffuse pollution all over the Baltic Sea Region will progress too slowly. Instructions will not only be included with the WSSP operational model itself, but also will be available as a simulation. Interactive dynamic simulations can be used for dissemination purposes, and links can be imbedded in webpages of stakeholders organisations. This will speed up the awareness of the new model to a much wider audience than only the target groups. The capacity of target groups will be increased to tackle diffuse pollution management challenge by integrating the WSSP operational model and toolbox with instructions to their daily work. That will be promoted by developing the WSSP toolbox together with end users and disseminating and training in various ways to other end users who may have not participated that closely to development this project. Key end users are public authorities and relevant sectoral agencies. After the active promotion of the model itself and the instructions about its utilisation, decision-makers around the Baltic Sea will be able to apply WSSP in creating new political strategies and guidance and even laws. The target group actors can use the simulation to demonstrate the WSSP operational model in an easily understandable format to non-subject experts which may include policy and decision makers. The utilisation of the WSSP operational model and toolbox will lead to prevention of diffuse pollution and pollutant load (including: nutrients, pathogens and hazardous chemicals) into water bodies and the Baltic Sea and therefore improve water quality, and in the long term, even enhancing the ecological status.	WSSP operational model	
D 3.2	WSSP operational model Road Map and durability plan of WSSP	WSSP operational model Road Map (= how to best advance implementation of the model) in each project partner country and written plan how to ensure durability and further development of WSSP operational model after project.	WSSP operational model	

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 4 - Pyhäjärvi Institute

Work package leader 2 PP 5 - VIA University College

5.4 Work package budget

Work package budget 15%

5.5 Target groups

	Target group	How do you plan to reach out to and engage the target group?
1	Sectoral agency Centers for Economic Development, Transport and the Environment that control and guide the implementation of WFD and sustainable water management activities in whole Finland (more intensive cooperation with Centers in Häme County and County of Southwest Finland) 262 / 500 characters	Sectoral agencies are end users of regional WSSP operational model. It is vital to engage representatives of these organisations in developing WSSP operational model. Contacting and networking this target group is carried out via emails, calls, meetings and seminars, and mapping their needs and co-develop WSSP operating model through phone and face to face discussions, meetings and workshops. Project partners, whose main target group are these regional environmental agencies, will have both an intensive work group and larger steering committee which consists of representatives of this target group. The compositions of the working group and the steering committee are formed in WP1. These Centers do have daily connections to ministries concerned (environment, health, agriculture and forestry) and thus, the discussions are open to national level as well. 864 / 1,000 characters
2	Local public authority Cities/municipalities (including strategic and land-use planning, environmental services etc.) from Finland, Denmark and Latvia. More intensive collaboration with one city from the central region of Denmark and Liepaja City from Latvia which is the third largest city in Latvia and located in the Baltic Sea shore and one local environmental office from Southern part of Satakunta County, Finland. 397 / 500 characters	Local public authorities like cities and municipalities are end users of local WSSP operational model. It is vital to engage representatives of these organisations in piloting local WSSP operational model. Contacting and networking this target group is carried out via emails, calls, meetings and conferences and seminars, and mapping their needs and co-develop WSSP operating model through phone and face to face discussions, meetings and workshops. Project partners, whose main target groups are cities and municipalities, will have both an intensive work group with closer target group organisations and larger general steering committee which consists of representatives of this target group. Both work group and steering committee will participate in the development of WSSP operating model through meetings and other communication and support the implementation of this project. The compositions of the working group and the steering committee are formed in WP1. 970 / 1,000 characters
3	NGO Estonian Association of Water Engineers 39 / 500 characters	Certain non-governmental organisations, like Estonian Association of Water Engineers, are end users of national WSSP operational model as well. It is vital to engage representatives of these organisations in developing WSSP operational model. Contacting and networking this target group is carried out via emails, calls, meetings and seminars, and mapping their needs and co-develop WSSP operating model through phone and face to face discussions, meetings and workshops. The representative of the association will be considered in WP1 when the compositions of working group and the steering committee of the project are formed. 629 / 1,000 characters

5.6 Activities, deliverables, outputs and timeline

No.	Name
1.1	**Determination of WSSP operational model**
1.2	**Information collection and other preparations for piloting of WSSP operational model**
1.3	**Preparing the toolbox for the WSSP operational model**

WP 1 Group of activities 1.1

5.6.1 Group of activities leader

Group of activities leader PP 1 - Häme University of Applied Sciences, HAMK

A 1.1

5.6.2 Title of the group of activities

Determination of WSSP operational model

39 / 100 characters

5.6.3 Description of the group of activities

The preliminary content of WSSP operational model is defined in more detail here. Every project partner participates and actively engage target groups to implement this group of activities.

Defining the WSSP operational model:

Our primary goal is to develop a flexible and adaptable operational model called the WaterShed Safety Plan (WSSP) consisting of a guide for best practices and a technical toolbox. The idea of the WSSP is to define catchment areas in a systematic manner, e.g. to map diffuse pollution hot spots and find best site-specific practices to prevent and reduce pollution to water bodies and the Baltic Sea.

The aim is to integrate WSSP into decision making and common water management planning process at different levels (local, regional and national). For example, through a regional WSSP, catchments that require a more detailed local WSSP for water management could be identified. A local WSSP can serve as a planning tool for identifying location sites of rehabilitation methods (for example sedimentation ponds or water protection wetlands) or ultimately as a legally binding water protection method. The WSSP can be also utilized in the granting of permission for actions that may contribute to diffuse pollution (for example fertilization or ditching). In the long term, the aim is to integrate WSSP into the legislative process.

Some example applications at the different levels are:

National Level
1) The WSSP should be incorporated as a module into the current electronic Water Safety Plan (WSP) tool
2) The use of the tool will be promoted in workshops and educational courses intended for regional and local authorities and risk managers of the water supplies. As an outcome, through the catchment level risk assessment, the watershed level management actions could be implemented.

Regional Level
1) Identification of large-scale catchment areas
2) Mapping of upcoming plans
3) Potential land use guidelines and restrictions
4) Compliance monitoring.

Local Level
1) Detailed Identification of catchment area.
2) Preparing sustainable water management plan (land use planning and pollution mitigation measures).
3) Implementation of a sustainable water management plan.
4) Monitoring and verification the effectiveness of WSSP.

In local and regional scales, WSSP will start by utilising all available open data and various geographical information systems (GIS). This will create common knowledge about the needs for developing IT-tools for the future use in different projects tasked with improving our environment around the Baltic Sea.

Wishes and needs of target groups are listened to prepare preliminary versions WSSP models to different scales. Our aim is to start continuum where WSSP operational models are developed and disseminated further. We believe that one significant reason why diffuse pollution is not properly under control is lack of tool like WSSP or they are not used enough.

2,956 / 3,000 characters

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

D 1.1

Title of the deliverable

WSSP operational model presentation document

44 / 100 characters

Description of the deliverable

Because WSSP operational model is a new concept in sustainable surface water management on a catchment level scale, it is important to define the concept carefully before piloting. The deliverable of this group of activities is a document that includes definition WSSP operational model and its different stages. The opinions of target groups are considered in this document.

375 / 2,000 characters

Which output does this deliverable contribute to?

WSSP operational model

22 / 100 characters

5.6.6 Timeline

Period:	1	2	3	4	5	6
WP.1: WP1 Preparing solutions						
A.1.1: Determination of WSSP operational model						
D.1.1: WSSP operational model presentation document						

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 3 - University of Helsinki, Faculty of Biological and Environmental Sciences

A 1.2

5.6.2 Title of the group of activities

Information collection and other preparations for piloting of WSSP operational model

84 / 100 characters

5.6.3 Description of the group of activities

Project partners participates and actively engage target groups to implement this of this group of activities.

One of the main issues in WP1 is to collate existing knowledge on holistic assessment relevant for WSSP implementation so that piloting will be successful in every project partner country. Therefore, previous results of WSSP or other similar piloting are also mapped in this WP and considered during planning WSSP piloting in this project. In addition, comparison of accessibility and quality of data relevant for WSSP in the different countries is also carried out.

We plan WSSP operational model piloting and its stages in a detailed way in every chosen sub-catchment area. One step is to design a data collection strategy how to identify pilot sub-catchment areas. For instance, data collection can consist of water and sludge quality data, GIS land use data, GIS topographic data etc. The Finnish environmental institute's GIS-based nutrient load model system (VEMALA), that covers the whole of Finland, is one example of software that can be utilized in piloting of WSSP operational model in this project. We also map potential open data sources that we could catalogue as part of the WSSP operational model in relation to different scales. We also start to to draft content of the WSSP operational instructions. Actual catchment area data collection and detailed writing of instructions are carried out as part of the WSSP piloting in WP2.

Water and sludge quality monitoring and sampling can be utilized not only to identify the catchment area, but also to prove the effectiveness of WSSP operational model. Therefore, existing cost-effective automatic measuring devices and data management are improved. A water and sludge quality sampling plan is initiated to prepare for WP2. In addition, the faecal pollution source identification scheme for watersheds in the Baltic Sea Region is developed. Other stages of WSSP operational model are also planned carefully in WP1.

In each sub-catchment area, a WSSP operational model is piloted locally but it is also considered after local piloting in WP3 how it could be adapted to regional, national and even transnational levels. Expectations and needs of target groups how to pilot WSSP operational model or adapt it to different scales are considered in this WP.

2,333 / 3,000 characters

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

D 1.2

Title of the deliverable

Premises for applicable WSSP operational model

46 / 100 characters

Description of the deliverable

The deliverable of this group of activities is a detailed written plan how to implement the piloting of WSSP operational model in WP 2. All pilot sub-catchment areas differ by among the other things, water bodies, land use, soil, vegetation, settlements and implementation of WFD can also vary between the partner countries. Further, a list of most efficient and available diffuse pollutant removal techniques for water and sludge matrixes will be provided as a basis for work in WP2. Written plan also includes comparison of accessibility and quality of data relevant for WSSP in the different countries.

Shortly, written plan consists of a list of premises for a WSSP how to pilot and disseminate it such way in each country in order to be useful and relevant with respect to local legal obligations and WFD implementations.

830 / 2,000 characters

Which output does this deliverable contribute to?

WSSP operating model

20 / 100 characters

5.6.6 Timeline

Period:	1	2	3	4	5	6
WP.1: WP1 Preparing solutions						
A.1.2: Information collection and other preparations for piloting of WSSP operational model						
D.1.2: Premises for applicable WSSP operational model						

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 5 - VIA University College

A 1.3

5.6.2 Title of the group of activities

Preparing the toolbox for the WSSP operational model

52 / 100 characters

5.6.3 Description of the group of activities

Project partners will participate and engage actively with target groups to implement this group of activities.

Defining and gathering preliminary content of WSSP toolbox. The aim of this activity is to map which kinds of software tools already exist which will be useful in implementing different stages of WSSP operational model at different scales. We also need to determine what existing tools still need to be refined and improved and if there is need for new ones to be created and what we can develop or create in this project.
Examples of useful tools are different GIS catchment area tools to model pollution, GIS land use planning tools, risk assessment tools, negotiations with various stakeholders, workshops, actual pollution mitigation measures, etc. We start to gather list of tools and instructions how use them to the internet platform that they can be utilised as a part of WSSP operational model also after this project. List will be supplemented in WP3, and authorized downstream users can edit and complement it in the future.

Preparing risk modelling and simulations

In this activity, human health and ecological risk assessment methods are improved. Characterization of risks is started, and it is based on previous research results and long-term water and sludge quality data provided by Activity 1.2. Conceptual models and Dynamic Simulation Models are started to develop to quantify the human health and ecological risks and especially, to introduce the existing situations to target groups and stakeholders in the catchment areas and later visualise the results to the target groups. Based on the initial conceptual models, open access health risk models with quantitative microbial risk assessment (QMRA) methods will be applied and developed for WSSP to assess health impacts of poor-quality surface water on drinking water production and recreational water use. Other models are also created if needed.

Pollution mitigation technologies

State-of-art information about efficiency of available water pollution mitigation technologies is gathered in this activity. Selection of smart technical and nature-based solutions, to prevent and reduce pollution runoff into waters, is decided and implemented WP2. Target groups are involved in this toolbox preparing phase by workshops and discussions actively. Mitigation technologies are tested with IT models developed in activity 2 of this group of activities. The purpose is to share existing knowledge with each other so that we can develop better tools to WSSP operational model and toolbox and promote their utilization together, and thus improve the quality of surface waters in the Baltic Sea Region and further help to achieve the good ecological status.

2,749 / 3,000 characters

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

D 1.3

Title of the deliverable

Preliminary toolbox for WSSP operational model

46 / 100 characters

Description of the deliverable

The deliverable of this group of activities is preliminary toolbox of WSSP operational model that includes all tools that are to help in implementating a water protection project starting from open data, various GIS-tools, drone investigations, water analysis, risk assessments, etc. and ending to practical solutions in catchments like wetlands, various filters, etc. For example, the project will test some new methods, like novel fecal source identification tehniques together with quantitative microbial risk assessment (QMRA) that can be added to the WSSP toolbox.

But, because mitigation of diffuse pollution needs actions by all stakeholders living or acting in the catchment the toolbox includes meetings, interwievs, workshops, posters, etc. as well. Aim is that the target groups in partner countries will have a clear idea about the usefulness of this WSSP operational model and toolbox. The WSSP operational model is to tailormade actions taken in each catchment because the circumstances are varying a lot. New tools that WSSPlan is going to create are still prototypes in this phase and will be finished in WP2. Also instructions will be finished in WP2.

1,171 / 2,000 characters

Which output does this deliverable contribute to?

WSSP operational model

22 / 100 characters

5.6.6 Timeline

Period:	1	2	3	4	5	6
WP.1: WP1 Preparing solutions						
A.1.3: Preparing the toolbox for the WSSP operational model						
D.1.3: Preliminary toolbox for WSSP operational model						

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 3 - University of Helsinki, Faculty of Biological and Environmental Sciences

Work package leader 2 PP 7 - Estonian University of Life Sciences, EULS

5.4 Work package budget

Work package budget 55%

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	Sectoral agency Centers for Economic Development, Transport and the Environment that control and guide the implementation of WFD and sustainable water management activities in whole Finland (more intensive cooperation with Centers in Häme County and County of Southwest Finland) 262 / 500 characters	Sectoral agencies are end users of regional WSSP operational model. It is vital to engage representatives of these organisations in developing WSSP operational model. Communication with these target groups is carried out via emails, calls, meetings and conferences and seminars, and mapping their needs and co-develop WSSP operational model through phone and face to face discussions, meetings and workshops. Project partners, whose main target groups are these regional environmental agencies, will have both an intensive working group and a larger steering committee which consists of representatives of this target group. We organize working group meetings monthly or more often if it is needed. Steering committee meetings are organised twice a year. 756 / 1,000 characters
2	Local public authority Cities/municipalities (including strategic and land-use planning, environmental services etc.) from Finland, Denmark and Latvia. More intensive collaboration with one city from the central region of Denmark and Liepaja City from Latvia which is the third largest city in Latvia and located in the Baltic Sea shore and one local environmental office from Southern part of Satakunta County, Finland. 397 / 500 characters	Local public authorities like cities and municipalities are end users of local WSSP operational model. It is vital to engage representatives of these organisations in piloting local WSSP operational model. Communication with these target groups is carried out via emails, calls, meetings and conferences and seminars, and mapping their needs and co-develop WSSP operational model through phone and face to face discussions, meetings and workshops. Project partners, whose main target groups are these regional environmental agencies, will have both an intensive working group and a larger steering committee which consists of representatives of this target group. We organize working group meetings monthly or more often if it is needed. Steering committee meetings are organised twice a year. Authorities of cities and municipalities are involved in the WSSP operational model piloting in each partner country due to the fact that the actions are taken in private owned properties. 985 / 1,000 characters
3	NGO Estonian Association of Water Engineers 39 / 500 characters	Certain non-governmental organisations, like Estonian Association of Water Engineers (EAWE), are end users of national WSSP operational model. It is vital to engage representatives of these organisations in developing WSSP operational model. Communication with these target groups is carried out via emails, calls, meetings and conferences and seminars, and mapping their needs and co-develop WSSP operational model through phone and face to face discussions, meetings and workshops. Organizations like EAWE are the ones planning, designing and implementing diffusion pollution mitigation measures in practice. Their knowledge is valuable when developing the WSSP operational model and the toolbox included. 709 / 1,000 characters

5.6 Activities, deliverables, outputs and timeline

No.	Name
2.1	**Identification of WSSP pilot catchment areas – basic characteristics**
2.2	**Detailed tracking of pollution sources and risk assessment**
2.3	**Selection and implementation of pollution mitigation measures**
2.4	**Expanded WSSP toolbox**
2.5	**Recommendation, evaluation and adaptation of WSSP**

WP 2 Group of activities 2.1

5.6.1 Group of activities leader

Group of activities leader PP 5 - VIA University College

A 2.1

5.6.2 Title of the group of activities

Identification of WSSP pilot catchment areas – basic characteristics

68 / 100 characters

5.6.3 Description of the group of activities

Project partners participate and engage target groups intensively. Travel to project countries are organised in this WP when it is needed and justified.

In this group of activities, project partners start to implement the local WSSP process in selected pilot sub-catchment areas which consist of urban, agricultural and/or forestry areas. Identification includes collection of different background information (like topography, land use, pollution sources, water quality and other data etc.) that are useful in piloting and implementing a local WSSP operational model. For instance, actions done in implementing WFD or other catchment level actions are investigated. The WSSP toolbox and other outputs, including GIS methodologies, from WP1 will be applied in piloting the identification of sub-catchment areas. WSSP operational piloting in different project partner countries is counted as a one pilot of WP2 (Actual Pilot).

The sub-catchment areas that are selected for the project are introduced in next chapters. All chosen areas suffer from diffuse pollution.

Finland

Ahmasoja (pilot area A) stream and river Pyhäjoki headwaters (pilot area B) are sub-catchment areas of the Eurajoki drainage basin (1335 km2). Ahmasoja (A) is a 9 km long river, catchment area is 44 km2 of which over 50% is forest and 12% agricultural land. The catchment area of the river Pyhäjoki (B) is 41 km2 and land use is mainly field (29%) and forest (62%).

The third of WSSP pilot area C, is agricultural and forestry Koiransuolenoja that is a sub-catchment area (6,75 km2) of Lake Pääjärvi (lake area 13,4 km2, catchment area 223 km2). The soil of Koiransuolenoja sub-catchment area varies between fine clay silt, coarse ridges, and moraine and peatland and there is chain of sedimentation ponds.

Estonia

In Estonia, for the piloting activities we selected a small catchment area with different land use in South-East Estonia. The catchment area of the Rahinge ditch is approximately 7 km2 and the recipient is the Ilmatsalu reservoir, the water of which flows into the Ilmatsalu River, from there through the Emajõgi River into Lake Peipsi, and finally to the Gulf of Finland. The land use of the catchment consists of approximately 64 % fields, 24 % forest, and 12 % residential area.

Latvia

Latvian WSSP operational model pilot sub-catchment area is the territory of Liepaja wastewater treatment plant that covers 18 ha in close vicinity to the Baltic Sea and on the northern border of Liepaja city and includes sludge composting site. Within 200 m there is a freely accessible beach and hiking tracks.

Denmark

The pilot project will take place in a sub-catchment area identified in the Central Region of Denmark. The WSSP pilot includes a sub-catchment area experiencing diffuse pollution from urban and rain-related drainage in a vulnerable water catchment area, Gudenåen.

2,890 / 3,000 characters

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

D 2.1

Title of the deliverable

Good practices for implementation of WSSP

42 / 100 characters

Description of the deliverable

Each country will create a written report (includes maps and water quality data etc.) with respect to the format of identified good practices for implementation of WSSP.

169 / 2,000 characters

Which output does this deliverable contribute to?

WSSP operational model

22 / 100 characters

5.6.6 Timeline

Period:	1	2	3	4	5	6
WP.2: WP2 Piloting and evaluating solutions						
A.2.1: Identification of WSSP pilot catchment areas – basic characteristics						
D.2.1: Good practices for implementation of WSSP						

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 2 - Finnish institute for health and welfare

A 2.2

5.6.2 Title of the group of activities

Detailed tracking of pollution sources and risk assessment

58 / 100 characters

5.6.3 Description of the group of activities

Project partners participate and actively engage target groups to implement of this group of activities.

Diffuse loading typically consists of many small pollution sources located in the catchment area. Identifying these pollution sources (Pilot Phase 1) is crucial for the development of WSSP. With our approach the aim is to locate these pollution sources by utilizing data and software tools, and then to supplement source tracking with field work. It is also used to verify the databased identification while piloting and developing WSSP operational model. Therefore, water and sewage sludge quality (nutrients, humic substances, hazardous chemicals and pathogens) measuring are also needed in sub-catchment areas. This is carried out by water sampling and continuous water quality monitoring and utilizing and developing novel pollutant source identification techniques. Further, cost-efficient Continuous Monitoring Water Quality Field Stations will be located in all pilot sub-catchment areas. In addition, novel pollution source tracking methods are tested and developed (Pilot Phase 2). All results are utilised for risk assessment that falls under the WSSP operational model concept.

Both environmental and human health risks are considered. The aim of ecological risk assessment (Pilot Phase 3) is to investigate harmful effects of pollution runoffs on the water environment. The assessment will use quantitive data, including nutrient pollution caused by agricultural, nutrient and hazardous chemical pollution from urban runoffs or nutrient and humic substance pollution from forestry. Results consist of precise field measurements of pollutant concentrations, discharge and turbidity in different discharge situations in selected sub-catchment areas. The results will be used to locate hot spots of diffuse loading. Tracking pilots will be conducted at all WSSP pilot catchments.

In this project, health risk assessment (Pilot Phase 4) is based on tracking of faecal pollution runoffs that consist of microbes that can cause risks for human health via contamination of swimming areas, irrigation or drinking water. The faecal pollution source identification scheme for water bodies in the Baltic Sea Region developed in WP1 will be verified in this stage by utilising microbiological expert analyses for samples collected from the pilot areas, e.g., river water with manure run-offs from production animals. The expert analyses will differentiate based on molecular microbiology quantitative PCR testing the animal species from where the faecal pollution is originating.

2,593 / 3,000 characters

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

D 2.2

Title of the deliverable

Pollution source data and cloud deployed ecological and risk models of WSSP pilot areas

87 / 100 characters

Description of the deliverable

This deliverable includes the written results of pollution source tracking and ecological and health risk assessments. Ecological risk assessment consists of precise field measurements of pollutant concentrations, discharge and turbidity in different discharge situations in selected sub-catchment areas that will be tested to locate hot spots of diffuse loading. Tracking pilots will be conducted at all WSSP pilot catchments.

Inclusion of quantitative microbial human health risk assessment compartment to the WSSPs will be done performing the human infection risk calculations using different faecal pathogen pollution mitigation scenarios at the pilot areas of the study. Based on the WP1 models and WP2 piloting, a guidance/road map for health risk assessments from diffuse pollution sources will be produced to the stakeholders of the project to enable transferring knowledge how to implement microbial source tracking tools and how to measure human health effects of the changing environment in the future (in WP3).

The health and environmental data will be included in predictive simulation models that take the interdependencies into account and that will produce risk measures. The interactive simulation models will be deployed to a cloud platform that stakeholders can access.

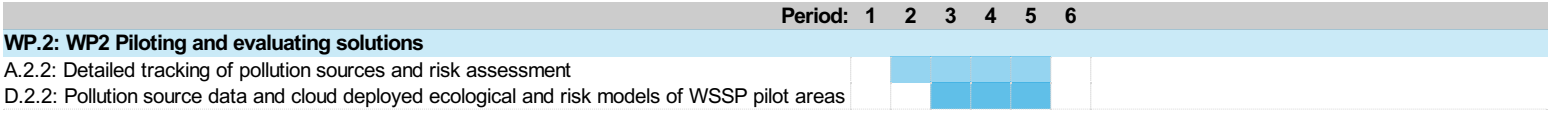
1,293 / 2,000 characters

Which output does this deliverable contribute to?

WSSP operational model

22 / 100 characters

5.6.6 Timeline



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 6 - Riga Technical University

A 2.3

5.6.2 Title of the group of activities

Selection and implementation of pollution mitigation measures

61 / 100 characters

5.6.3 Description of the group of activities

Project partners participate and actively engage target groups to implement of this group of activities.

Here, the most suitable pollution mitigation measures, based on previous piloting steps of WSSP operational model (like integrative risk scenario modelling) are selected and implemented (Pilot Phase 5) in WSSP pilot sub-catchment areas. Project partners from different countries discuss options as a group. The efficiency of pollution mitigation methods is higher when they are targeted at locations where they are the most needed and this also save economical resources. The efficiency will be quantified with water analyses and water continuous quality monitoring.

Both selected nature-based and technical pollution mitigation interventions are designed to prevent and reduce nutrient load, pathogens, hazardous substances and organic matter in water bodies and the Baltic Sea. Selected analyses variates based on previous stages of WSSP process. In addition to general continuous water quality monitoring in each pilot sub-catchment areas, at least in one catchment will be identified for continuous monitoring for microbial load (e.g., E. coli bacteria) by tryptophan detecting. The efficiency of the measures will be studied by several water samples and continuous monitoring.

In this WP, novel techniques will be applied for microbial testing. Testing will be conducted on sludge/manure and urban run and the microbial removal rates of nature-based solutions for emerging pathogens (bacteria, viruses, protozoa) will be calculated.

For example, in Latvia, Liepaja WWTP, pollution mitigation and control actions are introduced and validated in partnership with the local WSSP end user Liepaja Water and combined with other WSSP data. In addition, new agricultural practices are trialed at Koirasuolenoja Experimental catchment. There are 17 small units, which provide a small-scale experimental site for piloting new agricultural practices. The experimental design will be decided on basis of local WSSP to prevent and effectively reduce diffuse pollution.

In Denmark controlled test-pilots are set up for documentation of optimised natur-based solutions for diffuse pollution treatments from urban run of. Practices can be applicable to the whole catchment area. Efficiency, economy and usability of chosen analytical and technical methods are evaluated holistically.

2,393 / 3,000 characters

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

D 2.3

Title of the deliverable

Efficiency of pollutant mitigation measures selected by WSSP operational model

78 / 100 characters

Description of the deliverable

Report from each partner country: Results of pollution mitigation measures piloted with WSSP operational model

111 / 2,000 characters

Which output does this deliverable contribute to?

WSSP operational model

22 / 100 characters

5.6.6 Timeline

Period:	1	2	3	4	5	6
WP.2: WP2 Piloting and evaluating solutions						
A.2.3: Selection and implementation of pollution mitigation measures						
D.2.3: Efficiency of pollutant mitigation measures selected by WSSP operational model						

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 1 - Häme University of Applied Sciences, HAMK

A 2.4

5.6.2 Title of the group of activities

Expanded WSSP toolbox

21 / 100 characters

5.6.3 Description of the group of activities

While piloting WSSP operational models in sub-catchment areas, the initial work on the toolbox conducted in WP1 will be expanded based on the identified stakeholder requirements (Pilot Phase 6).
The WSSP Toolbox will provide a practical roadmap for ways in which the quality of Baltic water resources can be improved. This information will be based on case studies of projects across the Baltic region.

The toolbox will include a range of tools which will guide an organization to plan and design applicable intervention measures to combat diffuse pollution.
Each water protection project implementation has to be customised, since the catchment area and local conditions are specific to that location.
Users therefore need a wide range of tools so they can select those that will be appropriate for their specific case.

The aim of the WSSP toolbox is to empower stakeholders with a practical way to explore and visualize interventions and see how it may improve water quality in the region. The tool can be used for policy and intervention workshops and synthesize the research of ecology, geography and human health conducted in WP1. Since Especially since the digital tools are developing rapidly.

Since the digital tools are developing rapidly, it is important to ensure that the toolbox is up-dated regularly to stay relevant and useful. Thus, any stakeholder utilizing the toolbox should have access to the most up to date information. This group of activities will cover this issue as well. In the agendas of the project meetings (working groups, steering committees) the toolbox will be a permanent topic of discussion. The recommendations how to keep WSSP updated will be included in the final project report.

1,730 / 3,000 characters

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

D 2.4

Title of the deliverable

Expanded WSSP toolbox

21 / 100 characters

Description of the deliverable

Expanded WSSP toolbox including cloud based simulation model incorporating mitigation measures.

The exact specification of this deliverable will be developed based on the user requirements gathered in WP.
We envision that the toolbox will contain
Open data access Maps and GIS tools
Risk Assessments
Open cloud platform for running dynamic interactive simulations
Drone investigations
Water Analysis Reports
Posters and graphics
Stakeholder workshops and other events where persons and organizations are brought together to discuss about diffuse pollution and its mitigation
Any other tools innovated within the project

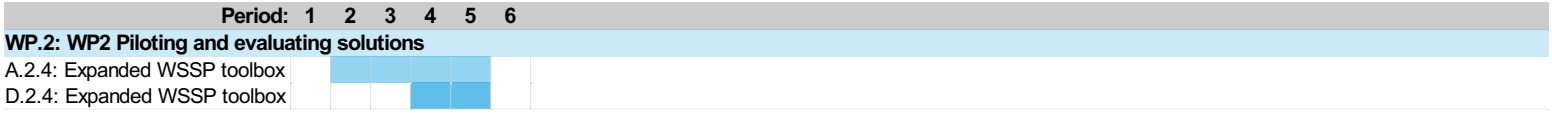
629 / 2,000 characters

Which output does this deliverable contribute to?

WSSP operational model

22 / 100 characters

5.6.6 Timeline



5.6.7 This deliverable/output contains productive or infrastructure investment ☐

WP 2 Group of activities 2.5

5.6.1 Group of activities leader

Group of activities leader PP 7 - Estonian University of Life Sciences, EULS

A 2.5

5.6.2 Title of the group of activities

Recommendation, evaluation and adaptation of WSSP

49 / 100 characters

5.6.3 Description of the group of activities

Project partners participate and actively engage target groups to implement of this group of activities.

We review different possible scenarios for our pilot catchment areas based on WSSP operational model piloting results and make land use recommendations for pilot sub-catchment areas (Pilot Phase 7). Holistic WSSP operational model on catchment level enables us to evaluate the effects of intensive land use activities (for example intensive farming or ditching of catchment) and how restrictions in certain risk operations could help in water protection. Development of these preventive methods focus on modelling and workshopping. These methods could provide basic knowledge on possibilities of WSSP implementation to binding legislation of water protection in future.

This group of activities also includes the comprehensive evaluation of local WSSP pilots (Pilot Phase 8). Efficiency, economy, applicability and usability of WSSP operational model are evaluated carefully. The purpose is to compile instructions and make recommendations how to promote and utilize WSSP operational model also in regional, national and transnational scales. We will also draw comparisons between challenges and benefits by using the WSSP with respect to WFD implementations. The results of all actions in WP1 and WP2 are properly documented and reported for the preparations of WP3.

1,377 / 3,000 characters

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

D 2.5

Title of the deliverable

Watershed Safety Plan operational model including the toolbox to reduce diffuse pollution

90 / 100 characters

Description of the deliverable

So far, small water pollution sources (diffuse pollution) have been tackled more or less randomly: land owners or various stakeholders in water protection projects have proposed wetlands, sedimentation bonds, filters, etc. placed in catchments without considering where they are most needed. These decisions are often on the basis of other interests, e.g. a piece of land lacking any kind of economical use, need to improve scenery, interest to get birds for hunting. Therefore, we will make land use recommendations for WSSP pilot sub-catchment areas in order to provide examples how to utilize WSSP operational model.

Watershed Safety Plan (WSSP) operational model is to tackle this problem. By investigating catchments carefully and systematically we can not only locate the small pollution sources but plan and design the most efficient water protection measures for these sites. This will guarantee the most efficient use of limited resources. After piloting the WSSP operational model in the five different catchments in four countries, we implement a comprehensive pilot evaluation of the WSSP operational model. In addition, we will provide preliminary guidelines how to adapt WSSP operational model to different scales and recommendations concerning its use, applicability in certain catchments and provide tools to be utilized in various cases. We will also make recommendations to include the WSSP operational model in legal statutes. A brief note for each country on challenges and benefits upon using WSSP with respect to WFD implementations.

After applying the freely available WSSP operational model in number of catchments all around the Baltic Sea, pollution sources will be better controlled. Furthermore, the adverse effects of pollutants on human health will be mitigated, and we can expect a reduced eutrophication of the Baltic Sea.

1,862 / 2,000 characters

Which output does this deliverable contribute to?

WSSP operational model

22 / 100 characters

5.6.6 Timeline

Period:	1	2	3	4	5	6
WP.2: WP2 Piloting and evaluating solutions						
A.2.5: Recommendation, evaluation and adaptation of WSSP						
D.2.5: Watershed Safety Plan operational model including the toolbox to reduce diffuse pollution						

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 - Häme University of Applied Sciences, HAMK

Work package leader 2 PP 6 - Riga Technical University

5.4 Work package budget

Work package budget 25%

5.5 Target groups

	Target group	How do you plan to reach out to and engage the target group?
1	Sectoral agency Centers for Economic Development, Transport and the Environment that control and guide the implementation of WFD and sustainable water management activities in whole Finland (more intensive cooperation with Centers in Häme County and County of Southwest Finland) 262 / 500 characters	Sectoral agencies are end users of regional WSSP operational model involved in the process of developing the model and new water protection measures in the toolbox and included in the model. It is also vital to engage representatives of these organisations in disseminating WSSP operational model. Centers for Economic Development, Transport and the Environment cover the whole Finland. We will encourage environmental agencies in Häme and Southwest Finland regions, that are associated partners of the project, to disseminate WSSP operational model to other environmental agencies around Finland. These agencies have continuous connections in national ministries concerned (environment, health, agriculture and forestry) and that is why they are kept up-dated about the results of the project. 798 / 1,000 characters
2	Local public authority Cities/municipalities (including strategic and land-use planning, environmental services etc.) from Finland, Denmark and Latvia. More intensive collaboration with one city from the central region of Denmark and Liepaja City from Latvia which is the third largest city in Latvia and located in the Baltic Sea shore and one local environmental office from Southern part of Satakunta County, Finland. 397 / 500 characters	Cities and municipalities are end users of local WSSP operational model involved in the process of developing the model and new water protection measures in the toolbox included. It is also vital to engage representatives of these local public authorities in disseminating WSSP operational model. We will encourage cities and municipalities to disseminate WSSP operational model to other cities and municipalities around project partner countries. Municipal authorities are involved in the events where the results of the project are disseminated on the local level (landowners and other stakeholders active in the catchments). 631 / 1,000 characters
3	NGO Estonian Association of Water Engineers 39 / 500 characters	Certain non-governmental, like Estonian Association of Water Engineers (EAWE) are end users of WSSP operational model involved in the process of developing the model and new water protection measures in the toolbox included. It is vital to engage representatives of these NGOs in disseminating WSSP operational model. We will encourage NGOs to disseminate WSSP operational model to other operators around project partner countries in various ways. The involvement of EAWE is important when the project is developing the practical diffusion mitigation measures introduced in the WSSP toolbox. These measures must be presented in a form that they are easily understood and applied without the danger of misunderstandings. 723 / 1,000 characters

5.6 Activities, deliverables, outputs and timeline

No.	Name
3.1	**Instructions and training of WSSP and involvement of target groups in WSSP dissemination**
3.2	**Securing the future development and usage of WSSP operational model**

WP 3 Group of activities 3.1

5.6.1 Group of activities leader

Group of activities leader PP 2 - Finnish institute for health and welfare

A 3.1

5.6.2 Title of the group of activities

Instructions and training of WSSP and involvement of target groups in WSSP dissemination

88 / 100 characters

5.6.3 Description of the group of activities

Project partners participate and engage target groups intensively particularly to disseminate project result together with them. Travel to Baltic Sea Region countries are organised in this WP in order to speed up the transfer of project results.

The target groups will be involved in project activities and share the knowledge in understandable way (e.g., visual and interactive cloud-based simulations). Regional and national workshops will be organised jointly with project stakeholders. These events will include guidelines on how to handle various water quality challenges with WSSP. The most efficient solutions tested in WP2 will also be promoted.

We also share wider recommendations and promote diverse dissemination in cooperation with target groups and stakeholders. The Partners will create a list of their networks to make sure that dissemination will be secured to a wider audience than only the target groups.

Potential end users and/or disseminators are selected from different sectors like policy-making agencies, higher educational and research units, industrial companies and water utilities (listed below). There are a number of associations and alike working for safer waters around the Baltic Sea. Furthermore, to sustain good quality waters, the project results must be delivered through schools and universities as well. The results will be reported and disseminated in newspapers, scientific journals and conferences, seminars, workshops, network meetings and social media. Political authorities can use the WSSP operational model and tools included for instance to set limits for pollutant concentrations or land use intensity.

Selected target groups have the ability to influence the enforcement of water pollution interventions, and thus improve the condition of surface waters in the Baltic Sea Region. This will contribute towards the achievement of goals of the EU strategy of the Baltic Sea region, EU's Water Framework Directive and EU Drinking Water Directive. Therefore, the project results will be promoted at national and international networks like HELCOM and Water Europe and events.

Because the WSSP operational model will eventually differ from country to country (organisations and duties of various stakeholders differ) and because the end users of the model are local, regional and even national stakeholders, each partner will involve some target groups' representatives to work in a national steering committee. This is to secure the usefulness and sustainability of the WSSP operational model after the project.

An international steering committee will be formed as well. This is needed to exchange experiences gained in the pilot catchments and plan the following steps in the process toward the WSSP operational model which will best serve in implementing the Water Framework Directive within the Baltic Sea region.

2,884 / 3,000 characters

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

D 3.1

Title of the deliverable

Guide and training of WSSP operational model

44 / 100 characters

Description of the deliverable

WSSP will be a totally new operational model in the fight against diffuse pollution.

Making WSSP freely available to use on servers of the competent health/environmental authorities is not sufficient. To get maximum benefit, users need to be guided by clear and detailed instructions. Otherwise, the process of mitigating diffuse pollution all over the Baltic Sea Region will progress too slowly. Instructions will not only be included with the WSSP operational model itself, but also will be available as a simulation. Interactive dynamic simulations can be used for dissemination purposes, and links can be imbedded in webpages of stakeholders organisations. This will speed up the awareness of the new model to a much wider audience than only the target groups.

The capacity of target groups will be increased to tackle diffuse pollution management challenge by integrating the WSSP operational model and toolbox with instructions to their daily work. That will be promoted by developing the WSSP toolbox together with end users and disseminating and training in various ways to other end users who may have not participated that closely to development this project.

Key end users are public authorities and relevant sectoral agencies. After the active promotion of the model itself and the instructions about its utilisation, decision-makers around the Baltic Sea will be able to apply WSSP in creating new political strategies and guidance and even laws. The target group actors can use the simulation to demonstrate the WSSP operational model in an easily understandable format to non-subject experts which may include policy and decision makers.

The utilisation of the WSSP operational model and toolbox will lead to prevention of diffuse pollution and pollutant load (including: nutrients, pathogens and hazardous chemicals) into water bodies and the Baltic Sea and therefore improve water quality, and in the long term, even enhancing the ecological status.

1,979 / 2,000 characters

Which output does this deliverable contribute to?

WSSP operational model

22 / 100 characters

5.6.6 Timeline

Period:	1	2	3	4	5	6
WP.3: WP3 Transferring solutions						
A.3.1: Instructions and training of WSSP and involvement of target groups in WSSP dissemination						
D.3.1: Guide and training of WSSP operational model						

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 - Häme University of Applied Sciences, HAMK

A 3.2

5.6.2 Title of the group of activities

Securing the future development and usage of WSSP operational model

67 / 100 characters

5.6.3 Description of the group of activities

The project partners consider the disseminating of the project results as crucial. In this work package, the comprehensive durability plan is intended to secure the future development and usage of the WSSP operational model.
Dissemination will be carried out with workshops, seminars and other events, videos, and social media. Dynamic simulations will be utilised to visualize diffuse pollution sources and what effects stakeholder interventions (or the lack thereof) might be. The results are to be published in international publications and conferences to guarantee that the new knowledge can benefit all countries around the Baltic Sea and beyond.

One of the most important aspects in applying the WSSP operational model is the preservation of resources. By utilising all available open data, various GIS-solutions, risk assessments and simulations WSSP will bring more efficient use of resources, both financial and human. While promoting the WSSP operational model in all the countries within the Baltic Sea region, the survival and further development of it will also be secured.

The WSSP will be made freely available to all stakeholders. It could also be incorporated into the servers of the competent health/environment authorities in each participating country after the project. In Finland, Ministry of Social Affairs and Health is an associated partner for that reason. The ministry's server already has some tools for WSP and SSP. The aim is to engage similar institutions also in the other partner countries who has platforms where WSSP can be hosted. Project partners will continue to promote WSSP after the project and share in maintenance costs if needed.

Training on how to use the WSSP operational model will be organised by all stakeholders. Each partner country will host their own promotion events but also one transnational conference will be organised. We will encourage stakeholders from Baltic countries to imbed the models in their own existing web portals to disseminate the knowledge to their target audiences in their local language.

WSSP is listed as one tool to guarantee good quality waters by 2030 in the Road Map Toward Circular Economy in Kanta-Häme Region in Finland. Similar Road Maps will be established in other partner countries and the WSSP operational model will be translated in the languages of the partners. This is to ensure that the model can effectively advise water protection associations and other local level stakeholders.
The WSSP operational model can also be used by universities and other education institutions when teaching water protection and conservation. The model will be accessible to a wider audience if translated into the national language.

2,726 / 3,000 characters

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

D 3.2

Title of the deliverable

WSSP operational model Road Map and durability plan of WSSP

59 / 100 characters

Description of the deliverable

WSSP operational model Road Map (= how to best advance implementation of the model) in each project partner country and written plan how to ensure durability and further development of WSSP operational model after project.

222 / 2,000 characters

Which output does this deliverable contribute to?

WSSP operational model

22 / 100 characters

5.6.6 Timeline

Period:	1	2	3	4	5	6
WP.3: WP3 Transferring solutions						
A.3.2: Securing the future development and usage of WSSP operational model						
D.3.2: WSSP operational model Road Map and durability plan of WSSP						

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	N/A		

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	N/A	They will adopt local WSSP operational model including toolbox piloted in sub-catchment ares of the project and utilise them in their daily work related to water protection. In addition, they will use their experiences of this WSSP operational model for various dissemination activities described in WP3. 304 / 2,000 characters

Output indicators

Output indicator	Total target value in number
RCO 87 - Organisations cooperating across borders	14

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	28	Project partners and associated organisations	The capacity of the project countries is increased to tackle diffuse pollution because they have adopted WSSP operational model and they will develop, utilize and disseminate it also in the future. With holistic WSSP operational model, associated partners are able to control and guide land use activities and water management plans to prevent and reduce diffuse pollution (incl. urban, agricultural and forestry run-offs) to water bodies and the Baltic Sea. Current planning procedures lack a tool to target sustainable water management on catchment level and our project will develop WSSP to meet this need. WSSP operational model is customised to their needs by developing it together with them in regional and local scale, during the project. By using all available open data, various GIS-solutions, risk assessments and simulations WSSP will bring more efficient use of resources, both financial and human resources. Project partners and associated partners can utilize simulations to visualize diffuse pollution sources and effects of actions taken for all stakeholders. This way knowledge and interest in water protection activities will disperse more widely around the Baltic Sea region. 1,197 / 1,500 characters
		Other organisations	In addition to environmental agencies, with holistic WSSP operational model, other political operators like land use planning agencies are able to control and guide land use activities and water management plans to prevent and reduce diffuse pollution (incl. urban, agricultural and forestry run-offs) to water bodies and the Baltic Sea. They and other cooperation organisations can also utilize simulations to visualize diffuse pollution sources and effects of actions taken for their water protection activities. It is important that water professionals in organizations can easily explain and visualize not only the WSSP operational model and its toolbox but the role of diffuse pollution and its mitigation to other colleagues in the very same organizations. This way understanding the importance of water protection activities will increase and it will be taken into account in various planning and implementation processes in advance. All this will finally lead to more safe environment and improved water quality in the rivers, lakes and the Balic Sea. 1,061 / 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	Häme University of Applied Sciences, HAMK	Active 22/09/2022	3,000.00	173,154.00	25,973.10
2 - PP	Finnish institute for health and welfare	Active 22/09/2022	3,000.00	223,839.00	33,575.85
3 - PP	University of Helsinki, Faculty of Biological and Environmental Sciences	Active 22/09/2022	3,000.00	245,228.00	36,784.20
4 - PP	Pyhäjärvi Institute	Active 22/09/2022	3,000.00	179,568.00	26,935.20
5 - PP	VIA University College	Active 22/09/2022	3,000.00	158,849.00	23,827.35
6 - PP	Riga Technical University	Active 22/09/2022	3,000.00	247,680.00	37,152.00
7 - PP	Estonian University of Life Sciences, EULS	Active 22/09/2022	3,000.00	194,532.00	29,179.80
8 - PP	Liepaja Water	Active 22/09/2022	3,000.00	30,000.00	4,500.00
Total			24,000.00	1,452,850.00	217,927.50

No. & role	Partner name	CAT3 - Travel & accommodation	CAT4 - External expertise & services	CAT5 - Equipment	Total partner budget
1 - LP	Häme University of Applie	25,973.10	122,000.00	47,320.00	397,420.20
2 - PP	Finnish institute for health	33,575.85	11,000.00	20,000.00	324,990.70
3 - PP	University of Helsinki, Fac	36,784.20	8,000.00	20,000.00	349,796.40
4 - PP	Pyhäjärvi Institute	26,935.20	80,200.00	11,500.00	328,138.40
5 - PP	VIA University College	23,827.35	40,800.00	27,000.00	277,303.70
6 - PP	Riga Technical University	37,152.00	0.00	30,000.00	354,984.00
7 - PP	Estonian University of Lif	29,179.80	20,000.00	24,108.40	300,000.00
8 - PP	Liepaja Water	4,500.00	0.00	0.00	42,000.00
Total		217,927.50	282,000.00	179,928.40	2,374,633.40

7.1.1 External expertise and services

Contracting partner	Group of expenditure	Item no.	Specification	Investment item?	Group of activities no.	Planned contract value
2. Finnish institute f	Other	CAT4-PP2-G-0	Water sample shipment and sequencing 36 / 100 characters	No	2.1 2.2 2.3	11,000.00
1. Häme Universitv	Specialist support	CAT4-PP1-E-0	Specialist co-operating with HAMK's students to implement simulations for the project's needs 93 / 100 characters	No	1.1 1.2 1.3 2.1 2.2 2.3 2.4 2.5 3.1 3.2	80,000.00
1. Häme Universitv	Specialist support	CAT4-PP1-E-0	Specialist implementing best pollutant mitigation practices in agricultural catchment areas 91 / 100 characters	No	2.1 2.2 2.3	34,000.00
4. Pvhäiärvi Institut	Specialist support	CAT4-PP4-E-0	Specialist implementing mitigation practices in pilot catchment areas including excavator works 95 / 100 characters	No	2.3	51,000.00
4. Pvhäiärvi Institut	Specialist support	CAT4-PP4-E-0	Water quality analysis (e.g. nutrients, suspended solids, microbes), 69 / 100 characters	No	2.1 2.2 2.3	16,500.00
4. Pvhäiärvi Institut	Specialist support	CAT4-PP4-E-0	Measurements and modeling in pilot sites for planning and implementation of pilots 82 / 100 characters	No	2.1 2.2 2.3	11,000.00
4. Pvhäiärvi Institut	Specialist support	CAT4-PP4-E-0	Data service for continuous microbial load monitoring 53 / 100 characters	No	2.1 2.2 2.3	1,700.00
5. VIA University C	Specialist support	CAT4-PP5-E-0	Microbiological and DNA analyses 33 / 100 characters	No	2.1 2.2 2.3	2,800.00
5. VIA University C	Specialist support	CAT4-PP5-E-0	Specialists implementing pilot test set up NbS solutions 56 / 100 characters	No	2.1 2.2 2.3	13,500.00
	Total					282,000.00

Contracting partner	Group of expenditure	Item no.	Specification	Investment item?	Group of activities no.	Planned contract value	
5. VIA Universitv C	Specialist support	CAT4-PP5-E-1	Urban subcatchment area analyses and authority support 54 / 100 characters	No	2.1 2.2 2.3	24,500.00	
3. Universitv of Hels	Other	CAT4-PP3-G-1	Preparations of experimental catchment pilot experiment. Excavator work, installations & materials. 99 / 100 characters	No	2.1 2.2 2.3	8,000.00	
7. Estonian Universi	Other	CAT4-PP7-G-1	Preparations of experimental catchment pilot experiment. Excavator work, installations & materials. 99 / 100 characters	No	1.2 2.1 2.2 2.3	4,000.00	
7. Estonian Universi	Other	CAT4-PP7-G-1	Water quality analysis (e.g. nutrients, suspended solids, microbes) 67 / 100 characters	No	1.2 2.1 2.2 2.3	9,000.00	
7. Estonian Universi	Specialist support	CAT4-PP7-E-1	Specialist implementing pilot test set up 41 / 100 characters	No	2.3	4,000.00	
7. Estonian Universi	Events/meetings	CAT4-PP7-A-1	Meetings with target group 26 / 100 characters	No	1.1 1.2 1.3 2.1 2.2 2.3 2.4 2.5 3.1 3.2	3,000.00	
1. Häme Universitv	Communication	CAT4-PP1-C-1	Promotion and visual appearance like websites, videos, brochures etc. 69 / 100 characters	No	1.1 1.2 1.3 2.1 2.2 2.3 2.4 2.5 3.1 3.2	8,000.00	
	Total					282,000.00	

7.1.2 Equipment

Contracting partner	Group of expenditure	Item no.	Specification	Investment item?	Group of activities no.	Planned contract value	
2. Finnish institute f	Other specific equip	CAT5-PP2-H-0	Laboratory materials, reagents and plasticware for waterborne pathogen and fecal source tracking 97 / 100 characters	No	2.2 2.3	20,000.00	
3. University of Hels	Other specific equip	CAT5-PP3-H-0	Handheld turbidity measurement device & acoustic discharge measuring device. Lab consumables. 93 / 100 characters	No	2.2 2.3	20,000.00	
4. Pyhäjärvi Institut	IT hardware and soft	CAT5-PP4-B-0	Laptop 6 / 100 characters	No	1.1 2.1 3.1	1,500.00	
4. Pyhäjärvi Institut	Tools or devices	CAT5-PP4-F-0	Tools and accessory related to implementation of pilots, GPS device for pilot actions and planning 98 / 100 characters	No	1.1 1.2 2.1 2.2 2.3	1,000.00	
4. Pyhäjärvi Institut	Other specific equip	CAT5-PP4-H-0	Continuous Microbial load monitoring equipment for pilot catchments 67 / 100 characters	No	2.1 2.2 2.3	9,000.00	
6. Riga Technical U	Other specific equip	CAT5-PP6-H-0	Laboratory consumables, reagents and plasticware for patgohen assesment in compost 83 / 100 characters	No	2.1 2.2 2.3	30,000.00	
5. VIA University C	Laboratory equipmen	CAT5-PP5-D-0	Laboratory consumables, reagents and plasticware for water quality parameter analyses 85 / 100 characters	No	2.1 2.2 2.3	13,500.00	
5. VIA University C	Tools or devices	CAT5-PP5-F-0	Tools, sensors and accessory related to NbS test pilots, continous measurement of water quality 95 / 100 characters	No	2.1 2.2 2.3	13,500.00	
	Total					179,928.40	

Contracting partner	Group of expenditure	Item no.	Specification	Investment item?	Group of activities no.	Planned contract value	
7. Estonian Universi	Tools or devices	CAT5-PP7-F-0	Tools, sensors and accessory related to test pilots, measurement of water flow rate and quality 95 / 100 characters	No	2.1 2.2 2.3	24,108.40	
1. Häme University	Tools or devices	CAT5-PP1-F-1	Tools, sensors and accessory related to online monitoring of water quality to test pilots 89 / 100 characters	No	2.1 2.2 2.3	11,320.00	
1. Häme University	IT hardware and soft	CAT5-PP1-B-1	Cloud simulation platform for simulations created in the project 64 / 100 characters	No	3.1 3.2	20,000.00	
1. Häme University	Other specific equip	CAT5-PP1-H-1	Novel pollutant mitigation measure/s to agricultural pilot sub-catchment area 77 / 100 characters	No	2.3	16,000.00	
	Total					179,928.40	

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	Häme University of Applied Sciences, HAMK	Active 22/09/2022	FI	ERDF	80.00 %	397,420.20	317,936.16	79,484.04	For each partner, the State aid relevance and applied aid measure are defined in the **State aid section**
2-PP	Finnish institute for health and welfare	Active 22/09/2022	FI	ERDF	80.00 %	324,990.70	259,992.56	64,998.14	
3-PP	University of Helsinki, Faculty of Biological and Environmental Sciences	Active 22/09/2022	FI	ERDF	80.00 %	349,796.40	279,837.12	69,959.28	
4-PP	Pyhäjärvi Institute	Active 22/09/2022	FI	ERDF	80.00 %	328,138.40	262,510.72	65,627.68	
5-PP	VIA University College	Active 22/09/2022	DK	ERDF	80.00 %	277,303.70	221,842.96	55,460.74	
6-PP	Riga Technical University	Active 22/09/2022	LV	ERDF	80.00 %	354,984.00	283,987.20	70,996.80	
7-PP	Estonian University of Life Sciences, EULS	Active 22/09/2022	EE	ERDF	80.00 %	300,000.00	240,000.00	60,000.00	
8-PP	Liepaja Water	Active 22/09/2022	LV	ERDF	80.00 %	42,000.00	33,600.00	8,400.00	
Total ERDF						2,374,633.40	1,899,706.72	474,926.68	
Total						2,374,633.40	1,899,706.72	474,926.68	

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	282,563.40	226,050.72	282,563.40	226,050.72
Period 2	386,841.00	309,472.80	386,841.00	309,472.80
Period 3	489,800.00	391,840.00	489,800.00	391,840.00
Period 4	535,580.00	428,464.00	535,580.00	428,464.00
Period 5	391,241.00	312,992.80	391,241.00	312,992.80
Period 6	264,608.00	211,686.40	264,608.00	211,686.40
Total	2,374,633.40	1,899,706.72	2,374,633.40	1,899,706.72