

# **D3.5 FINAL DIRECTORY OF RTD OFFER AND DEMAND IN URBAN STORMWATER MANAGEMENT**

BY: HAW HAMBURG **APRIL 29,2016** 

RESEARCH, TECHNOLOGY AND DEVELOPMENT LISTINGS IN THE BALTIC SEA REGION COUNTRIES OF ESTONIA, FINLAND, GERMANY, LATVIA AND SWEDEN















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### Introduction

The Baltic Flows project is a European Union's Seventh Framework project concerning rainwater monitoring and management in Baltic Sea catchment areas. The strategies, knowledge and expertise created during the project are meant be exploited elsewhere-in the European Union and also globally. Enhanced capacities in diffuse load monitoring and urban stormwater management are intended to lead to new business opportunities in the global market for water monitoring and management, know-how and solutions.

As part of the Baltic Flows project outcomes and deliverables, HAW Hamburg has successfully compiled and produced the main project deliverable and Final Directory of Research, Technology and Development (RTD) Offer and Demand in Urban Stormwater Management covering the five participating Baltic regions of Estonia, Finland, Germany, Latvia, and Sweden.

Within the field of urban stormwater management (USWM), cutting edge technologies, resource efficiency methods, and know-how, are areas contributing to demonstrate the economic potential and capacities of the Baltic Sea Region. In order to move towards a common goal and a successful strategy, a foundation of strong supporting partners from the academic to public and private sectors-is paramount. Current technological development and implementation in urban stormwater management across the Baltic has proven instrumental to demonstrate regional excellence while opening up golden opportunities for water innovation and market development.

Compiled around a specific listing of organizations with strong stormwater management and monitoring focus, this RTD Directory is an up-to-date inventory of key stakeholders from public, private and academic sectors consolidating five Baltic Flows regional networks. As a communication tool, this directory will offer opportunities for large and small organizations, industry, and SMEs, to share with an international community, their current research, products, practices, services, and areas of strength; and it presents a clear view of where the current demand and offer in USWM is concentrated.

This final RTD Directory is a contribution towards the development of a transnational vision of technological development and economic growth aimed at boosting innovation, competitiveness and smart specialization potential in the field of urban stormwater management and monitoring.





#### 1. Goals and Objectives

This RTD Directory has been compiled for the purpose of addressing competitiveness, RTD innovation and further development towards a transnational agenda in water smart specialization in the Baltic Sea Region. The main objectives of the RTD Directory include:

- a. Identification of USWM technological potential in BSR
- b. Insight into current market demand and offer
- c. Consolidation of substantial expertise and knowledge with potential for export

#### 2. Development Process

The Baltic Flows project compiled a broad number of organizations listed under this final RTD Directory. Specific information on each of the organizations was collected through surveys sent to the various stakeholders, authorities, and businesses interested in taking part in an international stormwater directory and marketplace. The Information received was classified into key areas in which USWM technologies and practices are typically planned, i.e. stormwater quantity and quality measures, actions, expertise and interests (Please see Image 1).

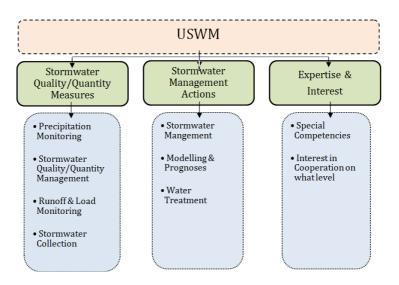


Image 1. Classification of the RTD Directory listing. Source: HAW Hamburg

Participation of the various organizations in this RTD Directory was also enhanced by regional cluster and networking activities carried out in each individual country over the course of the project. In general, the steps that were taken to compile and produce this final output included:





- A vast compilation of organizations from public, private, and academic sectors (by country) assisted by project partners
- 2. An information review phase
- 3. Production and completion of a final Excel document output to be shared via website

For communication purposes, a final document in Excel format has been generated and made accessible to the general public via Baltic Flows project website at <a href="www.balticflows.eu">www.balticflows.eu</a>. The user experience is that people will be able to navigate through a broad list of organizations with an USWM focus and have the possibility to filter required information through filtering and other Excel based functions. The information has been arranged in a user-friendly and flexible way, allowing users to conduct their search either by country, measure or by action. All participants listed provided website information which contributes to stimulate business development.

#### 3. Overview

Participating regions of the Baltic Flows project have identified key organizations from the public, academic, and private sectors with a particular interest in exporting technologies, services, and know-how across the Baltic Sea Region and beyond. For the purpose of this deliverable, a total of 136 organizations from the five Baltic countries of Estonia, Finland, Germany, Latvia, and Sweden have been identified as part of a final RTD Directory in Offer and Demand in Urban Stormwater Management.

Organizations were classified into academic, public, and private sectors. *Public sector* organizations were mainly composed of local and regional authorities, water utility entities and governmental organizations. The group of *private sector* organizations included a range of SMEs, businesses providing engineering services as well as private-sector companies actively involved in technology development. The *academic sector* was composed of a mix of research institutions, universities of applied sciences and other research organizations with a water focus. Table-1 shows the total number of organizations per sector that participated taken from the five different project countries. The table is also a representation of strengths and weaknesses currently characterizing the various sectors.







Table 1: USWM organizations in the Baltic Sea Region Countries. Source: HAW Hamburg

This final RTD Directory is a communication tool to bring areas of urban stormwater management as an integral part in a post-project strategy. As the Baltic Flows project takes further steps towards building a model for water innovation and economic development, a robust mixed sector of actors and networks is an asset in forming the base for the successful and innovative economies of the future. A strong network of stakeholder will open up new opportunities in market development for public, private, and academic sectors contributing to the future objectives of sustainable stormwater management and monitoring in the Baltic Sea Region.

#### 4. RTD Directory Listing by Country

HAW Hamburg has produced a final RTD Directory search document in Excel format available to the general public via Baltic Flows project website at <a href="www.balticflows.eu">www.balticflows.eu</a>. The pages below include the list of all the organizations, per country, that participated in this RTD Directory (Please see pages 7 through 11 below).





### ESTONIA



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GENERAL INFORMATION					STO	RMW	ATER QUALITY	AND Q	QUANTITY MEASUI	RES			STORMWA	ATER N	MANAGEMENT A	CTION	S	EXPERTISE & INTEREST					
					Precipitation Monitoring		Stormwater Quality/Quantity Management		Runoff & Load Monitoring		mwater Collection	Stormwater Management		Modeling & Prognoses		Water Treatment		Special Competencies: Organization's most relevant technologies products and services in rainwater management and monitoring.	Interest in cooperation-at what level?	WASTEWATER RELATED TECHNOLOGIES		OTHER	
No. Country Sector	Institution Name	Institution Name in English	Website	Involved	Action(s) in this Area	Involved	Action(s) in this Area	Involved	Action(s) in this Area	Involved	Action(s) in this Area	Involved	Action(s) in this Area	Involved	Action(s) in this Area	Involved	Action(s) in this Area			Involved	Action(s) in this Area	nvolved Action(s) in this	Area
E01 Estonia Academia	Tartu Ülikooli Eesti Mereinstituut	Estonian Marine Institute, University of Tartu	WWW.502.00	No		Yes	Remote sensing monitoring of coastal water quality	Yes	Remote sensing monitoring of coastal water quality	No		No		No		No		Monitoring from satellites and airborne sensors	Global Level	No		No	
E02 Estonia Academia	Tartu Ülikooli Geograafia Osakond	University of Tartu, Institute of Ecology and Earth Sciences (Department of Geography)	www.geograafia.ut.ee/en/department.geography	No		Yes	Investigate	No		No		Yes	Investigate	Yes	Investigate	No		Biodegradation of oil compounds in soil, groundwater and sea water	Cross-border Cooperation Level in Baltic Sea region	Yes	Investigate	No	
E03 Estonia Academia	Eesti Maaülikooli Põllumajandus- Ja Keskkonnainstituudi Limnoloogiakeskus	Estonian University of Life Sciences, Centre for Limnology (Institute of Agricultural and Environmental Sciences)	pk.emu.ee/en/structure/limnology	Yes	Buy	No		Yes	Buy	No		No		Yes	Develop, Investigate	No		$Monitoring \ CO_2 \ emissions \ in fresh \ water \ lakes \ and \ rivers \ due \ to \\ carbon \ inflow$	Global Level	No		Yes Investigate, Design, P Makers/ Legislatio	Policy don
E04 Estonia Academia	Eesti Maaülikooli Põllumajandus- Ja Keskkonnainstituut	Estonian University of Life Sciences, Department of Environmental Protection	pk.emu.ee/en/structure/environprotection	Yes	Investigate, Policy Makers/ Legislation	YES	Develop, Investigate, Design	Yes	Develop, Investigate, Design	Yes		Yes	Develop, Investigate, Design	Yes	Develop, Investigate, Design	Yes	Investigate		Local/Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Develop, Investigate, Design	No	
E05 Estonia Academia	Tallinna Tehnikaülikooli Mehaanikateaduskond	Tallinn University of Technology, Department of Mechanics	www.ttu.ee	Yes	Investigate	Yes	Investigate	Yes	Investigate	Yes		Yes	Investigate	Yes	Investigate	No			Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	No		No	
E06 Estonia Academia	Tallinna Olikooli Okoloogia Keskus	Institute of Ecology, Tallinn University	www.tlu.ee/et/Okoloogia-keskus	Yes	Investigate	No		Yes	Investigate	No		No		Yes	Investigate	No		Eco-bydrological processes of wetlands and wetlands ecosystem services	Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	No		No	
E07 Estonia Academia	Tallinna Tehnikaülikooli Mehaanikateaduskond	Tallinn University of Technology, Department of Mechanics, Chair of Fluid Mechanics	www.ttu.ee/ehitusteaduskond/mehaanikainstituut-4/oppetoolid-5/hudro-ja- aeromehaanika-oppetool	Yes	Buy	Yes	Buy	Yes	Buy	Yes		Yes	Develop	Yes	Develop	Yes	Buy	Measurements of rain characteristics and stormwater runoffs	Cross-border Cooperation Level in Baltic Sea region	Yes	Buy	Yes Investigate	
E08 Estonia Academia	Tartu Ülikooli Keemia Instituut	University of Tartu, Institute of Chemistry	www.chem.ut.ee/en	No		No		Yes	Develop, Investigate	No		No		No		Yes	Develop, Investigate	Bio sensing of micro pollutants e.g. pesticides and antibiotic residues	Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Investigate	Yes Develop, Investigat	gate
E09 Estonia Academia	Tallinna Tehnikaülikooli Keskkonnatehnika Instituut	Environmental Engineering Department, Tallinn University of Technology	www.ttu.ee/ehitusteaduskomd/keskkomnatehmika-instituut-4	No		Yes	Develop, Investigate	Yes	Develop, Investigate	Yes		Yes	Investigate	Yes	Develop, Investigate	Yes	Investigate	Planning, optimization and harmonization of monitoring networks, scientific interpretation, monitoring	Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	No		No	
E10 Estonia Academia	Tartu Ülikooli Füüsika Instituut	Tartu University Institute of Physics	www.flut.ee/en	Yes	Develop	Yes	Develop	Yes	Develop	No		No		No		No		Fluorescence based monitoring technology	State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	No		No	
E11 Estonia Private Sector	AS Tallinna Vesi	Tallinna Vesi Ltd.	www.tallinnavesi.ee/en	Yes	Investigate	Yes	Investigate	Yes	Investigate	Yes		No		No		Yes	Investigate	Stormwater collection service, stormwater treatment service, measuring intensity of the rain	Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region	No		No	
E12 Estonia Private Sector	Eesti Veevarustuse Ja Kanalisatsiooni Inseneride Selts	Estonian Association of Water supply and Wastewater Engineers	www.evkis.ee	No		No		No		Yes		Yes	Design	Yes	Design	Yes	Design	Umbrella organization for engineers involved in rain and sewage water fields	Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Design	No	
E13 Estonia Private Sector	Eesti Veeühing	Estonian Water Association	www.veeyhing.ee	No		No		No		No		No		No		No		Umbrella organization for actors in different water related fields	Local/Regional Level, State Level	No		Yes Policy Makers/Legisla	slation
E14 Estonia Private Sector	Eesti Vee-ettevõtete Liit	Estonian Waterworks Association	www.cvel.ee	No		No		No		No		No		No		No		Umbrella organization for wastewater companies	Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Training, Seminars	Yes Policy Makers/Legisla	slation
E15 Estonia Private Sector	Infragate Eesti AS	Infragate Estonia Ltd.	www.infragate.ce	Yes	Design	Yes	Design	Yes	Design	Yes	Design	Yes	Design	Yes	Design	Yes	Design	Design and consultation involving environmental technologies	Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region	Yes	Design	No	
E16 Estonia Private Sector	Flydog Solutions 00	Flydog Solutions Lic.	www.flydogmarine.com	No		Yes	Design	No		No		No		No		No		Data loggers and autonomous monitoring buoys	Global Level	No		No	
E17 Estonia Private Sector	Pipelife Estonia AS	Pipelife Estonia	www.pipelife.ee	No		Yes	Sell, Design, Develop	No		Yes	Sell, Design, Develop	Yes	Sell, Develop, Design	No		No		Wide range of stormwater and agricultural water management	Global Level	No		No	
E18 Estonia Private Sector	Kobras AS	Kobras Ltd.	www.kobras.ee	Yes	Buy	Yes	Buy, Design, Develop	Yes	Buy	Yes		Yes	Design, Develop, sell	Yes	Buy, Design	Yes	Design	Urban area and water management structure design	State Level	Yes	Design	No	
E19 Estonia Private Sector	00 Entec Eesti	Entec Eesti Lic.	www.entec.ee	No		No		Yes	Design	Yes	Design	Yes	Design	Yes	Design	Yes	Design	Planning & design solutions and services	Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Design	No	
E20 Estonia Private Sector	Elke Sensor OÜ	Elke Sensor Llc.	www.elkesensor.ee	No		Yes	Sell	No		No		No		No		No		Water quality monitoring technologies	Cross-border Cooperation Level in Baltic Sea region	Yes	Sell	No	
E21 Estonia Private Sector	4PEOPLE OÜ	4PEOPLE Lic.	www.4people.ce	Yes	Investigate	Yes	Buy, Investigate	Yes	Investigate	Yes	Sell, Develop, Investigate, Design	Yes	Sell, Develop, Investigate, Design	Yes	Buy, Investigate	Yes	Sell, Develop, Investigate, Design	Promoting public awareness of sustainable urban drainage, offering courses in sustainable urban drainage design, landscape architecture and sustainable construction. Conducting scientific research to improve our local data and knowledge	Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	No		Yes Sell, Develop, Investigate	te, Design
E22 Estonia Private Sector	TorroSen 00	TorroSen Llc.	www.hot.ee/torrosen	No		Yes	Develop, Investigate	No		No		No		Yes	Develop, Investigate	No		Rapid detection of various pathogens	Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	No		No	
E23 Estonia Private Sector	Cleantech Estonia MTÜ	Cleantech Estonia NPO	www.cleantechestonia.ee	No		Yes	Investigate	Yes	Investigate	Yes	Investigate	No		No		Yes	Investigate	Cleantech organizations cluster building and networking activities	Global Level	No		No	
E24 Estonia Public Sector	Eesti Keskkonnauuringute Keskus	Estonian Environmental Research Centre	www.klab.es/en/	Yes	Investigate	Yes	Investigate	Yes	Investigate	Yes	Investigate	Yes	Investigate	Yes	Investigate	Yes	Investigate	Accredited laboratory methods and high grade personal, knowledge- how built up the water and wastewater monitoring systems, contemporary chemical analyses and sampling aperture	Global Level	No		No	
E25 Estonia Public Sector	Terviseamet	Estonian Health Board	www.terviseamet.ee/en/	No		Yes	Investigate, sell	No		No		No		No		Yes	Investigate	, , , , , , , , , , , , , , , , , , , ,	Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Sell	No	
E26 Estonia Public Sector	Häirekeskus	Estonian Rescue Service	www.112.ee	No		No		No		No		No		No		No			State Level, Cross-border Cooperation Level in Baltic Sea region	No		No	
E27 Estonia Public Sector	Tallinna Kommunaalamet	Municipal Engineering Services Department	www.tallinn.ee/eng/Municipal-Engineering-Services-Department	No		Yes	Buy, Policy makers	Yes	Buy, Policy makers	Yes	Buy, Policy Makers/ Legislation	Yes	Buy, Develop, Investigate, Policy Makers/ Legislation	Yes	Buy	Yes	Buy	Tallinn city stormwater management infrastructure maintenance	Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region	No		No	
E28 Estonia Public Sector	Riigi Ilmateenistus	Estonian Environment Agency, Hydrology Department	www.ilmateenistus.ee	Yes	Develop, Investigate, Design, Policy Makers/ Legislation	Yes	Develop, Investigate, Design, Policy Makers/ Legislation	Yes	Develop, Investigate, Design, Policy Makers/ Legislation	No		No		Yes	Develop, Investigate, Design, Policy Makers/ Legislation	No		Monitoring network, covering all Estonia	Cross-border Cooperation Level in Baltic Sea region	No		No	
E29 Estonia Public Sector	Keskkonnaagentuur	The Estonian Environment Agency	www.keskkonnaagentuur.ee	Yes	Policy Makers/Legislation	Yes	Policy Makers / Legislation	Yes	Policy Makers/ Legislation	No		No		No		No			State Level	No		No	
E30 Estonia Public Sector	Keskkonnaministeerium	Ministry of the Environment Estonia	www.envir.ee/en	Yes	Investigate, Policy Makers / Legislation	Yes	Investigate, Policy Makers/ Legislation	Yes	Investigate, Policy Makers / Legislation	Yes	Investigate, Policy Makers/ Legislation	Yes	Investigate, Policy Makers/ Legislation	Yes	Investigate, Policy Makers/Legislation	Yes	Investigate, Policy Makers/ Legislati	00	Local/Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Investigate, Policy Makers/ Legislation	No	
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# FINLAND



STORMWATER QUALITY AND QUANTITY MEASURES														OTODAWATER MANAGEMENT ACTIONS EVERTICE & INTERFECT										
						ST	ORMWA	ATER QUALITY	AND QU	JANTITY MEASU	IRES		STORMWATER MANAGEMENT A					S	EXPERTISE & INTEREST					
GENERAL INFORMATION					Precipitation Monitoring		Stormwater Quality/Quantity Management		Runoff & Load Monitoring		Stormwater Collection		Stormwater Management		Modeling & Prognoses		Water Treatment		Special Competencies: Organization's most relevant technologies products and services in rainwater management and monitoring.	Interest in cooperation-at what level?	WASTEWATER RELATED TECHNOLOGIES		OTHER	
No. Cour	ntry Sector	Institution Name	Institution Name in English	Website	Involved	Action(s) in this Area	Involved	Action(s) in this Area	Involved	Action(s) in this Area	Involved	Action(s) in this Area	Involved	Action(s) in this Area	Involved	Action(s) in this Area	Involved	Action(s) in this Area			Involved	Action(s) in this Area	Involved A	Action(s) in this Area
F01 Finla	and Academia	Merenkulkualan Koulutus- Ja Tutkimuskeskus (MKK)	Center for Maritime Studies, Brahea Center - Turku University of Turku (UTU)	www.utu.fi/en/units/cms	No		Yes	Investigate	Yes	Investigate	No		No		No		No			Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Design	No	
F02 Fink	and Academia	Saaristomeren Tutkimuslaitos, Turun yliopisto	Archipelago Research Institute, University of Turku (UTU)	www.utu.fi/fi/yksikot/tyyk/saar is to meren-tutkimus laitos	Yes	Investigate	No		Yes	Investigate	No		No		Yes	Investigate	No		Monitoring of seawater, a website for the monitoring time series presentation, lectures about the ecological state of sea based on collected time series	Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	No		Yes	Investigate
F03 Fink	and Academia	Biofysiikan Laboratorio	Laboratory of Biophysics, Turun Yliopisto (UTU)	www.utu.fi/en/units/med/units/anatomy/contact/Pages/home.aspx	Yes		Yes		No		No		No		No		No				No		No	
F04 Fink	and Academia	Maantieteen Ja Geologian Laitos, Turun Yliopisto	Department of Geography & Geology, University of Turku (UTU)	www.utu.fi/en/sites/fluvial/Pages/home.aspx	No	Buy	Yes	Develop	Yes	Develop	No		No		Yes	Develop	No			Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	No		Yes	Develop
F05 Finla	and Academia	Turun Ammattikorkeakoulu, Vesitekniikan Tutkimusryhmä	Turku University of Applied Sciences (TUAS), Aquatic Systems and Water Management Research Group	www.turkuamkfi	No		Yes	Investigate	Yes	Investigate	No		Yes	Investigate	No		No			Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Investigate	No	
F06 Finla	and Academia	Technology Research Center (TRC), Turun yliopisto	Technology Research Center - Brahea Center, University of Turku (UTU)	tre atu.fi	Yes	Investigate	Yes	Investigate	Yes	Investigate	Yes	Investigate	Yes	Investigate	No		Yes	Investigate	Strategic know-how in the field of rainwater monitoring. Ion-sensitive field-effect transistor (SPET) and gloating gate (FGSFET) based electro-chemical sensors, know-how for water quality analysis, ultra high-speed imaging know-how e.g. for real-time analysis of flowing water via microscope	Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	No		No	
F07 Fink	and Academia	Satakunnan Ammattikorkeakoulu (SAMK), Vesi-Instituutti WANDER	R Satakunta University of Applied Sciences, Vesi-Instituutti WANDER	www.samkfi	No		No		No		No		No		No		Yes	Investigate		Cross-border Cooperation Level in Baltic Sea region	Yes	Investigate	No	
F08 Fink	and Private Sector	Centrum Balticum - săătiö	Centrum Balticum	www.centrumbalticum.org	No		No		No		No		No		No		No			Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region	No		Yes P	Policy Makers/ Legislation
F09 Fink	and Private Sector	NanoGeo Finland Oy	NanoGeo Finland Ltd.	www.manogeo.fi	Yes	Buy	No		Yes	Buy	No		No		No		Yes	Buy, Sell, Develop, Investigate, Desig	1	Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Buy, Sell, Develop, Investigate, Design	No	
F10 Finli	and Private Sector	Luode Consulting Oy	Luode Consulting Ltd.	www.luode.met	Yes	Sell	Yes	Sell	Yes	Sell	No		No		Yes	Sell	Yes	Investigate		Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Investigate	No	
F11 Fink	and Private Sector	Lounais-Suomen Vesiensuojeluyhdistys ry	South-West Finland Water Protection Association	www.lsvsy.fi	No		Yes	Sell, Investigate	Yes	Sell, Investigate	No		No		No		Yes	Investigate	Monitoring of water quality	Local/Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region	Yes	Investigate	Yes	Sell, Investigate
F12 Fink	and Private Sector	WIC Systems Oy	WIC Systems Ltd.	www.wicsystems.com	No		No		Yes	Sell, Develop	No		No		No		No			Not interested	No		No	
F13 Fink	and Private Sector	Flootech Oy	Flootech Ltd.	www.flootech.com	No		No		No		No		No		No		Yes	Buy, Sell, Develop, Investigate, Design	1	Not interested	Yes	Buy, Sell, Develop, Investigate, Design	No	
F14 Fink	and Private Sector	FCG - Finnish Consulting Group Oy	FCG	www.fcg.fi	No		Yes	Design	No		No		Yes	Design	Yes	Design	Yes	Design		Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Design	No	
F15 Fink	and Private Sector	Ramboll Finland Oy	Ramboll Finland Ltd.	www.ramboll.fi	Yes	Sell, Investigate, Design	Yes	Sell, Design	Yes	Sell, Develop, Investigate, Design	Yes	Sell, Develop, Investigate, Design, Policy Makers/ Legislation	Yes	Sell, Develop, Investigate, Design, Policy Makers/ Legislation	Yes	Sell, Develop, Investigate, Design	Yes	Sell, Develop, Investigate, Design	Modeling and design of storm water management for cities, system level/general plans, design on hold up structures, collection networks including pumping station	Global Level	Yes	Sell, Develop, Investigate, Design, Policy Makers/ Legislation	Yes (	Consulting and Planning
F16 Fink	and Private Sector	GWM-Engineering Oy	GWM-engineering Ltd.	www.gwm-engineering.fi	Yes	Sell	Yes	Sell	Yes	Sell	No		No		No		No			Not interested	Yes	Sell	No	
F17 Fink	and Private Sector	Masinotek Oy	Masinotek Ltd.	www.masinotek.com	Yes	Sell, Develop, Design	Yes	Sell, Develop, Design	Yes	Sell, Develop, Design	Yes	Investigate	Yes	Investigate	Yes	Develop	Yes	Investigate		Local/Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Sell, Develop, Design	No	
F18 Fink	and Private Sector	Uponor Infra Oy	Uponor Infra Oy	www.uponor.fi	No		No		No		Yes	Sell, Develop, Investigate	Yes	Sell, Develop, Investigate	No		Yes	Sell, Develop, Investigate		State Level, Cross-border Cooperation Level in Baltic Sea region	Yes	Sell, Develop, Investigate	No	
F19 Fink	and Public Sector	Valonia - Varsinais-Suomen Kestävän Kehityksen Ja Energia-Asioider Palvelukeskus	Valonia - Service Centre for Sustainable Development and Energy of     Southwest Finland	www.valonia.fi	No		No		No		No		No		No		No			Local/Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Investigate	No	
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### GERMANY



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						;	STORM	WATER QUALI	TY/QUA	NTITY MEASURE	S			STORMW	ATER N	MANAGEMENT A	CTION	IS	EXPERTISE	& INTEREST				
GENERAL INFORMATION				Precipitation Monitoring		Stormwater Quality/Quantity Management		Runoff & Load Monitoring		Stormwater Collection		Stormwater Management		Modeling & Prognoses		Water Treatment		Special Competencies: Organization's most relevant technologies products and services in rainwater management and monitoring.	Interest in cooperation-at what level?	WASTEWATER RELATED TECHNOLOGIES		OTHER		
No. Cour	try Sector	Institution Name Institut für Abwasserwirtschaft und Gewässerschutz. TU Hamburg	Institution Name in English  Institute of Wastewater Management and Water Protection, Technical	Website	Involved	Action(s) in this Area	Involved	Action(s) in this Area	Involved	Action(s) in this Area	Involved	Action(s) in this Area	Involved	Action(s) in this Area	Involved	Action(s) in this Area	Involved	Action(s) in this Area		Local/Regional Level. State Level. Cross-border Cooperation Level in	Involved		Involved	Action(s) in this Area
G01 Gern	any Academia	institut tur Abwasserwirtschaft und Gewasserschutz, 10 Hamburg Harburg	Institute of Wastewater Management and Water Protection, 1 ecnnical University of Hamburg-Harburg	www.tuhh.de/aww	No		No		No		Yes	Design	Yes	Design	No		Yes	Develop, Design		Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Develop, Design	No	
GO2 Gern	any Academia	HafenCity Universität Hamburg (HCU)	HafenCity University Hamburg	www.hcu-hamburg.de	No		Yes	Investigate	Yes	Investigate	Yes	Investigate	Yes	Investigate	No		Yes	Investigate		Local/ Regional Level	Yes	Investigate	No	
G03 Gern	any Academia	Forschungs und Transferzentrum, Hochschule für Angewandte Wissenschaften Hamburg	Research and Transfer Centre, Hamburg University of Applied Sciences	www.haw-hamburg.de/en/ftz-als	Yes	Develop, Investigate	No		Yes	Develop, Investigate	No		No		No		No		Flow analysis, flow through photometry and gas diffusion	Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Develop, Investigate	No	
GO4 Gern	any Academia	Hamburgisches WeltWirtschaftsInstitut Gemeinnützige GmbH (HWWI)	Hamburg Institute of International Economics (HWWI)	www.hwwi.org	No		No		No		No		No		No		No		Economic evaluation of policy instruments, technologies, and projects	Local/Regional, State, Cross-Border Co-operation, Global	No		No	
G05 Germ	any Private Sector	Lehne Ingenieurgesellschaft mbH für Bauen und Umwelt	Lehne Engineering Company for Building and the Environment	www.lehne-ing.de	Yes	Design	Yes	Design	Yes	Design	Yes	Design	Yes	Design	Yes	Develop, Design	Yes	Design		Local/ Regional Level, State Level	Yes	Design	No	
G06 Germ	any Private Sector	CONSULAQUA Hamburg Beratungsgesellschaft mbH (CAH)	CONSULAQUA Hamburg	www.consulaqua.de	No		No		Yes	Design	Yes	Design	Yes	Design	Yes	Develop, Investigate, Design	Yes	Design		Local/ Regional Level, State Level	Yes	Design	No	
GO7 Gern	any Private Sector	Ingenieurbüro Dr. Lehners + Wittorf	Consulting Office Dr. Lehners + Wittorf	www.geo-technik.com	No		No		No		No		Yes	Design	Yes	Design	No		Investigation and design of rainwater seepage installations and stormwater retention management	Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region	No		Yes	Design
GOS Gern	any Private Sector	Neumann Beratende Ingenieure GmbH	Neumann Engineering Consultants	www.neumann-ing.de	No		No		Yes	Design	Yes	Design	Yes	Design	No		Yes	Design			Yes	Design	No	
G09 Gern	any Private Sector	Ingenieurgesellschaft Prof. Dr. Sieker mbH	Engineering Company Prof. Sieker	www.sielser.de	Yes	Buy, Investigate, Design	Yes	Develop, Investigate, Design	Yes	Develop, Investigate, Design	Yes	Develop, Investigate, Design	Yes	Develop, Investigate, Design	Yes	Develop, Investigate, Design	Yes	Develop, Investigate, Design	systems (Mulden-Rigolen), urban water bodies etc., developing customized technical solutions like Innolet (street runoff treatment),	Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Develop, Investigate, Design	Yes	Develop, Investigate, Design
G10 Gern	any Private Sector	AJ Blomesystem GmbH	AJ Blomesystem GmbH	www.enmohydro.com , www.aj-blomesystem.de	No		No		No		No		No		Yes	Sell, Develop, Design	No			Local/ Regional Level, State Level, Cross-border Cooperation Level in Baltic Sea region, Global Level	Yes	Develop, Design	Yes	Sell, Develop, Design
G11 Gern	any Private Sector	ifu Hamburg GmbH	Institute for Environmental IT	www.ifu.com	No		No		No		No		No		Yes	Investigate, Sell	No		Life cycle assessment (holistic environmental assessment)	Local/Regional Level, Global Level	No		No	
G12 Gern	any Private sector	AQUA-STOP Hochwasserservice Dienstleistungs GmbH	AQUA-STOP Flood Service	www.aquastop.de	No		Yes	Sell, Design	No		No		Yes	Sell, Design	Yes	Sell, Design	No		Provides individual solutions for flood protection		No		No	
G13 Gern	any Private Sector	BIRCO GmbH	BIRCO GmbH	www.birco.de	No		No		No		No		Yes	Sell, Develop	No		Yes	Sell, Develop	Drainage channels for water and wastewater, drainage systems for sedimentation, filtration and new special retention tunnels	Global	Yes	Sell	Yes	Sell
G14 Germ	any Private Sector	Heinrich Beratende Ingonieure	Heinrich Consult	www.heinrich-berater.de	Yes	Design	Yes	Design	Yes	Design	Yes	Design	Yes	Design	Yes	Design	Yes	Make Policies/ Legislation	Consulting and draft design of complex rainwater management systems with infiltration, pumping stations, storage tank, inverted siphon with air cushion	Global	Yes	Design	Yes	
G15 Germ	any Private Sector	INTEWA GmbH	INTEWA GmbH	www.intewa.com	Yes	Sell, Develop, Investigate, Design	Yes	Sell, Develop, Investigate, Design	Yes	Sell, Develop, Investigate, Design	Yes	Sell, Develop, Investigate, Design	Yes	Sell, Develop, Investigate, Design	No		Yes	Sell, Develop, Investigate, Design	throttles, sedimentation and filter systems, rain planer simulation and dimensioning software, monitoring technologies for stormwater management systems. Disinfection of the offluent of waste uniter.	Global	Yes	Sell, Develop, Investigate, Design	Yes S	Sell, Develop, Investigate, Design
G16 Gern	any Private Sector	OtterWasser GmbH	OtterWasser GmbH	www.otterwasser.de	No		Yes	Design	No		Yes	Design	Yes	Design	No		Yes	Investigate, Design	Designs wastewater treatment plants or parts, new sanitation concepts which includes the reuse of nutrients and water	Local/Regional Level, State, Cross-Border Cooperation	Yes	Design	No	
G17 Germ	any Private Sector	ZinCo GmbH	ZinCo GmbH	www.zinco-greenroof.com	Yes	Investigate	Yes	Sell, Develop, Investigate	No		No		Yes	Sell, Develop, Investigate, Design	Yes	Develop, Investigate, Design	No			State level, Cross-Border Cooperation, Global	Yes	Sell, Develop, Investigate	Yes	Sell, Develop, Investigate
G18 Gern	any Private Sector	Funke Kunststoffe GmbH	Funke Kunststoffe GmbH	www.funkegruppe.de	No		Yes	Sell, Develop	No		Yes	Sell, Develop	Yes	Sell, Develop	No		Yes	Sell, Investigate		Global	No		No	
G19 Germ	any Public Sector	Behörde für Umwelt und Energie (BUE)	Ministry for Environment and Energy (BUE)	www.risa-hamburg.de	No	Make Policies/Legislation	Yes	Make Policies/Legislation	Yes	Make Policies/Legislation	Yes	Make Policies/Legislation	Yes	Make Policies/Legislation	Yes	Make Policies/Legislation	Yes	Make Policies/Legislation		Local/Regional Level, State Level, Cross-Border Co-operation	No	Make Policies/Legislation	Yes	Make Policies/Legislation
G20 Gern	any Public Sector	Landesbetrieb Strassen, Brücken und Gewässer (LSBG)	Agency of Roads, Bridges and Waters	Isbg.hamburg.de	Yes	Buy, Investigate	No		Yes	Buy, Investigate, Make Policies/ Legislation	Yes	Develop, Investigate, Make Policies/ Legislation	Yes	Buy, Develop, Investigate, Design, Make Policies/Legislation	Yes	Develop, Investigate, Design, Make Policies/ Legislation	No			Local Level	No		No	
G21 Germ	any Public Sector	Bezirk Hamburg-Nord, Fachamt Stadt und Landschaftsplanung	Hamburg-North District Office: Urban and Landscape Planning	www.hamburg.de/hamburg.nord/stadt-und-landschaftsplanung	Yes	Buy	No		Yes	Buy	Yes	Buy	Yes	Buy	Yes	Buy	No			Local/ Regional Level	No		No	
G22 Gern	any Public Sector		tit District Authority Hamburg-Elimsbuettel, Department of Management of Public Space, Streets and Waters Division - Water Management	www.hamburg.de/eimsbuettel	No		Yes	Buy	Yes	Buy	Yes	Buy	Yes	Design	Yes	Buy	Yes	Design		Local/Regional Level	No		No	
G23 Germ	any Public Sector	Hamburg Wasser	Hamburg Water	www.hamburgwasser.de	Yes	Develop, Planning, Design, Operation, Evaluate	Yes	Develop, Planning, Design, Operation, Evaluate	Yes	Investigate	Yes	Develop, Planning, Design, Operation, Evaluate	Yes	Develop, Planning, Design, Operation, Evaluate	Yes	Develop, Planning, Design, Operation, Evaluate	Yes	Develop, Planning, Design, Operation Evaluate	Decentralized wastewater treatment (vacuum technology) combined energy recovery (Hamburg Water Cycle), GIS based maps for rainwater infiltration capacity (project RISA)	Local/ Regional Level, State Level	Yes	Develop, Planning, Design, Operation, Evaluate	No	
G24 Germ	any Public Sector	Wasserbeschaffungsverband Harburg	Water Procurement Association Harburg	wbv-harburg.de	No		No		No		No		No		Yes	Buy	Yes	Buy		Local/ Regional Level	No	Develop, Planning, Design, Operation, Evaluate	No	
G25 Germ	any Public Sector	Handelskammer Hamburg (HK)	Hamburg Chamber of Commerce	www.hk24.de	No		No		No		No		Yes	Pelicy Makers/Legislation	Yes	Policy Makers/ Legislation	Yes	Policy Makers/Legislation		Local/ Regional Level, State Level	No		No	

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#### LATVIA STORMWATER QUALITY/QUANTITY MEASURES STORMWATER MANAGEMENT ACTIONS **EXPERTISE & INTEREST** WASTEWATER Special Competencies: GENERAL INFORMATION OTHER RELATED Organization's most relevant echnologies products and services Interest in cooperation-at what level? Precipitation Monitoring Runoff & Load Monitoring Stormwater Collection Modeling & Prognoses **TECHNOLOGIES** Management in rainwater management and Yes Yes Investigate No No No No Yes No Grupa 93 Ltd Develop, Investigate ALPS Design Sell, Develop Sell, Develop, Design Sell, Develop, Design Sell, Develop, Design SBR technology Sell, Develop, Design Policy Makers/Legislation Policy Makers/Legislation Policy Makers/Legislation Design Design Design Design Policy Makers/Legislation Local/ Regional Level Policy Makers/ Legislation No Yes Policy Makers / Legislation No No Not interested Yes Investigate, Design No Design No State Level No Yes Design No cal/ Regional Level, State Level, Cross-bord Baltic Sea region No No Yes No Yes Yes Yes No No Yes Yes Buy, Sell SIA "Jurmalas ūdens" No No No No No Yes Cēsu Pilsētas SIA "Vinda" Yes



#### SWEDEN STORMWATER QUALITY/QUANTITY MEASURES STORMWATER MANAGEMENT ACTIONS **EXPERTISE & INTEREST** WASTEWATER Special Competencies: OTHER GENERAL INFORMATION RELATED Organization's most relevant echnologies products and services Interest in cooperation-at what level? Precipitation Monitoring Runoff & Load Monitoring Stormwater Management Modeling & Prognoses **TECHNOLOGIES** Management in rainwater management and Swedish University of Agricultural Science Develop, Investigate, Design Develop, Investigate, Design Develop, Investigate, Design Uppsala Universitet Uppsala University Investigate Develop, Investigate, Design Develop, Investigate, Design Investigate Develop, Investigate, Design CMI AB l/ Regional Level, State Level, Cross-bords Baltic Sea region Yes l/ Regional Level, State Level, Cross-border Co Baltic Sea region, Global Level Artesia Groundwater Consulting AB Investigate Investigate Investigate Environmental planning Grundvattenteknik Rejlers AB www.rejlers.se Develop, Investigate, Design Develop, Investigate, Design Develop, Investigate, Design Investigate Investigate Investigate Groundwater advisory and risk analysis Sell MNV Sverige AB MNV Sverige AB Develop, Investigate, Design Develop, Investigate, Design Develop, Investigate, Design Investigate Investigate Sell Eurofins Mikrokemi AB Eurofins Mikrokemi AB Investigate Water chemical analyses. Sell Develop, Investigate, Design Develop, Investigate, Design Sell Urban Water Management AB Yes Develop, Investigate, Design Yes Sell Sell Yes Develop, Investigate, Design Sell Yes Sell Sell Sell Sell Sell AQUA-Q AB AQUA-Q AB Sell Sell al/ Regional Level, State Level, Cross-border Baltic Sea region Investigate Investigate Upplands Väsby Kommun Upplands Väsby Municipality Design Local/Regional Level Design Local/Regional Level Policy Makers/Legislation Stockholm Vatten Stockholm Water Buy Design Design Design Buy Buy Not interested Design Design



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