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Project 101060922**

**Innovative methodology to prevent and mitigate diffuse
pollution from urban water runoff**

WATERUN

Deliverable D6.1
WATERUN Website

Work Package 6
Exploitation, Dissemination, Communication

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Executive Summary

Abstract	<p>WATERUN website is available at www.waterun.eu. It has been developed with DRUPAL 9. Its maintenance is under the lead of OiEau. Its update relies on the efforts of the whole consortium.</p> <p>The website is one of the key promotional tool of the project and works as a show window, displaying information on the key components of the project: the objectives, concept, team in the <i>About</i> section, a focus on the 3 case studies and related co-creation process in the section <i>Case studies</i>, the preliminary list of WATERUN <i>Key exploitable results</i> in the related section. The section <i>Media center</i> will progressively gather all the public documents delivered by the project on the technical and communication sides.</p> <p>Finally, the <i>News</i> section will focus on the latest development of the project as well as WATERUN events and those of interest for the project.</p> <p>The website is part of the communication kit and closely related to WATERUN social media. It is planned to gather news articles from all the partners on a weekly basis so both social media and the website will be regularly updated.</p>
Keywords	WATERUN Website, Communication, Dissemination

Revision history

Version	Date	Status	Author	Description
V1.0	08/09/22	First draft	Natacha Amorsi OiEau (partner n°10)	Presenting the structure of the website
V1.1	09/11/22	Final draft	Natacha Amorsi, OiEau (partner n°10)	Corresponding to WATERUN website development, before being published
Final	14/11/22		Natacha Amorsi, OiEau (partner n°10)	Corresponding to WATERUN website published on line and integrating comments from AIMEN

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1 INTRODUCTION

This report (D6.1 Waterun website) is part of the work undertaken by WATERUN WP6 dealing with the Exploitation, Dissemination and Communication, led by OiEau (partner n°10). Specifically, it deals with the task 6.2 (Dissemination and Communication) and reports on the development of WATERUN website available at <https://waterun.eu>. D6.1 was initially due to M4 (September 2022). The development of the website design (see section 1.1) and gathering all the information postponed the delivery at M6 (November 2022), which remains coherent with the Communication and Dissemination plan (D6.7) and communication kit (including the website) planned at M6.

After setting the scene of the website development (next sub-sections), each section of this report details the content of the website composed of 5 main parts (News, About, Case studies, Key exploitable results and Media centre, see figure 1).

1.1 Website design

Steps of co-development

The structure of the website was introduced during the virtual kick off meeting in June 2022. Then, a draft design of the website was presented during a dedicated WP6 meeting in September 2022, after the summer break. The final website design was presented during the project meeting (end of September 2022). It was important to go through these different phases so partners could comment the structure before OiEau IT team started the development of the website.

Graphical charts

The graphical chart of the website is based on WATERUN logo (Table 1) and the related colours (table 2).

Table 1: WATERUN Logo





















Table 2: WATERUN Colour codes

	R	V	B	#
Dark Blue	73	88	118	#495876
Light Blue	0	157	224	#009DE0
Grey	135	136	138	#87888A
Orange	245	165	45	#f5a52d

A series of icons was specifically developed to illustrate the website themes and sections. They are also used for presentation and social media activity.

Table 3: WATERUN Graphic icons

Icon themes	Graphic icons		
WATERUN Approach		WATERUN Objectives	
WATERUN Case study		WATERUN Scientific target	
WATERUN Event	 	WATERUN Social media	 
WATERUN General presentation		WATERUN Summary	
WATERUN Key exploitable results		WATERUN Target end users	
WATERUN Latest news		WATERUN Target lead users	
WATERUN Links		WATERUN Team	
WATERUN News		WATERUN Workplan	

In addition, WATERUN concept, method, Workplan have been graphically designed (see the list of picture from the table of content)

1.2 Overall structure of WATERUN website

WATERUN is available at www.waterun.eu. As mentioned above, it is composed of 5 main parts, corresponding to the top bar menu. The content of each part has been listed in figure 1.

Picture 1: WATERUN Website home page with the content of the main menu

The screenshot shows the WATERUN website home page. At the top, there is a navigation bar with the following menu items: News, About, Case studies, Key exploitable results, and Media centre. A search bar is located on the right side of the navigation bar.

Below the navigation bar, there are five main content sections:

- News:** Latest news, Event
- About:** Project summary, Objectives, Workplan, Innovation potential, Our team, Collaboration and links
- Case studies:** Co-creation process, Santiago de compostela, Aarhus, Amman
- Key exploitable results:**
 - KER: Systemic WATERUN approach adoption services
 - OER1: Advanced monitoring solution
 - OER2: Identification tool for source pollution.
 - OER3: Planning tool for SW management.
 - OER4: Risk-based DSS for UWR management
 - Non-commercially exploitable result: Guidance for the implementation of future UWR Management Plans
- Media centre:** Deliverables, Scientific publication, Communication materials, Press release

Below these sections is the "In a nutshell" section, which provides a brief overview of the project's goals and methodology. It states that WATERUN aims to develop an innovative methodology for urban water runoff (UWR) management plans based on the Water-Sensitive Urban Design (WSUD) concept. The methodology involves a holistic perspective from source identification to decision-making, targeting the transformation of UWR management through identification, planning, and risk-based tools, with early involvement of urban water management and governance actors.

Further down, there are sections for "Last Tweet", "Last Event", and "Latest news".

The "WATERUN approach" section features a circular diagram with four main components:

- WHY? (Environmental concern):** Environmental concern, Knowledge gap
- WHAT? (Key steps):** 1-Monitoring, 2-Identification tool, 3-Planning tool for SW, 4-Green Infrastructure, 5-Risk based DSS
- HOW? (Multi-actor co-creation process):** Innovative modelling tools for diffuse pollution control, GI optimisation for diffuse pollution mitigation, Validation in 3 climate zones. Locations: Santiago de Compostela (Spain), Amman (Jordan), Aarhus (Denmark).
- FOR WHOM? (End-users, Lead-users, Scientific community):**
 - End-users:** Municipalities, water utilities, public authorities, citizens
 - Lead-users:** Environmental consulting firms, green infrastructures suppliers, software developers, monitoring solutions providers
 - Scientific community:** water technologies, environmental sciences, chemistry, computer engineering, etc.

The footer contains social media links (Follow Us: LinkedIn, Twitter, Facebook, YouTube), contact information (Contact Us, Legal Notice), a newsletter subscription form, and a search bar. It also includes the European Union logo and the project's funding information: WATERUN (2022-2026) has received funding from the European Union's under Horizon Europe programme under the Grant agreement n° 101060922. Copyright Waterun 2022 - 2026.

The main language of the website is English. In addition, the Spain and Arab case studies will also be translated in native language.

The website has been developed under DRUPAL 9 and hosted on an OïEau server.

1.3 Update of the website and links with WATERUN social media

WATERUN website is considered as the key show window of the project. It presents:

- The latest news and events in a *News* section
- The overall ambition, method, team, etc. of the project in the section *About*
- A focus on the 3 cases studies and the related co-creation process in the section *Case studies*
- A first insight of the *Key exploitable results* in the dedicated section.
- All the public documents delivered by the project in the section *Media centre*.

To update the website, the Communication and dissemination strategy (D6.7) has put into place a planning for partners to write short news articles. These articles will be uploaded in the corresponding part of the website and used as core materials to support the promotion of the project on WATERUN social media¹.

2 HOME PAGE

2.1 In a nutshell



WATERUN aims to develop an innovative methodology to contribute to the implementation of urban water runoff (UWR) management plans in cities based on the Water-Sensitive Urban Design (WSUD) concept. This methodology will provide preventive and mitigation solutions and best management practices adopting a holistic perspective (from source identification to decision making) for diffuse water pollution control in urban catchments. The target is to transform the UWR management by the development of identification, planning and risk-based tools and new working procedures (guidance) with the early involvement of the main urban water management and governance actors (co-creation process), ensuring a wider and faster adoption.

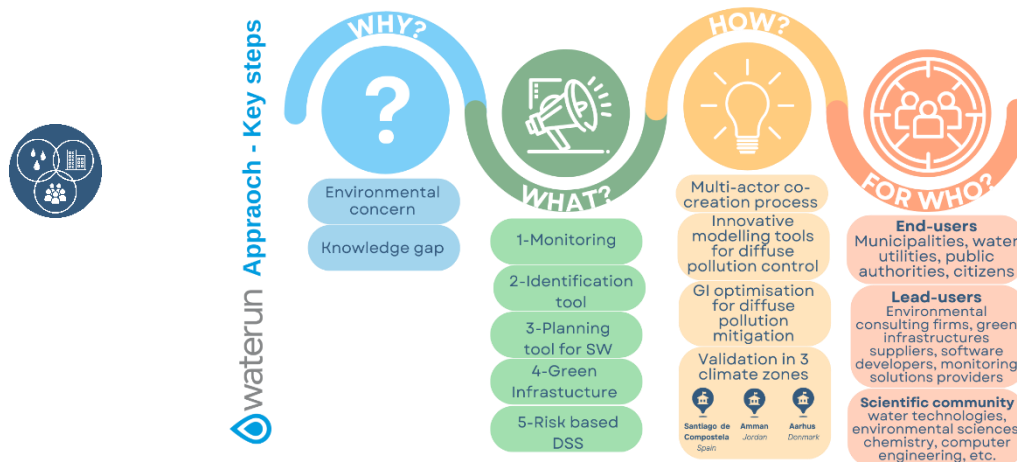
2.2 Latest news



Related to the section News\latest news\. The last content put on News\latest news appears on the home page.

¹ WATERUN twitter account : @EU_Waterun / LinkedIn account: @eu-project-waterun

2.3 WATERUN approach – Image



2.4 Legal notice

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How do we treat your personal data?

When you subscribe to the newsletter, you agree to your personal data being stored for the duration of the project (4 years) in order to send you newsletters and flashnews about the project, and also for statistical purposes (tracking of the number of subscriptions, etc.)

When using the "Contact us" button, you activate a specific form that invites you to send your comments to a specific functional mailbox. When you send such a message, you agree to your personal data being stored for the duration of the project (4 years) so that the WATERUN project team can answer your request. If the management team of the mailbox is unable to answer your question, it will forward your e-mail to another expert. You will be informed, via e-mail, about which expert your question has been forwarded to.

If you have any questions about the processing of your e-mail and related personal data, do not hesitate to include them in your message.

Information on the audience measurement service:

To serve you better, we measure the number of page views, the number of visits, in addition to the activity of visitors on our website and their return frequency. To achieve this, we use Google analytics system. If you do not want to be audited, you can modify your parameters and read confidentiality rules.

Creation, development, hosting and management of the website

International Office for Water (OIEau) for WATERUN project

Webmaster

waterun[@]oieau.fr

3 NEWS SECTION

The news section is composed of two sub-section

- *Latest new* will gather the news articles prepared by partners (see section 1.3) and additional information from other sources than WATERUN dealing with Urban Water Runoff and related innovation.
- *Events* will promote WATERUN events and events of interest for the project

4 ABOUT SECTION

4.1 Project summary sub-section

WATERUN project aims to develop an innovative methodology to contribute to the implementation of urban water runoff management plans in cities based on the Water-Sensitive Urban Design concept. This methodology will provide preventive and mitigation solutions and best management practices adopting a holistic perspective (from source identification to remediation strategies) for diffuse water pollution control in urban catchments. The target is to transform the urban water runoff management by the development of identification, planning and risk-based tools and new working procedures (guidance), counting on the early involvement of the main urban water management and governance actors (co-creation process) to ensure a wider and faster adoption.

Three case studies (city of Santiago de Compostela, city of Aarhus and city of Amman) have been chosen to obtain data and to elaborate, perform and validate the proposed WATERUN methodology. These case studies have been selected according to different climate conditions, land use and level of implementation of measures for diffuse pollution, in order to validate the tools in different scenarios. Key stakeholders as RTO, industry, public authorities, urban planners and citizens will participate in a continuous co-creation process from a multi-disciplinary approach ensuring that decisions for urban water runoff management are made with complete comprehension of environmental, social and economic dimensions.

In addition to providing solutions for sustainable urban water management, the WATERUN methodology will allow to gain advanced knowledge on diffuse water pollution in cities in a climate change context, thus contributing to protect water bodies and the environment, and ensuring high water quality for all.

Picture 2: WATERUN Approach



4.2 Objectives sub-section

The global aim of WATERUN is to develop an innovative methodology to contribute to the implementation of urban water runoff (UWR) management plans in cities based on the Water-Sensitive Urban Design (WSUD) concept. This methodology will provide preventive and mitigation solutions and best management practices adopting a holistic perspective (from source identification to decision making) for diffuse water pollution control in urban catchments. The target is to transform the UWR management by the development of identification, planning and risk-based tools and new working procedures (guidance) with the early involvement of the main urban water management and governance actors (co-creation process), ensuring a wider and faster adoption.

Picture 3: WATERUN Specific objectives



4.3 Method sub-section

WATERUN will accomplish an innovative methodology to address diffuse pollution in UWR by the implementation and validation of prevention (effective monitoring techniques and modelling tools) and mitigation. The methodology is based on four pillars

Picture 4: WATERUN Pillars



Pillar 1: Co-creation process for preventing and managing diffuse pollution from UWR in cities

A novel methodology for establishing UWR management plans based on WSUD approach must be adopted from a multidisciplinary point of view considering the vision, knowledge, and expertise of different key stakeholders (water utilities, public authorities, water regulators, water engineering companies, research community and citizens). In this sense, WATERUN methodology will be adopted from the beginning through a co-creation process involving the key stakeholders in the developments, implementations and validations of the project outputs and results.

Pillar 2: Development of advanced monitoring for diffuse pollution in UWR

AIMEN will lead in WP2 the elaboration of a long-term monitoring protocol based on field campaigns and data analyses to increase the level of understanding of conditions at each CS, fill data gaps and move forward with the implementation of hydrological and hydraulic models to understand diffuse pollution patterns. This protocol will gather information about hydrological processes, key pollutants, background concentration levels in water and soil samples, topographic surveys, demographic information, etc. Thereafter, the most sensitive parameters for detection, modelling and mitigation of diffuse pollution will be estimated, and the frequency of measurements and sample collection in the urban catchment will be designed. Factors such as location, season, rainfall, runoff, water quality and origin/fate will be considered to provide a solid approach towards the understanding of varying patterns of pollutant release and transport.

Pillar 3: Development of modelling tools for diffuse pollution identification, SW management and risk, and UWR quality management plans

In WATERUN, 3 modelling tools will be developed and validated to improve the UWR management in cities:

1. Identification tool for critical sources of urban diffuse pollution based on a connectivity assessment (WP3).
2. Planning tool for SW management based on a decentralised approach at city block level (WP3).
3. Risk-based DSS for UWR management and reuse based on environmental and health-risk assessment (WP5).

The identification tool (WP3, TUB) will provide global and qualitative information about the critical sources of pollution, pathways, severity ranking and locations for GI. Once the GI locations are identified, the risk-based DSS (WP5, UNIVPM) will give quantitative info about UWR quality (QMRA and QCRA) from a health-risk perspective, delivering the EWS providing indication on restrictions of the water use and allowing to assess the suitability of GI for different reuse scenarios (risk-based tool). Complementary, when GI are not considered suitable to reduce diffuse pollution in a specific location, the planning tool (WP3, UFZ) will be implemented for UWR and CSO reduction at city block level and based on a decentralised approach, which involves an intrinsic pollution reduction. All modelling tools will be connectable, and they will work as an integral methodology for UWR management.

Pillar4: Implementation and validation of Green Infrastructure for diffuse pollution mitigation from UWR

GI involve many sustainable techniques for UWR management from a WSUD point of view, comprising various technologies as SuDS, NBS or low impact developments. GI provide a new approach to UWR drainage and treatment planning that keeps water on site longer, prevents pollution and allows storage and use of the water.

In the Santiago and Aarhus CS, a comprehensive analysis of the components of the urban and industrial development sensitive to water (WSUD) by using GI will be performed. This analysis will be facilitated through the co-creation process (WP1), monitoring strategy (WP2), and UWR/SW modelling studies (WP3). After this urban and industrial development analysis of the CS, a strategy for the implementation and validation of GI based on SuDS and NBS will be developed in WP4 (GI implementation) with the collaboration of stakeholders in WP1 (co-creation process), considering not only the interaction of different types of water, but also the components of governance and economic, social and environmental feasibility, as well as the links of the urban water system with other urban infrastructures, such as transport, green areas, waste management, or energy, among others.

4.4 Workplan sub-section

The work plan is designed to accomplish the project objectives, within a total budget of 4.35 million€ and a total timespan of 48 months. Tasks have been organised under 7 distinct work packages, led by a partner responsible of organising the work, delivering results, and ensuring the exchange of required information among the WP.

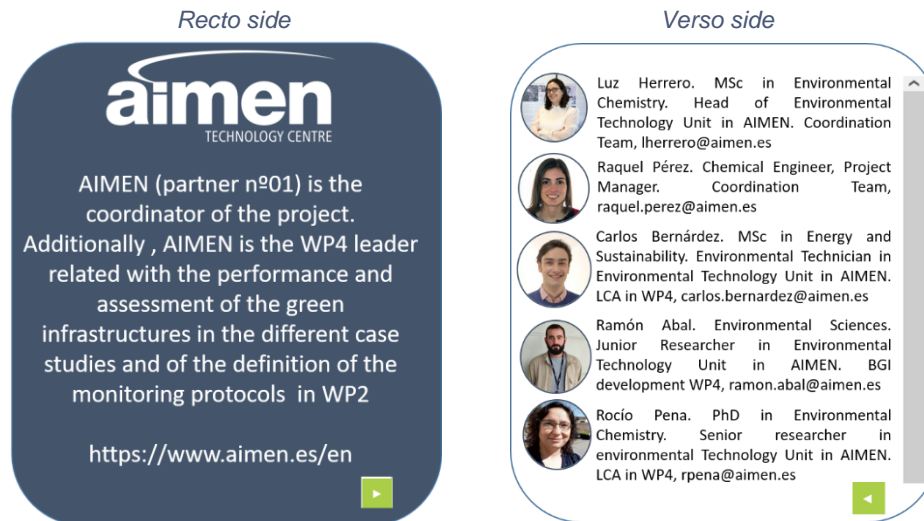
Picture 5: WATERUN Workplan



4.5 Our team sub-section

The consortium is presented via a system of flipping card. Each card presents on the recto the organisation and on the verso the partners involved in the project.

Picture 6: Example of flipping card to present the team



4.6 Collaboration and links sub-section




This sub-section will be activated when the content is available to promote other projects and initiatives sharing similar issues, objectives and innovative solutions with WATERUN.

5 CASE STUDIES

5.1 General presentation sub-section

Three case studies (city of Santiago de Compostela, city of Aarhus and city of Amman) have been chosen to obtain data and to elaborate, perform and validate the proposed WATERUN methodology. These case studies have been selected according to different climate conditions, land use and level of implementation of measures for diffuse pollution, in order to validate the tools in different scenarios. Key stakeholders as RTO, industry, public authorities, urban planners and citizens will participate in a continuous co-creation process from a multi-disciplinary approach ensuring that decisions for urban water runoff management are made with complete comprehension of environmental, social and economic dimensions.

Picture 7: WATERUN Case studies general overview

	 Santiago Spain	 Aarhus Denmark	 Amman Jordan
Climate type	Atlantic climate Residential/industrial	Continental climate Residential	Mediterranean climate Semi-arid urban
Description	Diffuse pollution monitoring and modelling at urban catchment level. Implementation and validation of UWR treatment by 3 GI in a specific area of the Tambre industrial park (1.2 km ² , 450 enterprises) which is provided with separated sewer without any treatment of the UWR generated.	Diffuse pollution monitoring Dry and wetponds as GI to be modelling at urban catchment level of the city. Operation and optimisation of UWR treatment by 4 NBS (2 wet ponds and 2 dry ponds) already implemented in the city centre of Aarhus but with a poor removal efficiency for diffuse contaminants from UWR.	Diffuse pollution monitoring at districts of the Sahab municipality of Amman (having a total area of 1,367 ha) [Implementation and validation of the planning tool at this Sahab district to estimate a SW decentralised management and identify the best GI at different climate scenarios to mitigate pollution diffusion.
Targets	Demonstrate innovative modelling studies and tools to facilitate the UWR management in cities with Atlantic climate conditions and residential/industrial land use and validation of new GI for efficient treatment of diffuse contaminants from UWR.	Demonstrate innovative modelling studies and tools to facilitate the UWR management in cities with continental climate conditions and residential land use and validation of implemented GI to treat efficiently pollutants from UWR.	Validate and replicate the software in a Mediterranean climate city to strengthen the tool and provide decentralised solutions based on GI to increase the green spaces in semi-arid urban settlements as Amman (currently green spaces do not account for more than 2.5% of city surface)
Innovation	<ul style="list-style-type: none"> Performance of a long-term monitoring program of diffuse pollution at urban catchment scale and block level of Santiago and Aarhus cities including pollutants, pathways, variability and effects, rainfall events, etc. Validation of advanced sensors for on-site analysis of PAH and microplastics and monitoring program for heavy metals, nutrients, pathogens in UWR. Validation of innovative modelling tools (diffuse pollution identification tool, SW management planning tool and risk-based DSS) to improve the UWR management plans avoiding floods and safeguarding the natural water bodies in cities of Atlantic and Continental climate and with residential and industrial areas. Implementation and validation of GI to treat contaminants from UWR improving natural water bodies quality and providing potential water reuse in cities. 		<ul style="list-style-type: none"> Estimation of SW collected from roof tops in Sahab municipality districts in addition to urban runoff over the last decade and set future scenarios. Monitoring of SW quality (focusing on micropollutants) collected from rooftops in Sahab municipality districts and urban runoff. Application of mapping tool to define potentials for decentralised management of urban SW and identify the best low impact GI at different climate scenarios to mitigate localised solutions and mitigate pollution diffusion. Participation of UJ in a participatory approach through the involvement of NICE committee in project's activities. Working groups will be formed to facilitate data acquisition regarding rainfall, land use, etc.

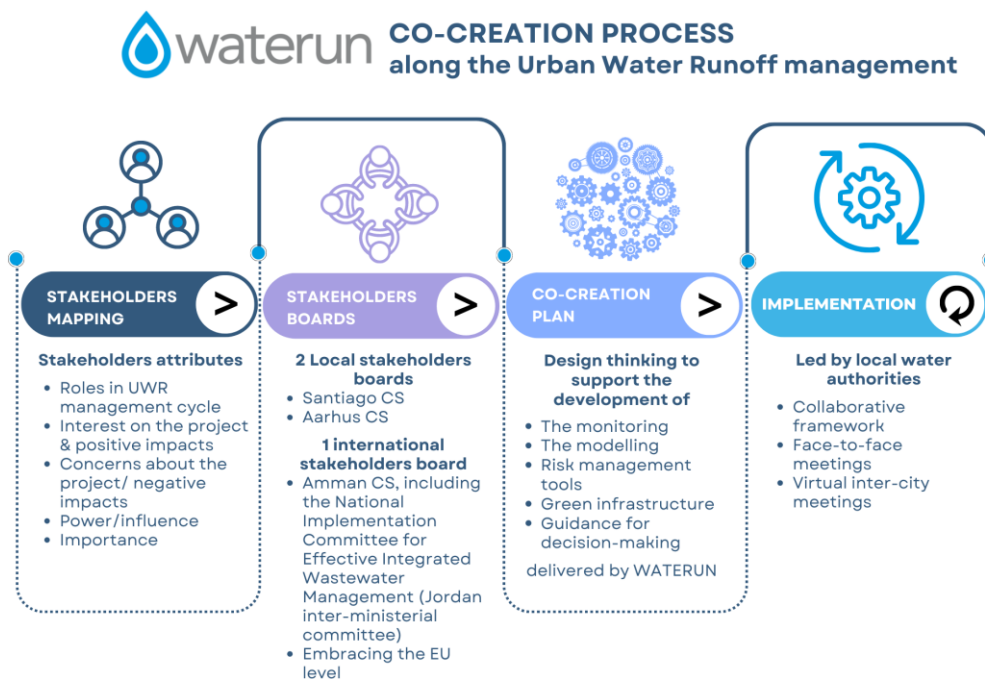


5.2 Co-creation process sub-section

WATERUN co-creation process is embedded in the Pillar 1 of the project method. It consists of engaging with the key stakeholders from the beginning of WATERUN for its all duration.

SEECON will lead this co-creation process in WP1. The main objective is to empower key stakeholders to actively participate in the decision-making process while analysing and selecting Urban Water Run off (UWR) preventive and mitigation measures, practices, tools and specifications. As UWR management methodology will be implemented in Santiago and Aarhus CS, being of out most importance that citizens and authorities not only are aware of the importance of UWR management, but also demand and act for a change.

Picture 8: WATERUN Co-creation process



The key objectives of the co-creation process are:

- To design and implement a co-creation action plan for an efficient and multidisciplinary participation in the decision-making process, while analysing and selecting the most suitable preventive and mitigation measures to tackle diffuse pollution in Santiago and Aarhus city through a holistic perspective, ensuring complete comprehension of the environmental, social, economic and political dimensions.
- To establish the requirements, specifications, and architecture of the integrated WATERUN UWR management methodology to be validated in the project CS (Santiago, Aarhus and Amman).
- To identify the technical dependencies, boundary conditions, inputs-outputs in terms of quality, quantity, and timing, among the working teams and tasks.

5.3 Santiago de Compostela sub-section

Santiago de Compostela is located in the Northwest of Spain. The climate is Atlantic with a daily temperature mean range of 5-25 °C. The monthly rainfall mean range are between: 23-141 mm. The population of the city is 97,800 people with a density: 442 people per km². The urban catchment size is 220 km² and the related water bodies are: Ulla, Tambre and Umia river basins.

Santiago Case Study (CS) aims to address diffuse pollution monitoring and modelling at urban catchment level. Through WATERUN, Santriago CS will implement and validate Urban Water Runoff (UWR) treatment by 3 Green Infrastructures (GI) in the specific area of the Tambre industrial park (1.2 km², 450 enterprises, see pictures below), which is provided with separated sewer without any treatment of the UWR generated.

Picture 9: Santiago de Compostela-photos of the site




Over the course of the project, Santiago CS will demonstrate innovative modelling studies and tools to facilitate the UWR management in cities with Atlantic climate conditions and residential/industrial land use and validation of new GI for efficient treatment of diffuse contaminants from UWR.

The related Key Performance Indicators are:

- 10 m³/d of UWR will be treated by a bioremediation treatment train achieving a removal of 70% of PAH, microplastics and nitrogen; 60% of heavy metals
- 2 log-units of pathogens 9000 m³/y of UWR will be reused by 2 Sustainable Urban Drainage Systems (SuDS)
- Creation of 1 Local Stakeholder Board (LSB)
- Validation of the identification tool at the urban catchment level in Aarhus CS
- Validation of the planning tool in 2 districts

WATERUN key activities involving Santiago CS are listed in the following table:

Picture 10: Santiago de Compostela key activities in WATERUN

Co-creation process & WATERUN Framework <i>related to WP1 activities</i>	 waterun Case study Santiago de Compostela Spain
<ul style="list-style-type: none"> • WATERUN Co-creation process • Requirements, specifications and architecture of WATERUN 	
Advanced monitoring strategies for diffuse pollution control <i>related to WP2 activities</i>	
<ul style="list-style-type: none"> • Definition of a monitoring protocol • Field campaigns to monitor diffuse pollution • Portable and low-cost sensors for on-site measurement of PAH and microplastics 	
Modelling tools for Urban Water Runoff management <i>related to WP3 activities</i>	
<ul style="list-style-type: none"> • Development of modelling databases • Development of diffuse pollution identification tool • Multi-scale modelling approach to rank severity of critical source areas • Development of the planning tool 	
Performance and assessment of Green Infrastructure (GI) <i>related to WP4 activities</i>	
<ul style="list-style-type: none"> • GI design and construction • Operation and validation of GI • Operation, performance analysis and upgrade of Aarhus CS GI • Environmental and technical-economic assessment 	
Risk management tool & guidance for decision making <i>related to WP5 activities</i>	
<ul style="list-style-type: none"> • Develop a decision-support platform for collecting analytical data of UWR quality, including a mapping tool for water quality and risk analysis provision • Develop and validate an early warning system (EWS) for a safe UWR reuse and management • Develop and validate a decision support system (DSS) for UWR management and reuse based on environmental and health-risk assessment • Elaborate a global guidance of WATERUN UWR management methodology 	

5.4 Aarhus sub-section

Aarhus Case Study (CS) is located in Denmark. The climate is continental with a daily temperature mean range between -1 - 21 °C. The monthly rainfall mean range is between 28 and 56 mm. The urban catchment is about 91 km². The city gathers 282,900 people with a population density: of 2,874 people/km². The water bodies influenced are: Aarhus river basin, lakes of Arslev, Egå and Brabrand, bay of Aarhus. Figure 7 show examples of GI to be validated and optimised in Aarhus CS.

Aarhus CS aims to address diffuse pollution monitoring and model dry (left photo) and wet (right photo) ponds as Glat urban catchment level of the city.

Picture 11: Aarhus-photos of ponds as Green Infrastructure



In addition, Aarhus CS will deal with the operation and optimisation of UWR treatment by 4 NBS (2 wet ponds and 2 dry ponds) already implemented in the city centre of Aarhus but with a poor removal efficiency for diffuse contaminants from UWR.

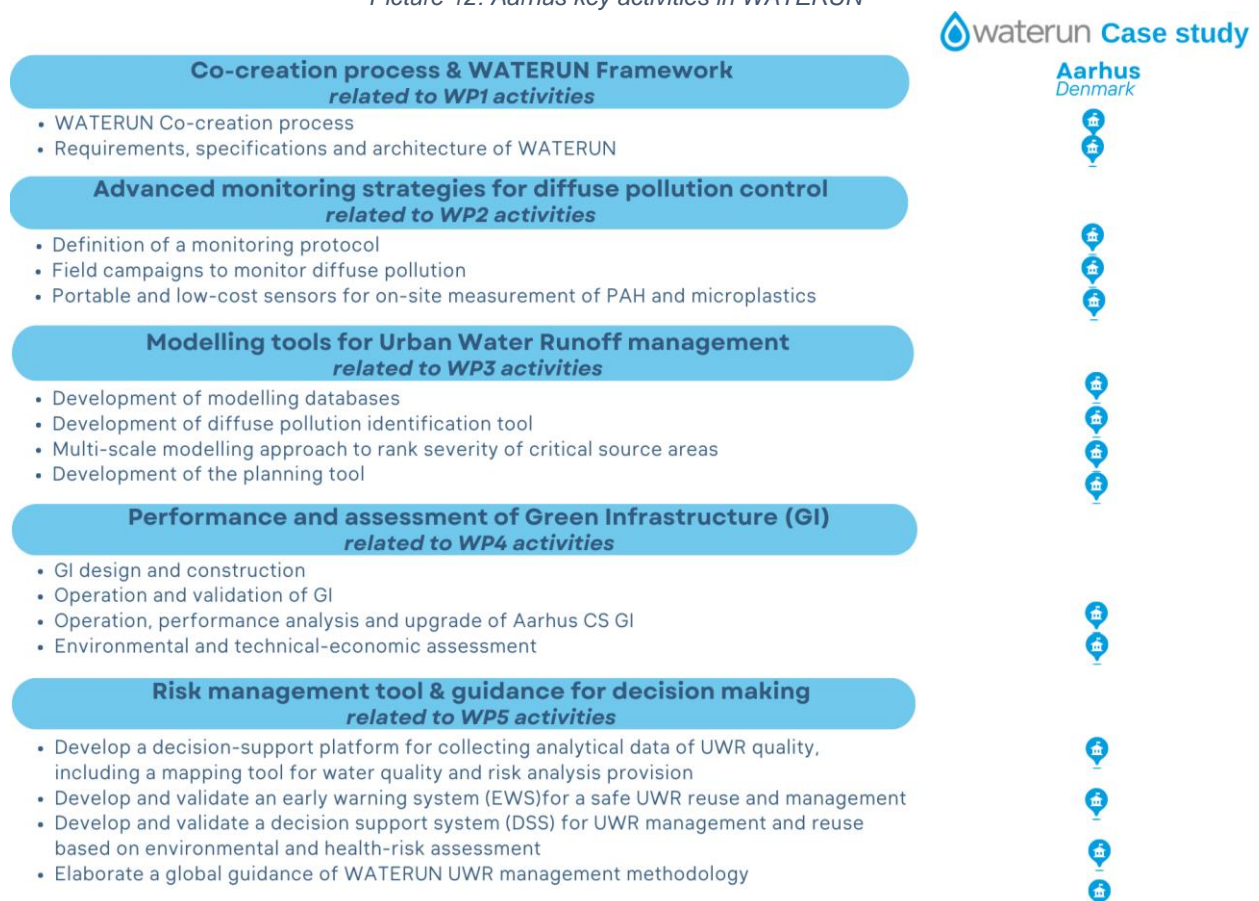
Over the course of the project, Aarhus CS will demonstrate innovative modelling studies and tools to facilitate the UWR management in cities with continental climate conditions and residential land use and validation of implemented GI to treat efficiently pollutants from UWR.

The related Key Performance Indicators are:

- 70% removal efficiency of PAH, microplastics and phosphorus will be obtained in 4 NBS (2 wet ponds and 2 dry ponds)
- 1 Local Stakeholder Board (LSB)
- Identification tool validated at urban catchment level in Aarhus
- Planning tool validated in 2 districts

WATERUN key activities involving Aarhus CS are listed in the following table:

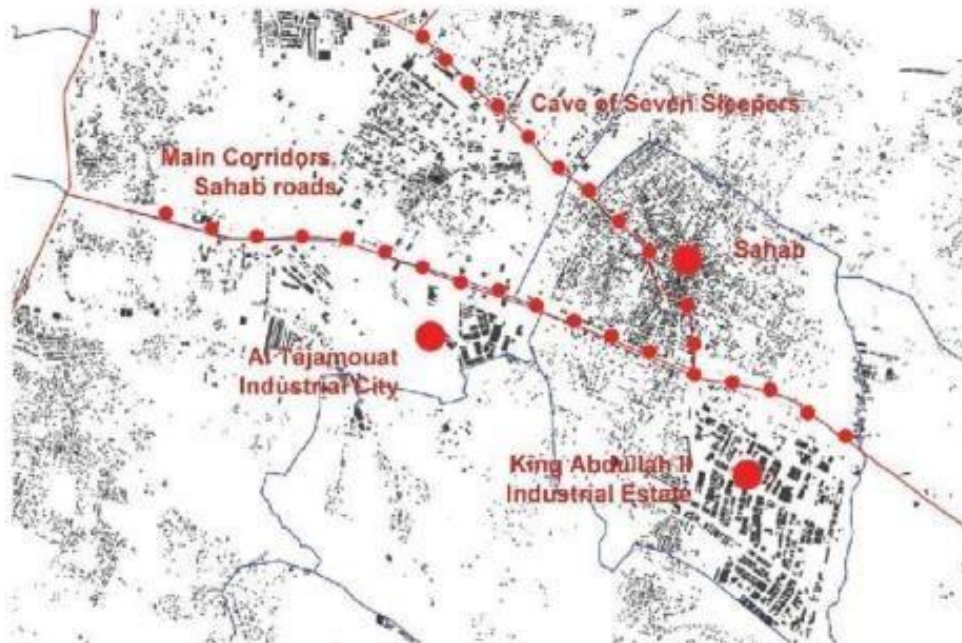
Picture 12: Aarhus key activities in WATERUN



5.5 Amman sub-section

Amman Case study (CS) is the main city of Jordan. This climate is Mediterranean with a daily temperature mean range of 3-32 °C. The monthly rainfall mean range is 0-42 mm. The urban catchment size is about 2,000 km². The population of the city is 4,000,000 people with a population density of 2,000 people/km². The water bodies influenced are Jordan and Yarmouk river basins and the dead sea.

Picture 13: Amman-photo of the site



Amman CS aims to address

- Diffuse pollution monitoring at districts of the Sahab municipality of Amman (having a total area of 1,367 ha)
- The Implementation and validation of the planning tool at this Sahab district to estimate a SW decentralised management
- To identify the best GI at different climate scenarios to mitigate pollution diffusion.

In addition, a participatory approach through the involvement of a Jordan inter-ministerial committee related to urban water management (NICE committee) will be involved by UJ in the International Stakeholder Board to be developed in the WATERUN co-creation process.

To validate and replicate the software in a Mediterranean climate city to strengthen the tool and provide decentralised solutions based on GI to increase the green spaces in semi-arid urban settlements as Amman (currently green spaces do not account for more than 2.5% of city surface²).

Over the course of the project, Amman CS will validate and replicate the software in a Mediterranean climate city to strengthen the tool and provide decentralised solutions based on GI to increase the green spaces in semi-arid urban settlements as Amman (currently green spaces do not account for more than 2.5% of city surface).

The related Key Performance Indicators are:

² Ministry of Environment- GIZ mission: <https://www.giz.de/en/worldwide/83767.html>

- The estimation and monitoring of SW in at least 2 Sahab municipality districts
- The application of planning tool to 1 Sahab municipality district.

WATERUN key activities involving Amman CS are listed in the following table:

Picture 14: Amman key activities in WATERUN



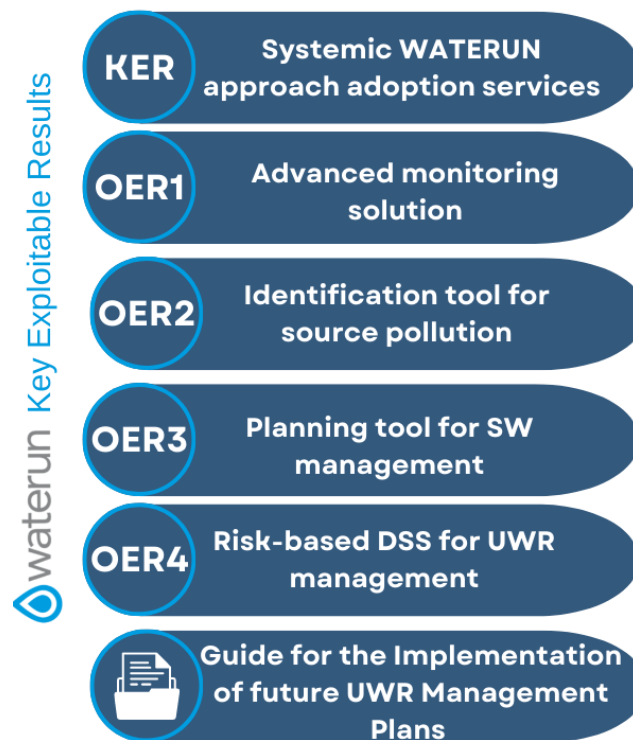
6 KEY EXPLOITABLE RESULTS - KER

6.1 WATERUN Innovation sub-section

WATERUN innovation is embedded into a more holistic and consistent approach that is needed to include UWR management explicitly in future water policies. In this context, WATERUN will deploy a comprehensive portfolio of tools for the prevention and mitigation of diffuse pollution in its three representative case studies (different climates, land-uses and implementation levels of UWR management).

In this way, advanced knowledge of one will nurture and speed up implementation in the others, enabling the adoption of WATERUN methodology from a wider perspective. In addition, the knowledge exchange and validation of some tools in a Mediterranean area (Jordan) will increase the significance of the solution for another important climate in southern Europe and severely affected by climate change, thus contributing significantly to the deployment of a much more universal solution.

Picture 15: WATERUN Key exploitation results



WATERUN will reinforce Europe's industrial competitiveness and leadership in the water sector thanks to

- Improved business opportunities and value creation in EU water industry reinforced by a co-creation process, and
- Measurable improvements in the quality and sustainable management of water.

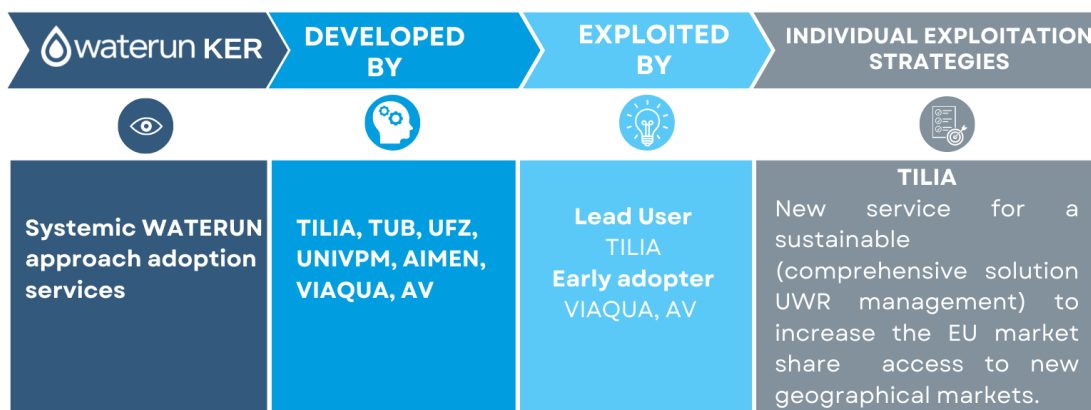
As one of the largest and most diversified industries globally, the EU water industry supplies virtually all sectors of the economy, and it plays a vital role in providing clean freshwater to all of Europe's cities. Furthermore, the implementation of WATERUN solutions will trigger a water management shift toward zero-pollution, thanks to prevention and mitigation solutions

that will allow minimising the pollutants impact on human health and environment. Therefore, relevant EU industries (water solutions suppliers, monitoring solutions providers, software developers, etc.) will gain a strong position to benefit from market opportunities. In addition, the solutions delivered will enable a more sustainable water use, since it is estimated that the WATERUN solutions will be able to treat 80% of the total UWR of a target area by the implementation of GI according to the outputs of the identification and mapping tool, which translates into approximately 1 billion m3 more per year of available water in EU

6.2 KER: Systemic WATERUN approach adoption services sub-section

Systemic WATERUN approach adoptions services refers to a set of integrated engineering and blueprint services for the deployment of the WATERUN methodology as a holistic technological solution and its industry adoption. All or some of the above results (depending on customer demand) together with the design and implementation of the GI solutions may be integrated into this portfolio of services.

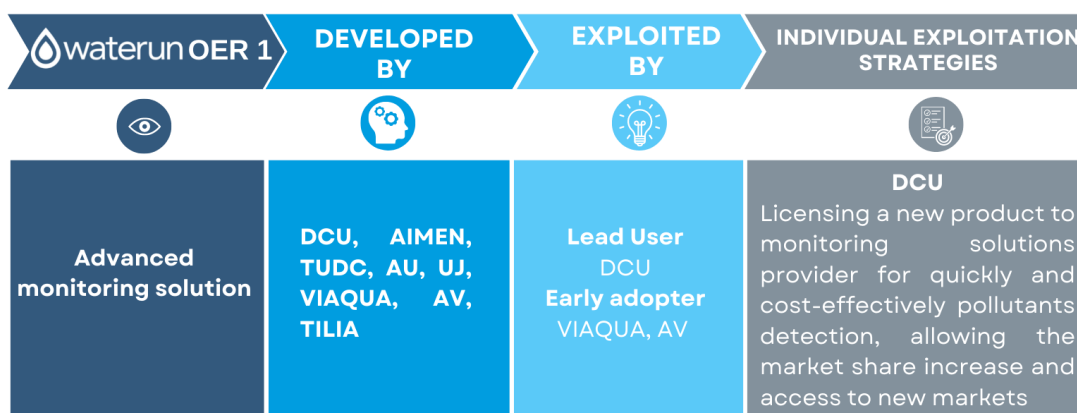
Picture 16: WATERUN KER-Systemic approach adoption services



6.3 OER1: Advanced monitoring solution sub-section

Advanced monitoring solution refers to a set of strategies and protocols for a reliable identification and quantification of pollutants in the urban surface, backed on innovative portable and microfluidic-based sensors for on-site detection of PAH and microplastics.

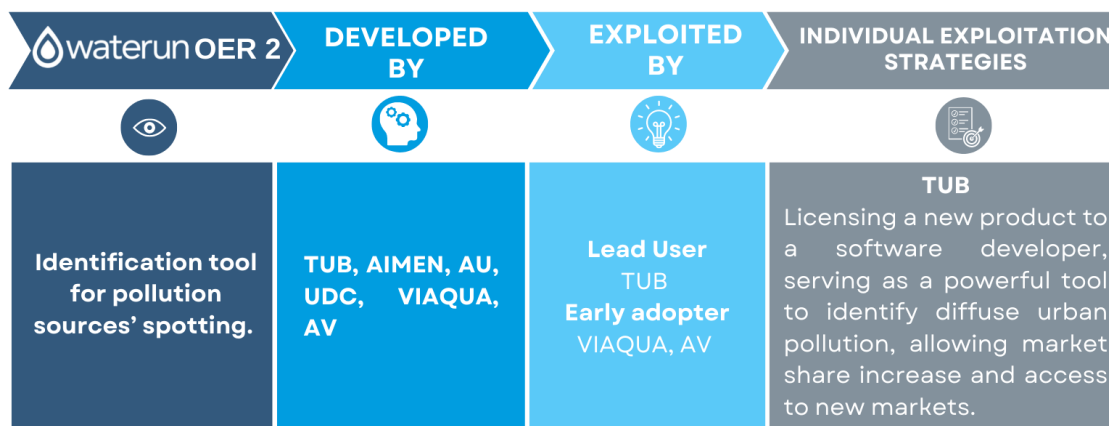
Picture 17: WATERUN OER1-Advanced monitoring solution



6.4 OER2: Identification tool for source pollution sub-section

The identification tool for source pollution refers to an open-source and web-based tool for the identification of critical source areas and pollutants pathways of urban diffuse pollution.

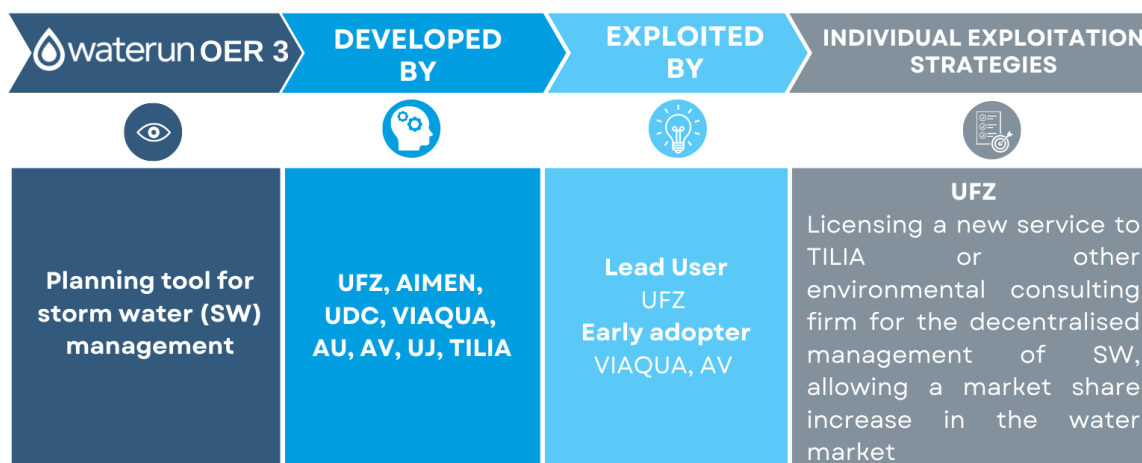
Picture 18: WATERUN OER2-Identification tool for source pollution



6.5 OER3: Planning tool for storm water management sub-section

The planning tool for storm water management aims to set up methods for modelling the reduction of pollution runoff by decentralised SW management at city block level.

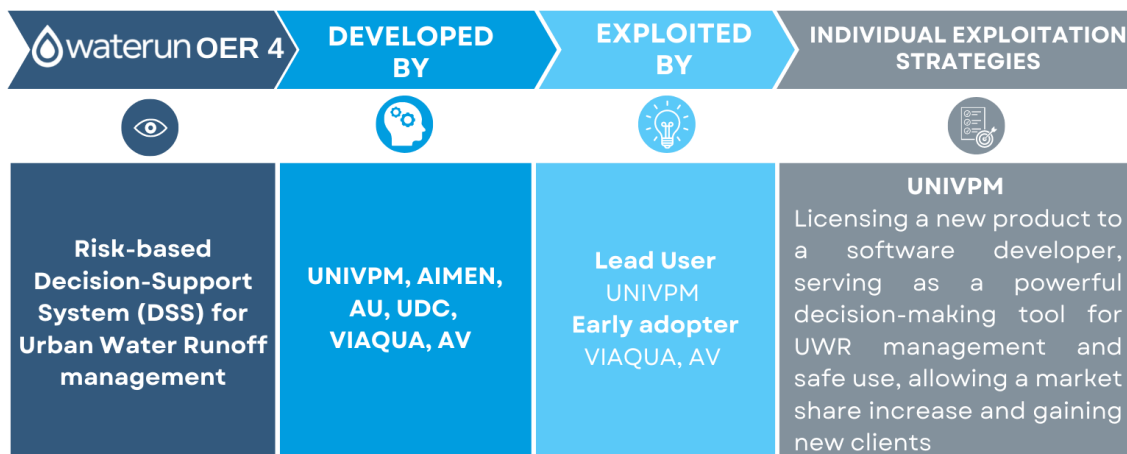
Picture 19: WATERUN OER3-Planning tool for storm water management



6.6 OER4: Risk-based DSS for UWR management sub-section

The Risk-based Decision-Support System (DSS) for Urban Water Runoff management refers to a DSS based on environmental and health-risk assessment helping in the decision-making on the selection of appropriate Green Infrastructure for a safe water use.

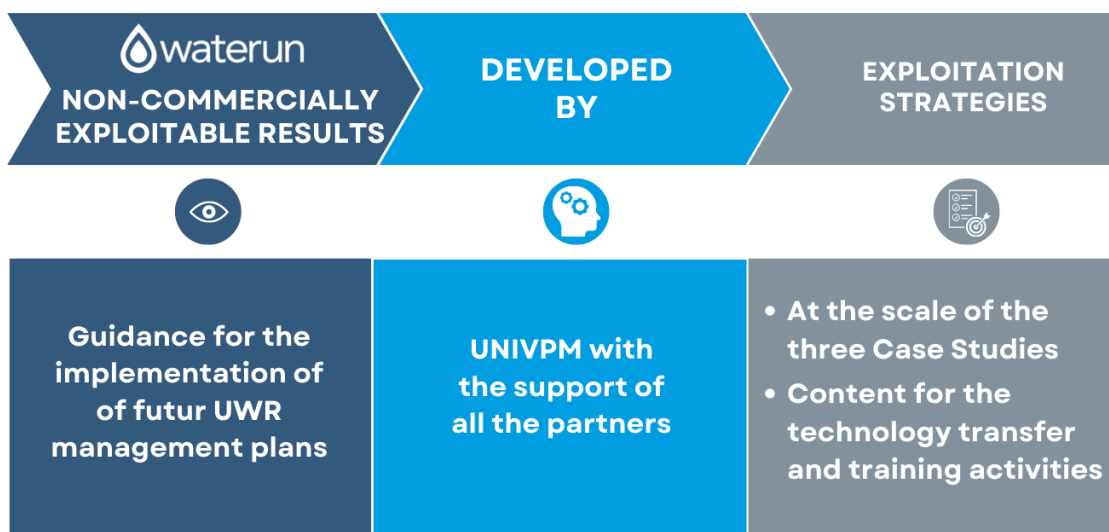
Picture 20: WATERUN OER3-Risk based DSS for UWR management



6.7 Non-commercially exploitable result: Guidance for the implementation of future UWR Management Plans sub-section

The guidance for the implementation of future Urban Water Runoff (UWR) Management Plans aims to explain the methodological implementation of risk assessment in UWR management including the use of WATERUN new developed software tools: identification tool, planning tool and risk-based DSS, as well as the best management practise of project GI. It will be a ready-made output for decision-making and governance in urban areas facilitating the elaboration of UWR management plans of cities.

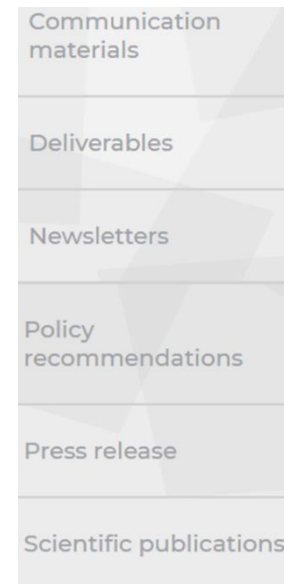
Picture 21: Non-commercially exploitable result-Guidance for the implementation of future UWR Management Plans



7 MEDIA CENTER SECTION

Picture 22: Menu of the Media center section

Media center section will gather all the public documents delivered by the project, both on the technical, policy and communications sides. A specific section will be dedicated to the public deliverables. The preliminary menu is presented in the picture 21.



8 CONCLUSION

WATERUN website is available at www.waterun.eu. It has been developed with DRUPAL 9. Its maintenance is under the lead of OiEau. Its update relies on the efforts of the whole consortium.

The website is one of the key promotional tool of the project and works as a show window, displaying information on the key components of the project: the objectives, concept, team in the *About* section, a focus on the 3 case studies and related co-creation process in the section *Case studies*, the preliminary list of WATERUN *Key exploitable results* in the related section. The section *Media center* will progressively gather all the public documents delivered by the project on the technical and communication sides.

Finally, the *News* section will focus on the latest development of the project as well as WATERUN events and those of interest for the project.

The website is part of the communication kit and closely related to WATERUN social media. It is planned to gather news articles from all the partners on a weekly basis so both social media and the website will be regularly updated.

WATERUN website will be regularly updated during the whole duration of the project and be kept available on-line at least 5 years after the end of the project.