Accelerating Water Smartness in Coastal Europe

Resultados

Información del proyecto

B-WaterSmart

Identificador del acuerdo de subvención: 869171

Sitio web del proyecto

DOI
10.3030/869171

Proyecto cerrado

Fecha de la firma de la CE
17 Abril 2020

Fecha de inicio
1 Septiembre 2020

Fecha de finalización
31 Agosto 2024

Financiado con arreglo a
SOCIETAL CHALLENGES - Climate action, Environment, Resource Efficiency and Raw Materials

Coste total
€ 17 345 523,21

Aportación de la UE
€ 14 975 184,15

Coordinado por
IWW ANALYTIK UND SERVICE GMBH
Alemania

CORDIS proporciona enlaces a los documentos públicos y las publicaciones de los proyectos de los programas marco HORIZONTE.

Los enlaces a los documentos y las publicaciones de los proyectos del Séptimo Programa Marco, así como los enlaces a algunos tipos de resultados específicos, como conjuntos de datos y «software», se obtienen dinámicamente de OpenAIRE.

Resultado final

Documentos, informes (37)

Drivers and Barriers: Proposal for a New Governance Model

Builds upon the analysis of policies and CoPs and D5.3, also taking into account the different characteristics and results from the LLs across case studies (input from T1.5); output for D.5.6 and D.5.7 (T5.3 and T.5.4)

A reclamation protocol for water reuse in craft beer production

Report offers a protocol for water reclamation aiming at producing food-grade water from treated wastewater, to be used by food and beverage industries, based on the Lisbon pilot (subtask 2.4.1).

B-WaterSmart, FIWARE based interoperability framework

Report on the interoperability approach based on FIWARE adopted in the project (produced by T3.1)

Energy production from small WWTP clusters

Report on the feasibility of energy production at small wastewater treatment plants based on different options regarding material flows, processes, and centralization vs. decentralization (T2.2 and subtask T2.2.2).

Guidelines of circular economy models for each Living Lab

Report to support the identification of circular economy opportunities at LLs (T4.2)-Input: Information of solutions implemented at each Living Lab during WP2, information of analysis of drivers and barriers from WP5 (T5.2.) and the attitude towards water smartness (T5.3) will be needed to be taken into account for this Deliverable 4.3.-Output: This report D4.3 will be taken into account to WP1 at task T1.5.

Manual on stakeholder mapping and engagement

Provides guidance on participatory methodologies and best practices for stakeholder engagement (output for T5.1 and T4.3)

Final strategic agenda and implementation plan for each LL after B-WaterSmart

The final, tailored strategic agenda and the implementation plan and structure of each LL (T1.5 and T1.2). It is a final result from B-WaterSmart.

Preliminary report on social acceptance and behaviours towards water-smart solutions

First analysis of the results from the CoPs operation, including an assessment of the gender dimensions involved in water access and management (T5.3), receives input from and feeds back into T1.2

Societal impact report (drafts M18, M36)

We will monitor and document the project's societal impact including related information gathered from all WPs (in particular WP1 and WP5) and include updated drafts at M18 and M36 in the periodic reports to the EC (outcome of T8.3, based on scanning of all deliverables.)

Valorization of oil & fats to improve co-digestion performance

Report on the lessons learnt from pilot studies (Alicante, Bodø) (T2.1 and Subtask 2.1.1.).

What is water-smartness and how to assess it?

Provides the framework and theoretical background, the water-smartness definition and the assessment requirements (T6.1, feeds MS13 and T6.2) Note that MS16 will be input to T1.4.

The monitoring, negotiation and decision support solutions toolkit - Early release

Report on monitoring, negotiation and decision support solutions focusing on complementarity. Includes tools 16-21, 29-30, 32 and 33 as defined in Annex I part B table 4. In addition to the public report there will be the actual software tools that are confidential / IPR-protected and will be commercially exploited by the developers. But access to the tools will be provided to project participants (Early release) (produced by T3.8). This deliverable is based on inputs by T3.2 to 3.7. Its architecture is influenced by D3.1.

The water cycle modelling and assessment solutions toolkit - Early release

Report on B-WaterSmart water cycle modelling and assessment solutions focusing on complementarity. Includes tools 22-28 and 31 as defined in Annex I part B table 4. In addition to the public report there will be the actual software tools that are confidential / IPR-protected and will be commercially exploited by the developers. But access to the tools will be provided to project participants (Early release) (produced by T3.8). This deliverable is based on inputs by T3.2 to 3.7. Its architecture is influenced by D3.1.

Manual of data specifications required from mapping of actors at Living Labs

Report on data specification on water-energy-resources nexus and review of methodologies and best practices to map stakeholders at LLs from a CE perspective (T4.1).-Input: During the T4.1 Cetaqua will define the specification of information needed from each LL about CE, stablishing what kind of data (water, energy and resources) has to be gathered from CoPs (T1.1).-Output: This Deliverable 4.1 [M6] will provide inputs from CE vision, to implement the structure and methodology at T1.1: Designing and organising B-WaterSmart collaborative work providing key stakeholders mapping for each CoP. In consequence, this deliverable will contribute as an input for the Report of CoPs' architecture and stakeholder mapping for each LL delivered at M9 offering the structure and methodology for the implementation and development of the CoPs. Also, this

Deliverable 4.1 will contribute in the development of the task T3.1: Developing a FIWARE-based interoperability approach to water-smart applications and data to provide a Deliverable D3.1 providing a report on the interoperability approach based on FIWARE at M12.

The water cycle modelling and assessment solutions toolkit - Final release

Report on B-WaterSmart water cycle modelling and assessment solutions focusing on complementarity. Includes tools 22-28 and 31 as defined in Annex I part B table 4. In addition to the public report there will be the actual software tools that are confidential / IPR-protected and will be commercially exploited by the developers. But access to the tools will be provided (CO) to project participants (Final release) (produced by T3.8). This deliverable is based on inputs by T3.2 to 3.7. Its architecture is influenced by D3.1

Demonstration of effluent reuse and treatment of off-spec raw water with reverse osmosis

Report on the results of the technical demonstration of effluent reuse for drinking water and treatment of off-spec raw surface water with high-recovery reverse osmosis to increase quantity and quality of recovered water and a protocol for these tests, including risk analysis and cost-benefit analysis (T2.3 and subtask 2.3.1).

Leakage and infiltration detection techniques

Report on the testing of multiple packages and corresponding signal transmission techniques from household smart meters to SCADA system, including solutions for local energy provision to operate sensors in order to detect water supply leakage and sewer infiltration (T2.2 and subtask 2.2.1), involves LL Bodø.

CoP's architecture and stakeholder mapping for each LL

Report about the structure, methodology, operations and timeline for the implementation and development of the CoPs and of the INALL (T1.1). Main input for T1.2 (CoPs), D1.4, and T1.4 (INALL), D1.5. It also feeds T1.5, D1.4. It will include: -key stakeholders mapping for each CoP based on the terms of reference from other WPs;-definition of practices, methodologies and tools to meet the objectives defined for the B-WaterSmart CoPs' operation and timeline for the CoPs' implementation;-guidelines for setting up INALL and definition of its main objectives

Guidelines on Financing CE projects

Report reviews financing products, services and instruments of water-smart circular economy (T4.4)-Input: Firstly, Cetaqua will make a review of circular economy financing instruments/products and services coming for private or public banking for living labs.- Output: This Deliverable D4.5 will help the financing of circular opportunities of the project B-WaterSmart

Ex-post dissemination & communication strategy & plan

Describes the activities to be carried out after the lifetime of the project (Output from T7.2).

"Preliminary report ""Drivers and Barriers for Water-smart Solutions across 6 European Cases: Policy and Governance"""

Analysis of the factors influencing adoption of water-smart solutions (T5.2); provides output for T4.2 and D.4.3.

Definition of circular economy indicators for Living Labs

Report on key performance indicators with focus on circular economy and water-smartness (T4.2)-Input: As input to elaborate D4.2, it is necessary feedback from implementing and managing water Smart systemic- water-energy-resources data (from WP1-T1.5). -Output: This Deliverable 4.2 will provide CE metrics and indicators for the water-smartness assessment framework to feed T6.2 (Development of the water-smartness assessment framework).

The B-WaterSmart innovation alliance

Lessons learnt from the INALL; recommendations for case owners (follow-up beyond the project) and for future users (replication) (T1.4). It is a final result from B-WaterSmart.

Micro-turbines for energy recovery in WWTP

Report provides concepts for the application of microturbine technology for energy recovery from WWTP effluents (T2.1 and Subtask 2.1.2), involves LL Alicante.

Stormwater reuse for agriculture

Stormwater reuse for agriculture. Report on the results of the technical demonstration of stormwater reuse for irrigation including quantity and quality of recovered water and a protocol for these tests (T2.3 and subtask 2.3.2).

Guidelines to improve new business models at Living Labs

Report assesses business models in use at the LLs and proposes circular ones (T4.3)-Input: Deliverable 4.2 and Deliverable 4.3 will be the framework to execute task T4.3 to adapt current business models or develop new ones. For this deliverable D4.4 will be necessary to assess current business models through water-energy-resource in each Living Lab, the literature review and schemes of different typologies of BMs and the proposal for adapting to water-energy-resources in each Living Lab.-Output: This D4.4. will feed T4.4. to support the circular transition, financing smart-water projects.

Technological indicators for water-smartness

Report provides a set of technology related indicators to be included into the water-smartness assessment framework in WP6 (T 2.7). Involves all LLs.

Socioeconomic metrics for the water-smartness assessment framework

Provides data on the social variables to be integrated into the water-smartness assessment framework (WP6) (based on the analysis developed within T5.2, provides output for T6.2 and D6.2).

Final report on social acceptance and behaviors towards water-smart solutions

Report summarizes the findings from the operation of the CoPs and LL (input from T1.2 and T1.5), considering the final outcomes of the participation processes (T5.3).

Set of policy briefs on regulation and policy instruments

Synthetic and accessible ‘take away’ documents that can be used by policy officers, stakeholders and the public. These will synthetize contributions from the various WPs (T5.4), receiving inputs especially from WP1, WP4 and WP6, including the regulatory implications caused by the Covid-19 pandemic.

The monitoring, negotiation and decision support solutions toolkit - Final release

Report on B-WaterSmart monitoring, negotiation and decision support solutions focusing on complementarity. Includes tools 16-21, 29-30, 32 and 33 as defined in Annex I part B table 4. In addition to the public report there will be the actual software tools that are confidential / IPR-protected and will be commercially exploited by the developers. But access to the tools will be provided (CO) to project participants (Final release) (produced by T3.8). This deliverable is based on inputs by T3.2 to 3.7. Its architecture is influenced by D3.1.

Water-smart technologies and concepts

Synthesis report on the results of the different case studies (T2.7). Involves all LLs.

Recommendations for refinement of the water-smartness framework and its transformation into a dashboard-type software

Will be obtained through the INALL activities for the adjustment of the water-smartness framework (T1.4). It is the main input to T6.3 to develop D6.3.

Final portfolio of training actions

Report on training actions (structure, planning, schedule, objectives, materials, replication) (T1.3). It is a final result from B-WaterSmart.

First version of the dissemination & communication strategy & plan

First dissemination & communication strategy & plan (DCSP) available. To be updated in M18 and M36 (Output from T7.2).

Guidelines & recommendations for regulation and policy instruments

Provides recommendations for revision of legislation, development of co-production strategies and new governance arrangements, according to the reality of each case study (T5.4), receives input from T6.3 and T4.4. This deliverable, as well as D.5.8, is expected to contribute to the implementation, at the local and regional level, of a range of EU Policies, including the EU Adaptation Strategy to Climate Change (2013), the Roadmap 2050 for a Low Carbon Europe (2011), the EU Action Plan for the Circular Economy (2017), the Proposal for Regulation of Water Reuse (COM2018/337) and the Water Framework Directive (2000/60/EC), as well as its daughter directives. Drawing from representative case studies, the recommendations are expected to be applicable to other EU State-Members beyond those directly involved in the Project. They will also consider the health, social and economic implications of the recent Covid-19 pandemic in each of these case studies, some of which are located in the most affected EU Member states.

B-WaterSmart solutions for Lisbon - Summary report

Summary report of the knowledge and methodologies developed for Lisbon within T2.4 – T2.4.1 (fed by D2.8), and T2.4.2-T2.4.4 that supported the development of DAP 2 (T2.4.3: W-E-P balance, reclaimed water modelling in the distribution network), DAP 6 (T2.4.3: risk assessment, including Covid-19 virus-related risks) and DAP 10 (T2.4.4 ‘water-smart for climate-ready’ certificates). DAPs 2, 6 and 10 are products of T3.5.

Open Research Data Pilot (1)

Data Management Plan first version (updates M18,36,48)

Plan details which data the project will generate and collect, and how these will be used, exploited, made accessible, stored and preserved. Updates at M18, M36 and M48 as part of the periodic report to the EC (outcome of T8.3, input for all deliverables)

Otro (5)

Final version of the water-smartness assessment framework (V2)

Consists of the final version of the framework (V2) refined after testing in T1.4 (T6.3). It feeds T3.9 for this task to deliver the final water-smartness dashboard application (DAP 11; D3.7).

Water-smartness dashboard - Final release

The final prototype of the water-smartness dashboard fully deployed online (produced by T3.9). Includes tool 34 as defined in Annex I part B table 4. This deliverable accepts as input D3.6, which in turn is based on D6.2 and D6.3.

Water-smartness dashboard - Early release

An early prototype of the water-smartness dashboard available for testing (produced by T3.9). Includes tool 34 as defined in Annex I part B table 4. This deliverable accepts as inputs D6.2 and D6.3.

First schedule of training actions and portfolio of possible contents

Document for the project website with an early schedule and portfolio of BWS training activities (T1.3). It feeds the activity of T1.3 after M12, D1.6, and T1.5, D1.4.

The water-smartness assessment framework (V1)

Framework prototype V1 and a supporting document, allowing T3.9 to start working on the online dashboard from M25 (T6.2, feeds T3.9 and T6.3)

Sitios web, solicitudes de patentes, vídeos, etc. (2)

Corporate identity and general communication material

A corporate project design and first communication material made available to partners (Output from T7.2).

Four issues of the project magazine

Four issues of the project magazine (delivered in M12, 24, 36, 48) available online and distributed through the mailing list (Output from T7.2)

Publicaciones

Artículos arbitrados (8)

Modeling Chlorine Decay in Reclaimed Water Distribution Systems—A Lisbon Area Case Study

Autores: Costa, J.; Mesquita, E.; Ferreira, F.; Figueiredo, D.; Rosa, M.J.; Viegas, R.M.C.
Publicado en: Sustainability 2023, Edición 15, 2023, Página(s) 16211, ISSN 2071-1050

Editor: MDPI Open Access Publishing
DOI: 10.3390/su152316211

The performance of encoder–decoder neural networks for leak detection in water distribution networks

Autores: Prasanna Mohan Doss, Marius Møller Rokstad, Franz Tscheikner-Gratl
Publicado en: Water Supply, 2024, ISSN 1606-9749
Editor: International Water Association Publishing
DOI: 10.2166/ws.2024.174

A comparative analysis of international guidelines for green infrastructure performance assessment

Autores: Bardia Roghani, Mahdi Bahrami, Franz Tscheikner-Gratl, Frédéric Cherqui, Tone Merete Muthanna, Marius Møller Rokstad
Publicado en: Blue-Green Systems, Edición 6, 2024, Página(s) 133-152, ISSN 2617-4782
Editor: IWA Publishing
DOI: 10.2166/bgs.2024.049

The Role of Scenario-Building in Risk Assessment and Decision-Making on Urban Water Reuse

Autores: Rita Ribeiro, Maria Rosa
Publicado en: Water, Edición 16, 2024, Página(s) 2674, ISSN 2073-4441
Editor: Multidisciplinary Digital Publishing Institute (MDPI)
DOI: 10.3390/w16182674

GIS-AHP Ensembles for Multi-Actor Multi-Criteria Site Selection Processes: Application to Groundwater Management under Climate Change

Autores: Konstantin W. Scheihing, Christine Kübeck, Uwe Sütering
Publicado en: Water 2022, 14, 1793, Edición 11, 2022, Página(s) 1793, ISSN 2071-1050
Editor: MDPI Open Access Publishing
DOI: 10.3390/w14111793

Identification and Modelling of Chlorine Decay Mechanisms in Reclaimed Water Containing Ammonia

Autores: Joana Costa; Elsa Mesquita; Filipa Ferreira; Maria João Rosa; Rui M. C. Viegas
Publicado en: Sustainability, Vol 13, Iss 13548, p 13548 (2021), Edición 1, 2021, ISSN 2071-1050
Editor: MDPI Open Access Publishing
DOI: 10.3390/su132413548

Towards a water-smart society: Progress in linking theory and practice.

Autores: Sigrid Damman, Alexandra Schmuck, Rosário Oliveira, Steven (Stef) H.A. Koop, Maria do Céu Almeida, Helena Alegre, Rita Maria Ugarelli

Publicado en: Utilities Policy, Edición Volume 85, 2023, ISSN 0957-1787
Editor: Pergamon Press Ltd.
DOI: 10.1016/j.jup.2023.101674

Uncertainties in different leak localization methods for water distribution networks: a review
Autores: P. Mohan Doss; M.M. Rokstad; D. Steffelbauer; F. Tscheikner-Gratl
Publicado en: Urban Water Journal, Edición 20, 2023, Página(s) 953-967, ISSN 1573-062X
Editor: Taylor & Francis
DOI: 10.1080/1573062x.2023.2229301

Actas de congresos (1)

Leak Localization Using Autoencoders and Shapley Values
Autores: Prasanna Mohan Doss, Marius Møller Rokstad, Franz Tscheikner-Gratl
Publicado en: The 3rd International Joint Conference on Water Distribution Systems Analysis & Computing and Control for the Water Industry (WDSA/CCWI 2024), Edición 9, 2024, Página(s) 92
Editor: MDPI
DOI: 10.3390/engproc2024069092

Capítulos de libros (1)

Controlling organic micropollutants in urban (waste) water treatment by activated carbon adsorption and membrane technology
Autores: Maria João Rosa, Margarida Campinas, Catarina Silva, Elsa Mesquita, Rui M. C. Viegas
Publicado en: Clean Technologies Toward the Development of a Sustainable Environment and Future, 2023, Página(s) 141-180
Editor: IWA Publishing
DOI: 10.2166/9781789063783_0141

Conjuntos de datos

Conjuntos de datos vía OpenAIRE (1)

Sewer Network and Smart Water Meter Data for Modelling and Analysis of Water Distribution and Sewer Networks

Autores: Mohan Doss, Prasanna; Roghani, Bardia; Bosco, Camillo; Abdalla, Elhadi Mohsen Hassan; Rokstad, Marius Møller; Tscheikner-Gratl, Franz
Publicado en: Zenodo

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