



SUWANU EUROPE

Deliverable 3.2

Train the practitioners workshop Report

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INTRODUCTION

Main barriers identified for the spread of water reuse in agriculture can be alleviated with an effective knowledge transfer. For instance, perception barriers are linked to the lack of examples and experiences that may provide confidence to the different actors involved (e.g. farmers, consumers, water operators, etc.). Likewise, awareness of environmental benefits of reuse and knowledge of technologies for water reclamation, nutrient monitoring and precise irrigation contribute to make irrigation with reclaimed water safer, environmentally friendly and cheaper.

Moreover, the recently approved EU Regulation 2020/741 has created a scenario with new procedures and standards that need to be implemented in all the EU Member States that plan to reuse treated wastewater in agriculture. This situation also requires transfer knowledge and experiences in a context where mutual learning is crucial.

The 8 workshops organized under task 3.2 are oriented to transfer the necessary knowledge and skills. They are adapted to the specific needs of the 8 project target regions but there is also a common background: the 8 Regional Action Plans that were produced jointly by the 8 regions in the first period of the project. This work has enabled already to exert mutual learning and exchange problems and strategies among the consortium members. The important lessons learnt have been also shared in the different workshops organised.

Finally, the workshops enabled the active participation of the audience. Besides the difficulties of the pandemic, digital solutions for online events have permitted the engagement of stakeholders that could provide their insights, solve doubts and propose measures. These inputs are very helpful for the consortium to understand better the challenges for the wide implementation of water reuse in Europe and will guide us in the next steps.

EXECUTIVE SUMMARY

In the Work Package 3 “Knowledge exchange”, task 3.2 “Train the practitioner’s workshops”, eight workshops (one per region) were organized in the frame of the project. These events are organized at local level involving stakeholders outside the consortium. The responsible organizations for each workshop were the following: AUTH in Greece, ASERSA in Spain, TTZ in Germany, PSKW in Belgium, AU in Bulgaria, ECOFILAE in France, CONSULAI in Portugal, CER in Italy.

The aim of the workshops is to increase the capacities of practitioners and other stakeholders of water reuse for irrigation, on practical knowledge about the use of water for reuse in agriculture. Also, to share and have open discussion in all relevant aspects associated to the water reuse in agriculture and promote the use of the info packages as a source of practical knowledge adapted to their needs.

Specifically, for this task it is defined as practitioners, the farmers and cooperatives, water engineers and operators, and agricultural advisory services.

This document is structured by region, in 6 main sections: Organising the coordination team and participants; evidence of dissemination of the workshop at regional level; planning and organisation of the workshop (pre-work, preparation); agenda for the entire session; brief description of the presentations and dynamics carried out throughout the session; main results and conclusions.

TARGET REGIONS

Table 1 - Target regions and responsible partner

No.	Region	Country	Responsible Partner
1	Alentejo	Portugal	CONSULAI
2	Andalusia	Spain	BIOAZUL
3	Antwerp – Limburg	Belgium	PSKW
4	Braunschweig	Germany	TTZ Bremerhaven
5	Occitanie	France	ECOFILAE
6	Plovdiv	Bulgaria	Agricultural University – Plovdiv
7	Po River Basin	Italy	CER
8	Thessaloniki	Greece	AUTH

1 ALENTEJO | PORTUGAL

1.1 Executive summary

On the 3rd of February 2021, FENAREG and CONSULAI held a Train the Practitioners Workshop of the SUWANU EUROPE project. These events aim to increase practical knowledge about the use of water for reuse in agriculture.

The session was attended by over 50 participants, including regional and national policy makers, engineering companies, watering farmers and consumers.

The morning started with the Workshop which, in addition to presenting the Alentejo regional action plan, allowed to collect contributions from participants through the group dynamics "From theory to practice". In particular, the participants contributed to identifying the advantages and barriers associated with the use of water for reuse in agriculture in Portugal. Adaptation to climate change and the circular economy were highlighted as the main benefits and, on the other hand, costs, necessary investment, and public acceptance as evident difficulties.

The event is available at: <https://youtu.be/faxD5ygG4Xw>

1.2 Composition of the workshop organization team

Table 2 - Workshop steering Committee's members

Workshop steering Committee's members		
Name	Organization	Position to the organization
Carolina Ramos	CONSULAI	Technician
Marta Mendes	CONSULAI	Technician
Rui Almeida	CONSULAI	Partner & Executive Director
Carina Almeida	FENAREG	General Secretary
Diana Cordeiro	FENAREG	Technician
Workshops working teams and moderators (if applicable)		
Topics	Name	Member of the partners working team
Dynamic "From theory to practice" – Group 1	CONSULAI	Rui Almeida
Dynamic "From theory to practice" – Group 2	CONSULAI	Carolina Ramos
Dynamic "From theory to practice" – Group 3	FENAREG	Carina Arranja

1.3 Workshop Participants

The national dissemination of the workshop was planned to reach the most diverse stakeholders of interest for the SuWaNu Europe project.

At the beginning of the session a short online form was conducted to understand the audience, with the following results:

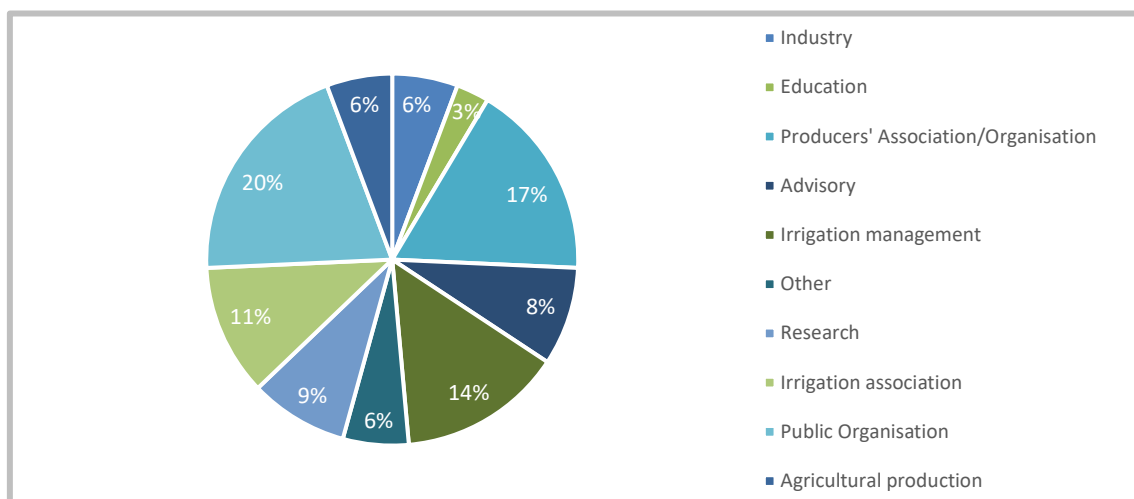


Figure 1 - Ice breaker | Question #01 "What is your area of work?"

This diversity of stakeholders is very important, not only to involve them in the project, but also to understand the different perspectives of this thematic according to the target group, since each one is different and directed to their area of action.

It's this heterogeneity of the audience that makes this group work and brainstorming sessions challenging and with such interesting results.

In the table below it is possible to verify a large group and a varied composition of stakeholders who attended the workshop.

Table 3 - Participants of the train the practitioners' workshop

Participants	
Name	Organization represented
Alexandra Brito	CAP - Confederação dos Agricultores de Portugal
Ana Correia	Particular
Ana Maria Santos Vicente	DRAPN – Direção Regional de Agricultura e Pescas do Norte
Ana Sofia Pelaio Rodrigues	Agência Portuguesa do Ambiente, I.P./Administração da Região Hidrográfica do Alentejo (APA/ARH Alentejo)
Ana Timóteo	Direção Regional de Agricultura e Pescas de Lisboa e Vale do Tejo
Anabela Barateiro	Appizêzere
António Cabeleira	Direção Regional de Agricultura e Pescas do Norte

Participants	
Name	Organization represented
António Oliveira	Direção Geral de Agricultura e Desenvolvimento Rural - Ministério da Agricultura
António Russo	ABOFH Baixo Mondego
APPP-FN	APPP-FN
Astride Sousa Monteiro	ANPOC
Carina Almeida	Aqualogus
Carina Arranja	FENAREG
Carla Lúcio	Associação de Beneficiários do Mira
Carlos Marques	Abroxo
Carlos Paulino	COTR
Carlos Salvador	Maravilha Farms
Carolina Ramos	CONSULAI
Cátia Inês Santos	ADVID - CoLAB Vines&Wines
Diana Cordeiro	FENAREG
Duarte Tito	First Element
Élia Pimenta	ABCELA
Gonçalo Morais Tristão	COTR
Isabel Maria Rodrigues Correia	Secretaria Regional da Agricultura e Desenvolvimento Rural
Joana Anjos	CONSULAI
João Maria Palma Parreira Cano	OPP Serpa
João Pedro	INIAV IP
João Pedro Barbas	Sociedade Agrícola Herdade do Ximenes Ida
Joaquim Cabral	CONSULAI
José Costa Gomes	EDIA
Mafalda Sousa	Águas e Resíduos da Madeira, S.A.
Manuela Moreira	Universidade do Algarve
Maria Dulce Fernandes Guilherme Martins Fernandes	DRAPN – Direção Regional de Agricultura e Pescas do Norte
Maria Manuela Ruivo	EDIA - Empresa de Desenvolvimento e Infra-estruturas do Alqueva, S.A.
Mário Figueira	DRAP Alentejo
Marta Costa Santos	COTR
Marta Mendes	CONSULAI
Miguel Tavares	Sysmart - Water & Energy Systems
Nancy Barbosa de Sousa	ESA IPVC
Nídia Pita	Driscoll's
Nuno Martins	DARDICO
Rita Fragoso	ISA-ULisboa
Rosa Amador	ADVID
Rui Almeida	CONSULAI
Rui Sequeira	APA/ARH Alentejo
Susana Meneses	Driscoll's
Teresa Godinho Tavares	DGADR
Vasco Costa	DRAPLVT

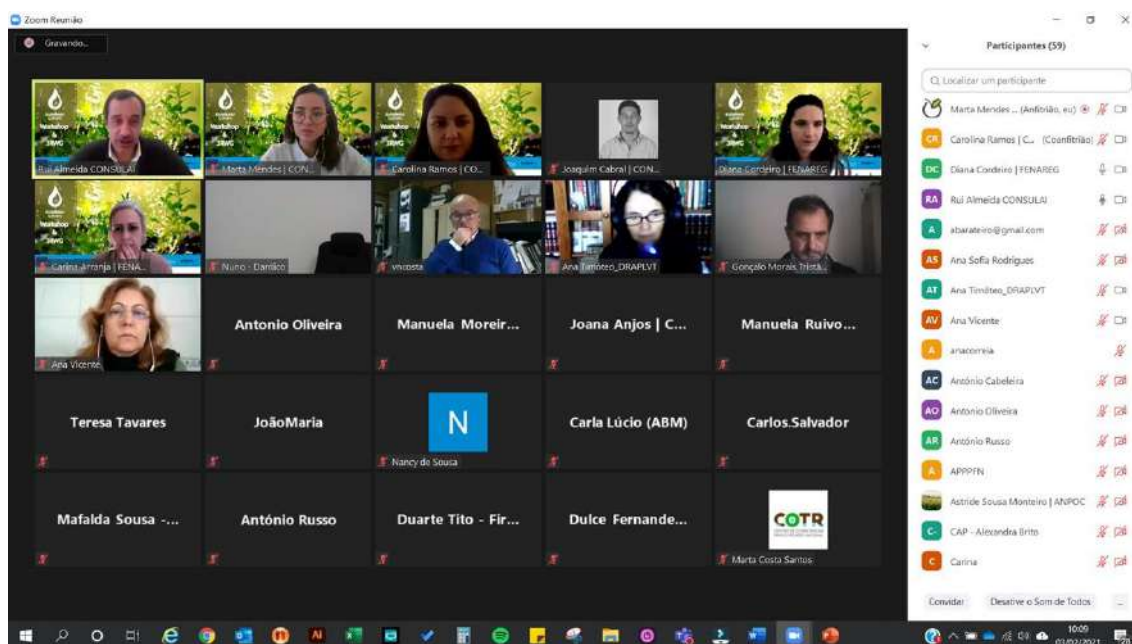


Figure 2 - Workshop's participants

1.4 Workshop dissemination

For the workshop, an email was sent directly to a list of contacts in the sector, to agricultural stakeholders, from farmers to industry. Contacts involved in policy development, governmental authorities and territorial management in Portugal were also included.

The event was also disseminated on the SuWaNu Europe project website and social networks. For a larger dissemination and to reach the intended target audience, the posts were shared by several pages, including the Portuguese partners, CONSULAI and FENAREG.



Figure 3 - Post about the event on SuWaNu Europe project website



Figure 4 - Post about the event on SuWaNu Europe Facebook



Figure 5 - Post about the event on SuWaNu Europe LinkedIn

The event was also disseminated in online websites and platforms of the agricultural sector in Portugal such as “Frutas e Legumes” and National Rural Network:

- Frutas e Legumes, post available here: <https://www.flfrevista.pt/2021/01/evento-online-de-projecto-europeu-sobre-uso-de-agua-residual-na-agricultura/>
- National Rural Network, post available here: <http://www.rederural.gov.pt/12-informacao/3376-projeto-suwanu-europe-realiza-workshop-sobre-uso-de-agua-residual-na-agricultura>



Figure 6 - Post about the event in "Frutas e Legumes" website

Projeto SuWanu Europe realiza workshop sobre uso de água residual na agricultura

Criado em 29 janeiro 2021



Durante a manhã de 3 de fevereiro, a Federação Nacional de Regantes (Fenareg) e a empresa de consultoria Consulai, parceiros nacionais do consórcio SuWanu Europe, vão realizar um evento online regional sobre esta iniciativa. O projeto, realizado no âmbito do programa Horizonte 2020, da União Europeia, é dedicado à reutilização de águas residuais tratadas na

agricultura.

Na primeira parte do **evento** surge o *workshop* "Train the practitioners", onde será apresentado o plano de acção regional do Alentejo e se procurará recolher contributos dos participantes. A segunda parte consiste no "3rd Regional Working Group", em que será apresentada a evolução do projecto e das novas iniciativas de uso de água residual na agricultura em Portugal e onde também se procurará recolher contributos.

Com um orçamento de dois milhões de euros, financiado pelo programa Horizonte 2020, da União Europeia, e uma duração prevista de dois anos e meio, o **projecto SuWanu**

Figure 7 - Post about the event in "National Rural Network" website

Due to the pandemic issue of COVID19, Portugal was in mandatory confinement, so the event was held in online format (via ZOOM). However, we had over 100 registrations and over 48 people attending the workshop.

1.5 Workshop pre-work, preparation, and distributed material

This workshop had been planned to be face-to-face but due to the current pandemic situation of COVID19, it was adapted to online format (the session was prepared through the ZOOM platform).

Therefore, it was not necessary to distribute printed material. However, during the session different materials produced with the main results of the project were presented, indicating that they are available on the SuWaNu Europe website.

For the workshop, a power point presentation was created for the SuWaNu Europe project and for the Alentejo Regional Action Plan presentation. The template of the Mural, the collaborative platform that was used in the group dynamics, was also prepared before the workshop, by the working team.

A work on communication has also been done by the team, creating a registration form and the agenda published and sent to several contacts. The event was also disseminated in different media channels as described in the previous section (Chapter 5 - Workshop Dissemination).

Figure 8 - Registration form

1.6 Programme-Agenda



WORKSHOP

- 09h30 Receção aos participantes | Rui Almeida (CONSULAI)
- 09h35 Apresentação do projeto SuWaNu Europe | Marta Mendes (CONSULAI)
- 09h50 Apresentação do plano de ação regional do Alentejo | Diana Cordeiro (FENAREG)
- 10h10 Apresentação da dinâmica de grupo | Carolina Ramos (CONSULAI)
- 10h15 Dinâmica de grupo "Da teoria à prática"
- 11h00 Apresentação de resultados e discussão | Moderado por Rui Almeida (CONSULAI)
- 11h15 Notas finais e encerramento | Carina Arranja (FENAREG)

Pausa para café

3º REGIONAL WORKING GROUP

- 11h30 Receção aos participantes | Rui Almeida (CONSULAI)
- 11h40 Apresentação da evolução do projeto e enquadramento do RWG | Diana Cordeiro (FENAREG)
- 11h55 A reutilização de águas residuais urbanas tratadas na agricultura em Portugal
 - Reutilização de águas residuais tratadas na rega de citrinos no Algarve | Manuela Moreira da Silva (ISE/ UAIG)
 - O caso da cultura do arroz – MEDWATERICE | Isabel Duarte (ESAC)
- 12h15 Apresentação da dinâmica de grupo | Marta Mendes (CONSULAI)
- 12h20 Dinâmica de grupo "A visão dos utilizadores finais"
- 12h50 Apresentação de resultados e discussão | Moderado por Rui Almeida (CONSULAI)
- 13h00 Notas finais e encerramento | Carina Arranja (FENAREG)

INSCRIÇÕES ABERTAS!



Figure 9 - Workshop programme

1.7 Summary of the presentations and activities carried out during the workshop

The workshop, held on 03rd of February, started with a welcome session to the participants, by Rui Almeida, from CONSULAI, including a small icebreaker questionnaire with the following questions:

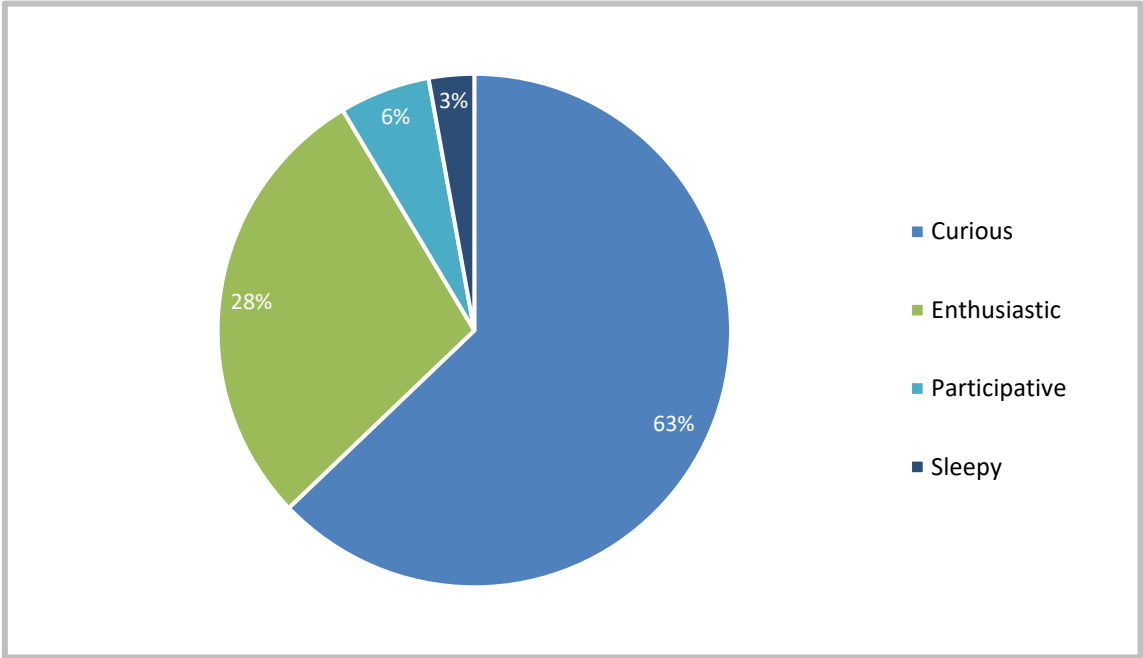


Figure 10 - Ice breaker | Question #02 “How do you feel today?”

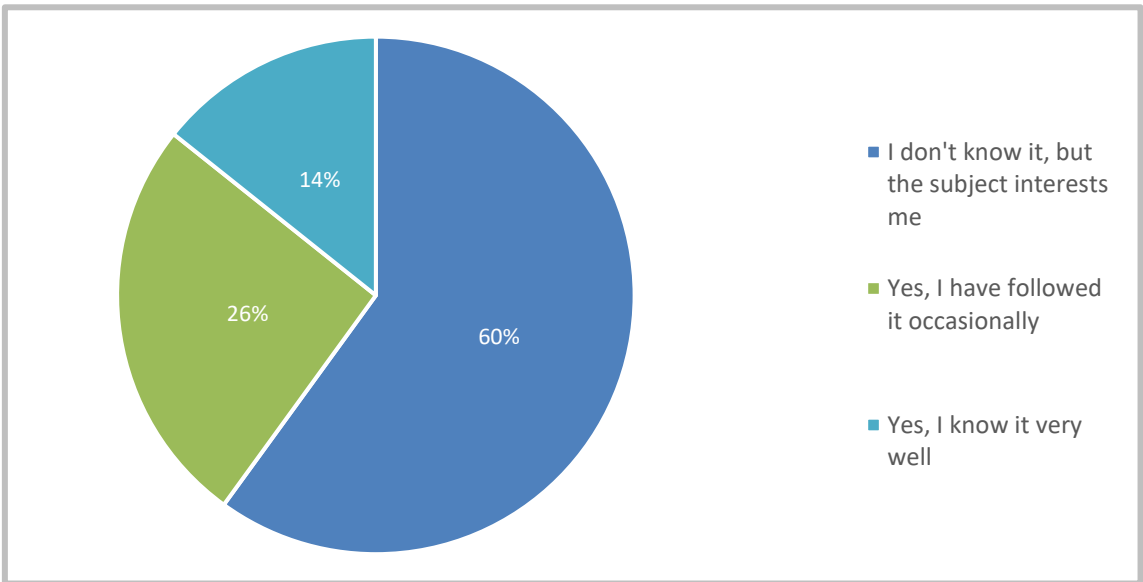


Figure 11 - Ice breaker | Question #03 “Are you familiar with the SuWaNu Europe project?”

The first presentation was made by Marta Mendes from CONSULAI, who presented the SuWANu Europe project, including the consortium, the project objectives and the tasks performed so far.

Diana Cordeiro, from FENAREG, presented the Alentejo regional action plan, included in the project, and this was the starting point for the next part of the workshop.

In a group dynamic called "From theory to practice", presented by Carolina Ramos from CONSULAI, the participants were divided into three rooms for group work.

In this activity, using the Mural collaborative platform, and with the help of the facilitators Rui Almeida, Carolina Ramos and Carina Arranja (FENAREG), the participants contributed to identifying the advantages and barriers associated with the use of water for reuse in agriculture in Portugal. Adaptation to climate change and the circular economy were highlighted as the main benefits and, on the other hand, costs, necessary investment, and public acceptance as evident difficulties.

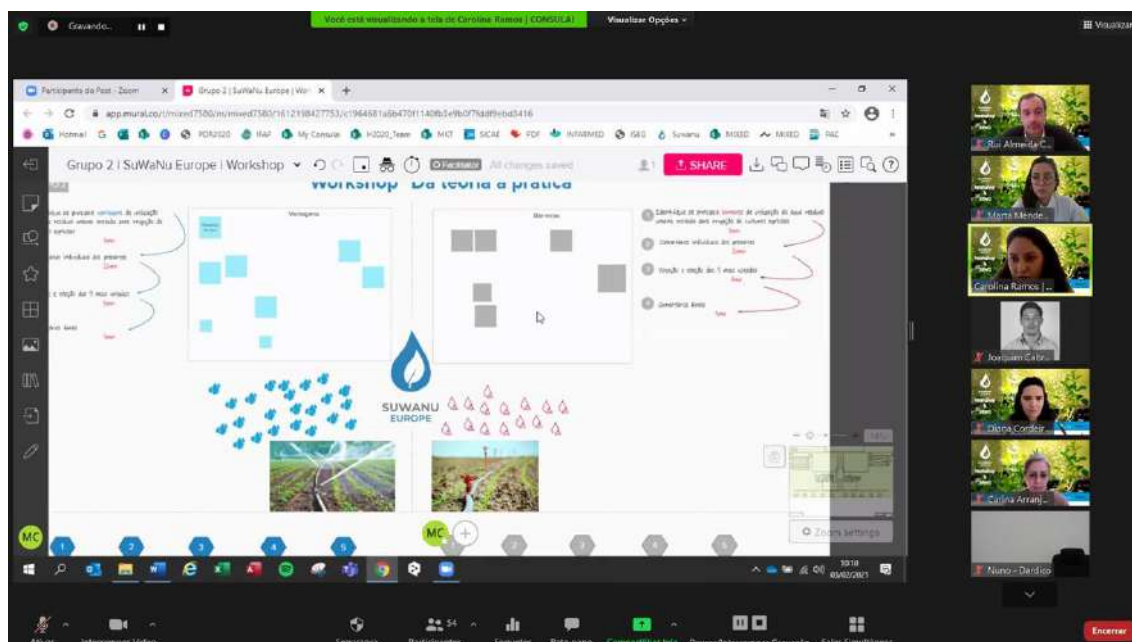


Figure 12 - Dynamic session using Mural collaborative platform

The speaker elected from each group, presented the results (the five biggest advantages and the five biggest barriers identified and voted by the group) in plenary and the session was opened for comments and participation by all the participants.

The event ended with the thanking and final notes but most of the participants stayed online for the 3rd RWG that followed.



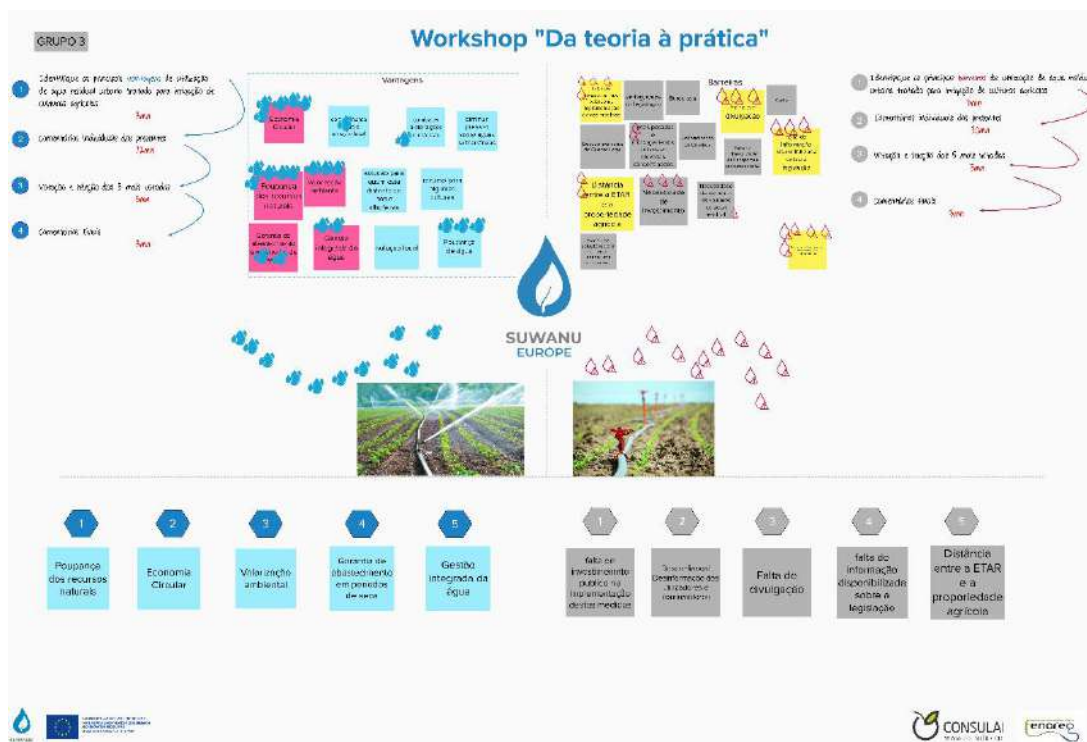


Figure 15 - Mural results from Group3

1.8 Results

Table 4 - Main results of the workshop

Input, feedback or lesson learnt obtained during the workshop	Activity where this input was generated	How this input/feedback might be implemented in the SUWANU EUROPE project and/or might be a driver for change in society.
SuWaNu Project Presentation	Speech from expert	Dissemination of the project and the project results
Alentejo Regional Action Plan Presentation	Speech from expert	Dissemination of the project and the project results for Alentejo region
Dynamic “From theory to practice” – Group 1 • Advantages ○ Availability of water in periods of scarcity ○ Alternative water source / water economy ○ Reduction of pollution (microplastics / environmental improvement / discharges) ○ Optimization of the water resource ○ Source of transparency regarding the quality of water used for irrigation • Barriers	Participatory activity / group session	Regional Action Plan of Alentejo Through the RWGs that will still be organized under the project (in April/May 2021); Dissemination materials such as factsheets on the issues raised in the discussion; News / posts on the project's website and social networks.

Input, feedback or lesson learnt obtained during the workshop	Activity where this input was generated	How this input/feedback might be implemented in the SUWANU EUROPE project and/or might be a driver for change in society.
○ Public acceptance ○ Implementation cost / investment required ○ Licensing and entity consents ○ Facility of access to water ○ Spatial gap between quantities of water for reuse and agricultural needs		
Dynamic “From theory to practice” – Group 2 • Advantages ○ Mitigation and adaptation to climate change ○ Increased water availability and reduced pressure on water resources ○ Viability of agriculture ○ Promotion of circular economy (water and nutrients) ○ Promotion of environmental and economic sustainability • Barriers ○ Distribution infrastructures / irrigation system equipment: adjustments, durability, costs, maintenance ○ Transport and storage: risk of quality change / technical and financial viability ○ Limiting quantities (supply vs demand) ○ Legislation and paperwork ○ Acceptance by farmers, distribution chains and consumers	Participatory activity / group session	Regional Action Plan of Alentejo Through the RWGs that will still be organized under the project (in April/May 2021); Dissemination materials such as factsheets on the issues raised in the discussion; News / posts on the project's website and social networks.
Dynamic “From theory to practice” – Group 3 • Advantages ○ Conservation of natural resources ○ Circular economy ○ Environmental protection ○ Guarantee of supply in periods of water scarcity ○ Integrated water management • Barriers ○ Lack of public investment ○ Lack of trust and information of users and consumers ○ Lack of dissemination ○ Lack of information available on legislation	Participatory activity / group session	Regional Action Plan of Alentejo Through the RWGs that will still be organized under the project (in April/May 2021); Dissemination materials such as factsheets on the issues raised in the discussion; News / posts on the project's website and social networks.

Input, feedback or lesson learnt obtained during the workshop	Activity where this input was generated	How this input/feedback might be implemented in the SUWANU EUROPE project and/or might be a driver for change in society.
Distance between wastewater treatment station and farms		

1.9 Conclusions

The SUWANU EUROPE training workshop held in Portugal, enabled to share the project results with a great variety of stakeholders. The presentation of SUWANU EUROPE materials to a wide audience is expected to have a major impact and complement the efforts of other dissemination activities such as the use of social media or the publication of articles.

Furthermore, there has been an exchange of important lessons learnt in the advance to promote water reuse practices in the workshop. The workshop, although online, was attended by about 50 participants.

The different perspectives and views presented in the workshop respond to the multi-actor approach followed by SUWANU EUROPE and outlined in the scope of thematic networks. This scope is intended to meet the needs of a complex problem, namely increase water efficiency, that requires multidisciplinary solutions at different levels: legislation, governance, technology, and citizen engagement.

We understand the pandemic situation discouraged people to participate more actively. However, we managed to reach a very wide audience and the participants were very active, as we used interactive tools for participation.

As a conclusion, the workshop has been very satisfactory in terms of quality of the programme and audience.

2 ANDALUSIA | SPAIN

2.1 Executive summary

The training workshop for the region of Andalusia was held in Malaga (South Spain) on the 25th of September 2020. SUWANU EUROPE results and materials were presented in a special workshop session conducted by the project coordinator. This was an opportunity to disseminate main project results such as the database of water reuse projects, the factsheets, the regional action plans and the info-packages. This session was complemented with the participation of other speakers. We brought high profile experts that shared their experience and knowledge about water reuse. In this sense, the programme included as speakers the president of the river basin authority, regional authorities, researchers, and farmers using reclaimed water. A noteworthy speech was done by the director of ESAMUR in Murcia to bring the experience of Murcia, a front-runner region in Spain in terms of water reuse. An intense dissemination campaign enabled to have a broad audience with more than 100 participants. The audience was very heterogenous and included all components of the quadruple helix such as researchers, associations of farmers, authorities, and private sector representatives. A round table with the Andalusian cluster and the participation of the audience enabled a dialogue to discuss best strategies to extend water reuse solutions in the region. The event was organized as a side event of the SmartAgrifood summit which is an international reference event in the agri-food sector. SUWANUE EUROPE training workshop was a hybrid event with face-to-face participation but it was also broadcast live in streaming in order to have a higher audience given the limitations of the Covid-19 pandemic.

2.2 Composition of the workshop organization team

Table 5 - Workshop steering Committee's members

Workshops steering Committee's members		
Name	Organization	Position to the organization
Rafael Casielles	BIOAZUL	SUWANU EUROPE coordinator Senior Project manager
Antonia Lorenzo	BIOAZUL	CEO, Manager R&D department
Angela Magno	BIOAZUL	Project manager Manager MKT & Communication
David Salaberri	BIOAZUL	MKT & Communication
David Hernández	FENACORE	Consulting engineer
Ignacio Berdugo	FENACORE	Digital communication manager
Julio Berbel	UCO	Director research group WEARE
Alfonso Expósito	UCO	Member of research group WEARE
Xana Rodríguez	CECU	Project manager

2.3 Workshop Participants

There were 68 participants in the workshop registered. However, the event was broadcast in streaming and there was a peak of 143 viewers in the moment of maximum audience. The workshop participants included a variety of sectors including farmers, different types of associations (e.g. consumers, ecologists, irrigators, etc.), researchers from academia and private companies. Researchers and private sectors were the most represented with similar participation, close to 27% each. Farmers accounted for 19% and private sector 17%. Finally, associations were represented with a 9% of the audience, and students with 1%.

Table 6 - Participants of the train the practitioners' workshop

Participants		
	Name	Organization represented
Manuel	Alfárez Portero	CCRR Tintín
Antonio	Antequera Prados	COMUNIDADES DE REGANTES
Josipa	Arapović	Bioazul
Jose	Arcas Ramirez	COMUNIDAD REGANTES FUENTE DEL BADEN - NERJA
Joaquin	Arezo	consultor ambiental
Emilie	Bélon	ASCOMADE
Carmen	Bernáldez Lara	Human Smart Lab
Irene	Blanco Gutiérrez	Universidad Politécnica de Madrid
Ginés	Blaya Ortega	Estudiante
Antonio	Bolinches	UCM
Ruben	Brandan Gordillo	CEDEX
Ruben	Brandan Gordillo	CEDEX
Manuel	Calvo-Judici	WATS
Pablo	Carnicero	RIEGOS IBERIA REGABER, S.A.
Francisco	Carrasco Arenas	Feragua
Carlos	Chacón Domínguez	CITRICOS DEL ANDEVALO S.A.
Santos	Cruces Cantos	NORORMA
Juan De Dios	Cuberos Urbano	AGROISA SL
César	Díaz	Confederación de Consumidores y Usuarios
José Joaquín	Echaniz Serrano	QUIMSA ITW
Elena	Escudero Álvarez	Asociación Siom
Jose Manuel	Escutia Sánchez	Comunidad de Regantes de Algarrobo
David	Escutia Sánchez	Comunidad de Regantes de Algarrobo
Marta	Espejo Rayo	CIROSIP
Paloma	Esteve Bengoechea	Universidad Politécnica de Madrid
Fernando S.	Estévez Pastor	EMASESA
Flor	ETCHEBARNE	EURODIA Group
Alfonso	Expósito García	WEARE & Universidad de Sevilla
Luis Felipe	Fernández	Ecolagunas,S.L.
Karin	Florencio	Sorigue
Daniel	García Arca	Universidad de Almería

Participants		
Name		Organization represented
José Manuel	Gil Ruiz	Comunidad de Regantes
José Manuel	Gil Segovia	Comunidad de Regantes
Leopoldo	Gimenez Montero	COMUNIDAD REGANTES FUENTE DEL BADEN - NERJA
Almudena	Gomez Ramos	universidad de valladolid
Miguel Alberto	González Escamilla	Globo de agua
Felisa	González Hidalgo	CCRR Tintín
Rita	Hogan Almeida	Universidad Politécnica de Madrid
Ignacio	Iturbe	RFAG
Irene	Jimenez	Institut de Microelectronica de Barcelona (IMB-CNM-CSIC)
Adriana	Linde Martín	Comunidad de Regantes Las Mayoralas
Antonia	Lorenzo	BIOAZUL SL
Concepcion	Marcuello	Dirección General del Agua - Ministerio para la Transición Ecológica y el Reto Demográfico
Javier	Martínez Dalmau	UNIVERSIDAD DE CÓRDOBA
Monica	Matamala	AGROCELER UNIVERSIDAD ANDRES BELLO
Enrique	Mesa Pérez	Universidad de Córdoba
Soledad	Montero Linares	Ecologistas
Antonio	Montes Poyato	CCRR Tintín
Silvia	Nieto Abril	Agencia de Medio Ambiente y Agua
José Manuel	Nieto López	Cetaqua
Lourdes	Orta Rasco	Regaber
Francisco	Pedrero Salcedo	CEBAS-CSIC
Antonio Jesús	Pérez González	Diputación Provincial de Málaga
Rocio	Piazuelo Carrasco	Xylem
Carmen	Porras	Agapa
Isaac-Arturo	Ramos-Fuentes	itk
Luis Alberto	Rodríguez Carpizo	SECALFLOR
Macario	Rodríguez Entrena	Universidad de Córdoba
Yadira	Rodríguez Muñoz	Universidad de Valladolid
María Remedios	Romero Aranda	Consejo Superior de Investigaciones Científicas
Ricardo	Ruiz Antúnez	Junta de Andalucía - Consejería de Agricultura, Ganadería, Pesca y Desarrollo Sostenible - Dirección General de Planificación y Recursos Hídricos
Melania	Salazar Ordóñez	Universidad de Córdoba
Jose Antonio	Salinas Andujar	Cátedra del Agua en Agricultura, Regadío y Agroalimentación (Universidad de Almería)
Carlos	Sanchez Pacheco	Ayuntamiento de Málaga
Pedro José	Simón Andreu	ESAMUR
Miriam	Tormo Aguilar	Agencia de Medio Ambiente y Agua
Raul	Verano Garrido	SV INNOVA
Antonio	Villasclaras Martin	COMUNIDAD REGANTES FUENTE DEL BADEN - NERJA

Below are streaming view statistics reflecting 143 views of the broadcast on the day of the event:



Figure 16 - Statistics of YouTube views obtained by the company COCOM Media on the day of the event

2.4 Workshop dissemination

The dissemination of the 3rd SUWANU EUROPE workshop in Málaga was made by the website, LinkedIn, Twitter Facebook and Mailchimp invitation. It was begun by contacting the attendees of the previous workshops held in 2019, for which a newsletter was prepared through *mailchimp*.



En otoño se cumplirá un año de nuestros [Talleres regionales de SUWANU EUROPE](#) celebrados en Córdoba y Málaga, en los que tuvimos la suerte de contar con la asistencia de muchos de vosotros.

Durante este tiempo hemos trabajado para recopilar las necesidades del sector y responder a vuestras necesidades. Ahora queremos compartir nuestro trabajo con vosotros el día 25 de Septiembre en el Palacio de Congresos de Málaga en el

III Taller SUWANU EUROPE
"Herramientas para el uso de aguas regeneradas en agricultura"

Hablaremos sobre el [Plan REGENERA](#) (Plan de Acción Regional Andalus para el Uso del Agua Regenerada) y se prestará especial atención a la elaboración de [Planes de Gestión de Riesgos](#), uno de los requisitos del [nuevo Reglamento Europeo](#) (EU/2020/741). Además presentaremos las herramientas que SUWANU EUROPE pondrá a disposición de todos, como nuestra [plataforma de enseñanza virtual](#).

¡El plazo de inscripción ya está abierto! La participación podrá ser presencial o en streaming, y junto a vuestro registro podéis conseguir entradas para la feria [SMART AGRIFOOD SUMMIT](#) (No os quedéis sin la vuestra!)

¡QUIERO REGISTRARME!

[Consultar la agenda del evento](#)

Figure 17 - Newsletter <https://mailchi.mp/d41096dca25c/invitacion-taller-suwanu-europe>

Then expanded to the general public using the website and other social networks of the project. To achieve the highest number of registered in the event, the campaign was divided into 4 steps to create more expectation:

STEP 1: SUMMARY OF THE WORKSHOP

First of all, a piece of news with all the information related to the workshop was published in the SUWANU EUROPE **website**. This news included the aim of the workshop, the agenda, and the link to register.

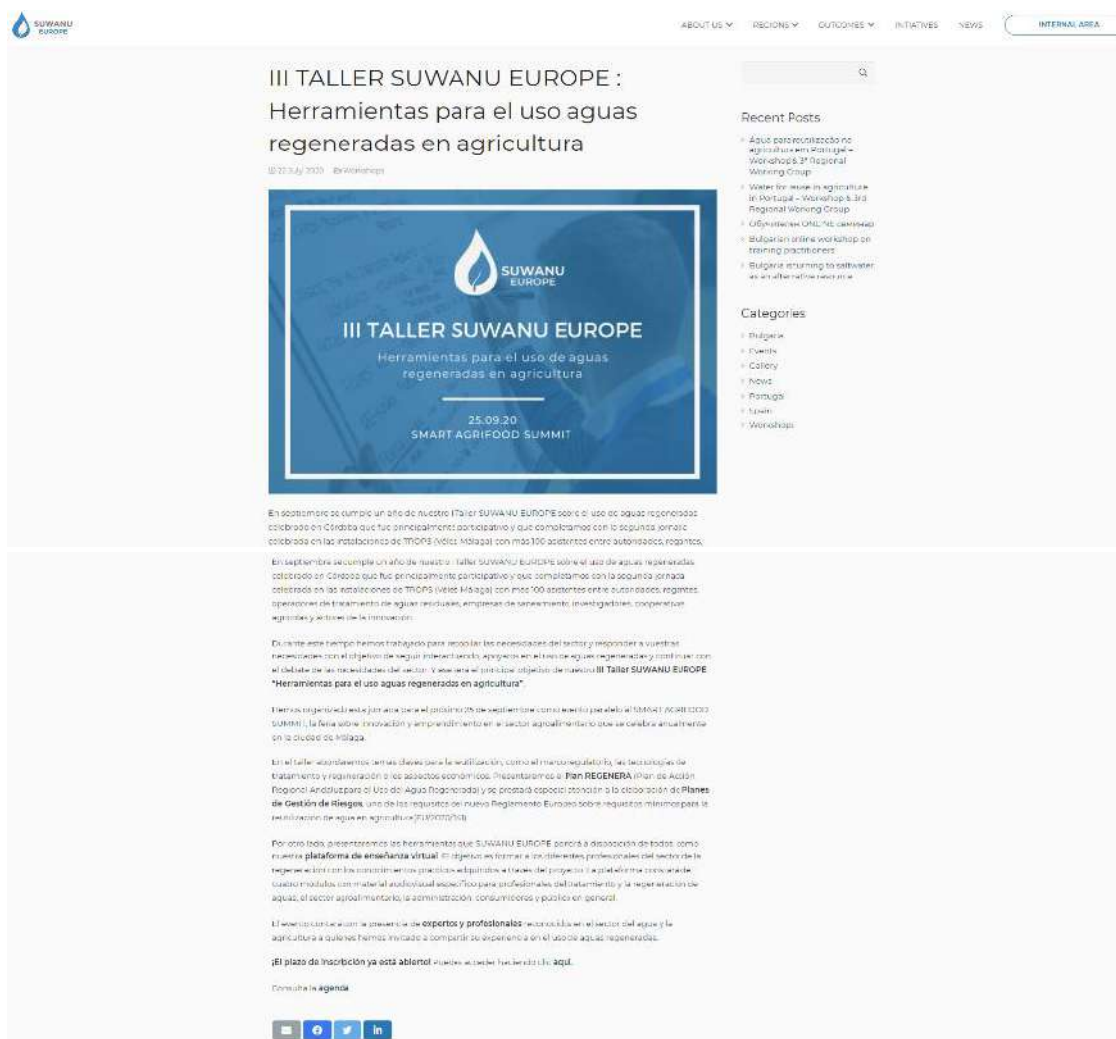


Figure 18 - <https://suwanu-europe.eu/taller-suwanu-europe-herramientas-aguas-regeneradas-agricultura/>

In the social media channels different banners and posts were published:



Figure 19 - Banners used in the social media posts

- **LinkedIn:**

<https://www.linkedin.com/feed/update/urn:li:activity:6691984904453947392>

<https://www.linkedin.com/feed/update/urn:li:activity:6694225249833144320>

<https://www.linkedin.com/feed/update/urn:li:activity:6699570440848994304>

<https://www.linkedin.com/feed/update/urn:li:activity:6704324493935964160>

- **Twitter:**

https://twitter.com/SUWANU_EUROPE/status/1286222117768396807?s=20

https://twitter.com/bioazul_spain/status/1286241437668061184?s=20

https://twitter.com/SUWANU_EUROPE/status/1293804748261523461?s=20

https://twitter.com/SUWANU_EUROPE/status/1298591451379572738?s=20

- **Facebook:**

<https://www.facebook.com/suwanu.europe/posts/145676673826030>

<https://www.facebook.com/suwanu.europe/photos/a.132832998443731/154637226263308/>

STEP 2: SPEAKERS

The second step of the campaign was to announce the speakers that will participate in the first part of the workshop, using the social media channels and Spanish subscribers to SUWANU EUROPE.



Figure 20 - Banner with Speakers information

This banner was prepared to disseminate in the different social media channels.

- **LinkedIn:** <https://www.linkedin.com/feed/update/urn:li:activity:6706900531035611136>
- **Twitter:** https://twitter.com/SUWANU_EUROPE/status/1301117472763006977?s=20
- **Facebook:** <https://www.facebook.com/suwanu.europe/posts/162456535481377>
- **Mailchimp:** <https://mailchi.mp/dc865cf08bf3/agenda-taller-suwanu-europe-25-sept>



III TALLER SUWANU EUROPE

Herramientas para el uso de aguas regeneradas en agricultura

25.09.20
SMART AGRI-FOOD SUMMIT

Hola de nuevo,

El 25 de septiembre se acerca y ya tenemos todo listo para el III Taller SUWANU EUROPE "Herramientas para el uso de aguas regeneradas en agricultura" que tendrá lugar en el Palacio de Ferias y Congresos de Málaga con todas las medidas de prevención disponibles y que además retransmitiremos en streaming para que todos los interesados podáis participar.

Hasta esa día vamos a compartir con vosotros el contenido del taller. En esta ocasión os dejamos el panel de profesionales y expertos con los que tenemos la suerte de contar como ponentes, que compartirán su experiencia y visión estratégica en la gestión y uso de las aguas regeneradas en agricultura.

¡El plazo de inscripción ya está abierto!

Podrás asistir de forma presencial o en streaming, y recuerda que junto a tu registro podrás conseguir entradas para la feria Smart Agrifood Summit.

[¡QUIERO REGISTRARME!](#)



Rafael Casielles
BIOAZUL
Resultados SUWANU EUROPE
Plataforma de formación: [¿Qué RECÉNSA...](#)



Pedro Simón
ESAMUR
Nueva regulación europea de reutilización
Elaboración de planes de gestión de riesgos



Junta de Andalucía
Dirección General de Planificación y Recursos Hídricos
Pacto Andaluz del Agua
El papel de las aguas regeneradas en Andalucía



Joaquín Paéz
CONFEDERACIÓN HIDROGRÁFICA DEL GUADALQUIVIR
Gestión de las aguas regeneradas en la cuenca del Guadalquivir



M. Mercedes Romero
CSIC-IBSM LA MAYORA
Efectos de las aguas regeneradas en cultivos
El proyecto RichWater



Reutivar
Comunidad de regantes Tintín
PROYECTO REUTIVAR
Experiencia de los usuarios del Rego en olivo

[Consulta la agenda completa del evento](#)







Figure 21 - Newsletter with Speakers information

STEP 3: PARTICIPATIVE SESSION

The speakers of the participative session which consists in a round table with public participation about the Andalusia Action Plan developed within the project (Plan REGENERA) were announced in this third step.



Figure 22 - Banner with components of ROUND TABLE about Andalusia action plan (Plan REGENERA)

The social media channels where this banner was shared were:

- **LinkedIn:** <https://www.linkedin.com/feed/update/urn:li:activity:6709764531192635393>
- **Twitter:** https://twitter.com/SUWANU_EUROPE/status/1304003625648377856?s=20
- **Facebook:** <https://www.facebook.com/suwanu.europe/posts/165261991867498>
- **Mailchimp:** <https://mailchi.mp/164acf881f68/sesion-participativa-taller-suwanu-europe-25-sept>



Hola,

Ya queda menos para nuestro [III Taller SUWANU EUROPE "Herramientas para el uso de aguas regeneradas en agricultura"](#) el próximo 25 de septiembre en el Palacio de Ferias y Congresos de Málaga. Un evento híbrido al que podrás asistir tanto de forma presencial, garantizando todas las medidas de seguridad e higiene, o en streaming a través de nuestro canal de [Youtube](#).

Hoy queremos compartir contigo el grupo de expertos que nos acompañarán durante la sesión participativa del evento en la que recogeremos vuestras aportaciones para la elaboración del [PlanREGENERA](#), el plan de acción regional para el uso eficiente del agua regenerada en agricultura. Uno de nuestros objetivos es incluir este plan dentro del [PlanDSEAR](#) que actualmente desarrolla el [MITECO](#), con el que mantenemos una estrecha colaboración.



[Consulta la agenda completa del evento](#)



Este proyecto ha sido financiado por el [Programa de la Unión Europea Horizonte 2020](#), destinado a financiar la investigación y el desarrollo, bajo el contrato de colaboración [H2-BIOBES](#). Este material se difunde solo refleja la opinión del autor; la Comisión Europea no se hace responsable del uso que pueda hacerse del mismo.

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Figure 23 - Newsletter about the Participative session

STEP 4: INSTRUCTIONS FOR THE WORKSHOP

The last step of this campaigns was to share the instructions for the workshop and emphasize the possibility of being able to attend via streaming.



Figure 24 - Banners from last step of dissemination

- **LinkedIn:**
<https://www.linkedin.com/feed/update/urn:li:activity:6711562616956850176>
<https://www.linkedin.com/feed/update/urn:li:activity:6714866043170418688>
- **Twitter:**
https://twitter.com/SUWANU_EUROPE/status/1305798878025920512?s=20
https://twitter.com/SUWANU_EUROPE/status/1309100353829376006?s=20
- **Facebook:**
<https://www.facebook.com/suwanu.europe/posts/166913008369063>
<https://www.facebook.com/suwanu.europe/photos/a.132832998443731/169982324728798/>

FINAL INSTRUCTIONS

Before the event, a newsletter was sent to all registered with clear information on how to attend, both in person (including information about the SMART AGRIFOOD fair) and to connect via streaming.

In this newsletter, the development of the workshop was explained in detail, how to share the event on social networks and how to interact with the speakers of the round table, in which questions were sent to the public so that they could share their opinion on the blocks that make up the Andalusia Action Plan (Plan REGENERA). This interactive session was done using the online application [AHASLIDES](#).



¡Ya tenemos todo preparado!

Te dejamos algunas instrucciones sobre el acceso y funcionamiento del taller para no tengas ninguna duda y puedas disfrutar de la interesante jornada que hemos organizado para ti.

LOCALIZACIÓN Y REGISTRO

Como ya sabes el evento presencial tendrá lugar en el [Palacio de Ferias y Congresos de Málaga \(FYCMA\)](#) en la sala de conferencias 1.1+1.2+1.3, coincidiendo además con la feria SMART AGRIFOOD SUMMIT. Aquí tienes un mapa para poder localizarnos sin problemas siguiendo la línea amarilla:



Desde el equipo de organización de SMART AGRIFOOD SUMMIT habrás recibido un email con tu acreditación que incluye un código QR. Este código te permitirá acceder tanto a nuestro Taller SUWANU EUROPE como a la feria.

Cuando llegues al Palacio de Ferias y Congresos de Málaga deberás pasar, en primer lugar, por el control de temperatura e higienización y después llegarás a la zona de registro. Una vez estés aquí deberás enseñar tu código QR (impreso o desde tu dispositivo móvil) con el que podrás acceder al recinto.

Recuerda que para llegar a la sala de conferencias deberás pasar por la zona de expositores de la feria.

EVENTO EN STREAMING

Si no puedes asistir de forma presencial podrás hacerlo vía online. El taller se retransmitirá en directo a partir de las 9:00 desde nuestro canal de [YouTube](#). Durante toda la jornada podrás hacer uso del chat de nuestro canal para lanzar tus preguntas a los ponentes y que os respondan en directo.

REDES SOCIALES

Nos gustaría que compartieses en nuestras redes sociales tus impresiones sobre el taller:

1. Menciona a [@SUWANU_EU](#) (twitter) o [@suwanu.europe](#) (facebook)
2. Utiliza los hashtags [#TallerSUWANUEU](#) y [#aguasresiduales](#).

P.D. ¡No olvidéis seguirnos!

AhaSlides

Para el final del taller necesitamos tu participación donde los miembros del consorcio español de SUWANU EUROPE presentarán el [#PlanREGENERA](#). Durante esta sesión lanzarán varias preguntas a través de la aplicación web [Ahaslides.com](#) que usaremos para pedir tu opinión.

Este es enlace para acceder: <https://ahaslides.com/250920>

El funcionamiento es muy sencillo: sólo hay que pinchar en el link (o escribirlo directamente en tu servidor) e ir contestando a las preguntas que aparecen. No te preocupes si surge alguna duda, en el taller te explicaremos su funcionamiento en detalle.

Figure 25 - Final information <https://mailchi.mp/7c2e2ff9e54c/instrucciones-taller-suwanu-europe>

2.5 Workshop pre-work, preparation, and distributed material

The workshop was organized taking advantage of the [SMART AGRIFOOD SUMMIT](#) conference that takes place annually in Malaga, an industry-leading event for the creation of innovative ecosystems within the European agri-food sector.

SMART AGRIFOOD SUMMIT celebrated its third edition, consolidating itself as the main international event for the agri-food and innovative ecosystem. In total, 1,450 professionals have registered for the event where they have found new business opportunities and have accessed the most cutting-edge technologies for the development of the primary sector. This edition was a hybrid event for the development of the event with the maximum-security guarantees against COVID-19.

Furthermore, the workshop was conceived as a hybrid event that would allow both speakers and attendees to be physically at the event or also remotely, with live broadcasting and connections with experts in real time.

For all this, the Palace of Fairs and Congresses of Malaga ([FYCMA](#)) was contacted to contract the space and organize a room and be at the fair as a side event.

SCHEDULE – SIDE EVENTS

Organization of parallel activities by corporations during Smart Agrifood Summit.

Friday, September 25th 2020

3RD SUWANU EUROPE WORKSHOP: TOOLS FOR THE USE OF RECLAIMED WATER IN AGRICULTURE



Organiser: BIOAZUL
Time: 9:00 – 2:00 p.m.
Location: Conference Rooms 1.1+1.2+1.3

The workshop will address key issues for reuse, such as the regulatory framework, treatment and regeneration technologies or economic aspects. On the other hand, the tools that SUWANU EUROPE will make available to the public as the virtual teaching platform will be presented.
 The event will have the presence of recognized experts and professionals in the water and agriculture sector who will share their experience in the use of reclaimed water.

[MORE INFO](#)

Figure 26 - Screenshote Programm side events AGRIFOOD 2020

And on the other hand, budgets were requested for the streaming broadcast of the event, finally choosing the company [COCOM Media](#).

BIOAZUL in cooperation with this company developed graphics and posters to accompany the broadcast of the event. In addition, QR codes and links were generated to share project information with both face-to-face and virtual attendees.





RICARDO RUIZ
Subdirector General de Planificación y Recursos Hídricos de la Junta de Andalucía
Pacto Andaluz del Agua
El papel de las aguas regeneradas en la gestión de los recursos hídricos en Andalucía



EMILIO RODRÍGUEZ
Jefe de Área de planes y estudios de la oficina de planificación hidrológica de Confederación Hidrográfica del Guadalquivir
Licencias de uso de aguas regeneradas en la cuenca del Guadalquivir
Lecciones aprendidas y planes de futuro

III TALLER SUWANU EUROPE
Herramientas para el uso de aguas regeneradas en agricultura
22.03.2024 - 09:00H - 14:00H SUWANU EUROPE



M. REMEDIOS ROMERO
Investigadora CSIC-IMM La Mayora
Efectos de las aguas regeneradas en cultivos
El proyecto RichWater



ANTONIO MONTES
Técnico en las Comarcas de regantes Tinto
Proyecto REUTIVAR
Experiencia de los usuarios en el riego de alto con aguas regeneradas

III TALLER SUWANU EUROPE
Herramientas para el uso de aguas regeneradas en agricultura
22.03.2024 - 09:00H - 14:00H SUWANU EUROPE

SESIÓN PARTICIPATIVA
Mesa redonda sobre el PLAN REGENERA



ALFONSO EXPÓSITO
Gerente Investigación IRRAS
(Ponente)



JULIO BERBEL
Universidad de Córdoba



DAVID HERNÁNDEZ
Federación Nacional de Comunidades de Regantes de España



RAFAEL CASELLES
Irrigador



XANA RODRÍGUEZ
Coordinadora de Consumidores y Usuarios



JULIO BERBEL
Catedrático del Departamento de Economía, Sociología y Política Agrarias de la Universidad de Córdoba. Director del grupo de Investigación WEARE
BLOQUE I
Marco legislativo y procedimientos administrativos adecuados

III TALLER SUWANU EUROPE
Herramientas para el uso de aguas regeneradas en agricultura
22.03.2024 - 09:00H - 14:00H SUWANU EUROPE



DAVID HERNÁNDEZ
Ingeniero consultor en la Federación Nacional de Comunidades de Regantes de España (FENACORE)
BLOQUE II
Incentivos para la reutilización



XANA RODRÍGUEZ
Técnica de Proyectos en la Confederación de Consumidores y Usuarios (CECU)
BLOQUE IV
Aceptación de los consumidores

III TALLER SUWANU EUROPE
Herramientas para el uso de aguas regeneradas en agricultura
22.03.2024 - 09:00H - 14:00H SUWANU EUROPE

Figure 27 - Banners using during the workshop

2.6 Programme-Agenda



25 SEPTIEMBRE 2020
Palacio de Ferias y Congresos de Málaga

III TALLER SUWANU EUROPE Herramientas para el uso de aguas regeneradas en agricultura	
9:00 H	SESIÓN INAUGURAL Ricardo Ruiz (Subdirector Gral. de Planificación y Recursos Hídricos JA) Concha Marcuello (Responsable Unidad Apoyo Dir. Gral. del Agua MITECO) Emilio Rodríguez (Jefe de área de planes y estudios de la oficina de planificación hidrológica de la Confederación Hidrográfica del Guadalquivir) Alberto Pérez (Alcalde Ayto. Algarrobo) Modera: Antonia Lorenzo (CEO y Directora de I+D+i de BIOAZUL)
9:30 H	RESULTADOS SUWANU EUROPE Plataforma de formación, Plan REGENERA, Repositorio on-line de iniciativas de reutilización Rafael Casielles (BIOAZUL), coordinador SUWANU EUROPE
10:00 H	NUEVA REGULACIÓN EUROPEA DE REUTILIZACIÓN Elaboración de planes de gestión de riesgos Pedro Simón, Director Técnico de ESAMUR
10:45 H	COFFEE BREAK
11:15 H	PACTO ANDALUZ DEL AGUA El papel de las aguas regeneradas en la gestión de los recursos hídricos en Andalucía Ricardo Ruiz, Subdirector General de Planificación y Recursos Hídricos de la Junta de Andalucía
11:45 H	LICENCIAS DE USO DE AGUAS REGENERADAS EN LA CUENCA DEL GUADALQUIVIR Lecciones aprendidas y planes de futuro. Emilio Rodríguez, Jefe de área de planes y estudios de la oficina de planificación hidrológica de CHG
12:15 H	EFFECTOS DE LAS AGUAS REGENERADAS EN CULTIVOS El proyecto RichWater María Remedios Romero, investigadora CSIC-IHSM La Mayora
12:45 H	PROYECTO REUTIVAR Experiencia en el riego de olivo con aguas regeneradas Antonio Montes, técnico de la Comunidad de regantes Tintín
13:20 H	SESIÓN PARTICIPATIVA Mesa redonda sobre el PLAN REGENERA Moderador: Alfonso Expósito, investigador grupo WEARE Mesa: Julio Berbel (UCO), David Hernández (FENACORE), Rafael Casielles (BIOAZUL) y Xana Rodríguez (CECU)
14:00 H	CLAUSURA

[Inscripción en este link](#)

Organizan:



Este proyecto ha sido financiado por el Programa de la Unión Europea Horizonte 2020, destinado a financiar la investigación y el desarrollo, bajo el contrato de colaboración Nº 818088.

Figure 28 - Programme

2.7 Summary of the presentations and activities carried out during the workshop

The workshop, which was held as a parallel event within the Smart Agrifood Summit fair, was attended by great experts and recognized professionals from the water and agriculture sector. The event had around 68 attendees between face-to-face and virtual.

Rafael Casielles, general coordinator of SUWANU EUROPE and **Bioazul** project manager, was the presenter and the person who led the event. The workshop started with an opening table made up of **Ricardo Ruiz**, Deputy Director General of Planning and Water Resources of the [Junta de Andalucía](#); **Concha Marcuello**, head of the Support Unit for the General Water Directorate of the [Spanish Ministry for the Ecological Transition and the Demographic Challenge](#); **Emilio Rodríguez**, head of the plans and studies area of the hydrological planning office of the [Guadalquivir Hydrographic Confederation](#), Alberto Pérez, mayor of the [Algarrobo City Council](#); and **Antonia Lorenzo**, CEO and director of R + D + i at **Bioazul**. All agreed on the commitment that all administrations and institutions must make to support the use of reclaimed water, as well as raise awareness and help the communities of irrigators and farmers.

After this introduction, Rafael Casielles presented the SUWANU EUROPE project as well as the work carried out so far. Rafael announced some of the project's results such as the compilation of **initiatives and success stories** in the use of reclaimed water that serve as a guide for other regions. He also presented the next **virtual teaching platform** where there will be different training packages with audio-visual material and virtual classes taught by the members of the project consortium to share in this way all the information and knowledge collected so far.

The next guest of the workshop was **Pedro Simón**, **Technical Director of ESAMUR** (Entity of Sanitation and Wastewater Treatment of the Region of Murcia). He was one of the most anticipated speakers due to the success of his intervention in the first edition of the SUWANU EUROPE workshop. On this occasion, Pedro Simón presented the **New European Regulation** on the use of reclaimed water that came into force last May 2020 and for which he calls for greater shared responsibility between the different actors, also including the end user. He also presented the success story of the Murcia region, a pioneer in the use of these unconventional water resources. Finally, he explained how to develop an **adequate irrigation plan**, one of the new requirements of the European Regulation.

The day continued with the intervention of **Ricardo Ruiz**, **deputy director of planning and Water Resources of the Junta de Andalucía**, who presented the Andalusian Water Pact. The main objective of this pact is to promote the reuse of regenerated wastewater for agricultural use, golf courses and others, providing existing and future wastewater treatment facilities with efficient and sustainable systems that allow the obtaining of reclaimed water with the required quality. This pact is in the third phase in which the working document of the pact has been presented to the Collegiate bodies of Water Participation in Andalusia and once it is reviewed the first draft will be obtained.

After this intervention, it was the turn of **Emilio Rodríguez**, **head of the plans and studies area of the hydrological planning office of the Guadalquivir Hydrographic Confederation**. His presentation focused on the **licenses for the use of reclaimed water in the Guadalquivir**. Emilio

reviewed the measures adopted over the years to promote the use of these waters and presented the objectives for a plan to use reclaimed waters.

Later, **M. Remedios Romero**, [CSIC-IHSM La Mayora](#) researcher, presented us with the **results of the RichWater project** and the effects that regenerated water produces on crops. Her role in this project was to endorse the agronomic studies carried out on crops that had been irrigated with reclaimed water. She highlighted above all the advantages and potential of these water resources compared to conventional ones, such as a greater contribution of nutrients.

The last speaker at this workshop was **Antonio Montes**, a technician from the **Tintín Irrigation Community** in the town of Montilla (Córdoba). Antonio presented the results and activities carried out in the [REUTIVAR project](#), whose objective was the development of a sustainable olive grove irrigation model for rural areas of Andalusia, integrating irrigation with reclaimed water.

2.8 Results

Table 7 - Main results of the workshop

Input, feedback or lesson learnt obtained during the workshop	Activity where this input was generated (e.g., speech from expert, roundtable with stakeholders, comments from the audience during Q&A session or participatory activity, etc.)	How this input/feedback might be implemented in the SUWANU EUROPE project and/or might be a driver for change in society.
One barrier is the high prize of reclaimed water compared with fresh water. It is difficult to make farmers opt for a more expensive water. There is a need of economic incentives.	Round table: open debate between experts and the audience.	Regional Action Plan of Andalusia
Sharing of costs to produce reclaimed water between the citizen and the farmers applying the principle of “polluters pay” because citizens are discharging water to the sewer in a worse quality to the water they receive.	Round table: open debate between experts and the audience.	Regional Action Plan of Andalusia

Investments in infrastructure (e.g., tertiary treatments) are needed to ensure compliance with quality requirements.	Round table: open debate between experts and the audience.	Regional Action Plan of Andalusia
It is important to use renewable energies (e.g., photovoltaic panels) to reduce the costs of producing reclaimed water.	Round table: open debate between experts and the audience.	Regional Action Plan of Andalusia
Spain has faces sanctions for not complying with the urban wastewater treatment directive. It is a priority now for the public administration to improve water treatment. The water “canon” shall be used exclusively to improve the water treatment and reclamation infrastructure.	Round table: open debate between experts and the audience.	Regional Action Plan of Andalusia
Dialogue between actors is important. River basin plans shall include the use reclaimed water according to stakeholder’s demand.	Round table: open debate between experts and the audience.	Regional Action Plan of Andalusia
Innovation is very relevant to provide effective and efficient technology that reduce costs of water reclamation. Instruments such as Innovative Public Procurement is an interesting tool to promote innovation.	Round table: open debate between experts and the audience.	Regional Action Plan of Andalusia
Negative social perception of reclaimed water is one of the main barriers to extend the use of reclaimed water. Raise awareness campaign are needed adapting scientific knowledge to the language of the general public and using a positive narrative (e.g., reclaimed water vs. wastewater) and emphasizing the relevance of the water scarce context.	Round table: open debate between experts and the audience.	Regional Action Plan of Andalusia

2.9 Conclusions

The SUWANU EUROPE training workshop held in Andalusia enabled to share the project results with a great variety of stakeholders. The presentation of SUWANU EUROPE materials to a wide audience is expected to have a major impact and complement the efforts of other dissemination activities such as the use of social media or the publication of articles.

Furthermore, there has been an exchange of important lessons learnt in the advance to promote water reuse practices in the workshop. Here we wanted to bring experiences from three different initiatives: the experience of water governance by the public sector, research results from the academia and the practical experience of farmers that irrigate with reclaimed water. The different perspectives and views presented in the workshop respond to the multi-actor approach followed by SUWANU EUROPE and outlined in the scope of thematic networks. This scope is intended to meet the needs of a complex problem, namely increase water efficiency, that requires multidisciplinary solutions at different levels: legislation, governance, technology and citizen engagement.

In this sense it was very relevant to bring the case of the Murcia region which is a pioneer in the use of reclaimed water in agriculture and one of the regions in Europe with highest reuse rate. The case of Murcia is not sufficiently known in other regions in Spain and has brought an important lesson: the need of developing adapted plans that prioritize the use of reclaimed water with the adequate allocation of financing resources.

The round table was intended to promote dialogue and interaction with the public, however, there was not as much feedback as expected. We understand the pandemic situation and the low participation in the face-to-face event discouraged people to participate more actively. It is a lesson learnt for future events to use more effectively interactive tools for participation.

As a conclusion, the workshop has been very satisfactory in terms of quality of the programme and audience. The workshop has reinforced the network of contacts that will be continuously engaged and contacted through other means such as the project newsletter and the social media. The workshop is underpinned by the intensive networking of the first project period. In this sense, it is worth to stress the role of the Regional Working Group which has been key in the dissemination of the event and preparation of the programme.

3 ANTWERP – LIMBURG | BELGIUM

3.1 Executive summary

The workshop was held on the 22nd of March 2021 as one of the three webinar series of the event called 'WaterWijs' (WaterWise), a yearly event organized by PSKW to disseminate water-related research topics in the vegetable production. The event took place in the light of "World Water Day". This year the event was online due to Covid-19 restrictions.

The workshop consisted in a webinar. It started giving the context and the vision of water reuse in agriculture in Flanders, based on the results of the SuWaNu Europe deliverables and workshops with the regional working group. Four speakers then highlighted different water reuse cases for agriculture in Flanders. There was room for interaction and discussion with the participants at the end of each topic.

In total 58 persons participated in the workshop. The workshop was recorded and will be published online to reach and inform a broader audience which could not be present at the moment.

3.2 Composition of the workshop organization team

Table 8 - Workshop organising committee

Workshop steering Committee's members		
Name	Organization	Position to the organization
Els Berckmoes	PSKW	Director of PSKW and researcher
Noémie Hissette	PSKW	Researcher
Charlotte Boeckaert	VLAKWA (Flemish knowledge centre for water)	Water Innovator
Birte Raes	Aquafin (Operator of water treatment infrastructure in the Flemish region)	Research and development Engineer
Alexander Opdebeeck	PSKW	Communication/dissemination
Robby Sallaets	PSKW	Communication/dissemination

3.3 Workshop Participants

A lot of major agricultural associations were represented during the workshop. From policy makers and government to industries and farmers. Out of 58 people present, 15 amongst them were farmers. The distribution of the participants is visualised in the diagram of Figure 29. The workshop was in Dutch since it was held for our target region in Flanders.

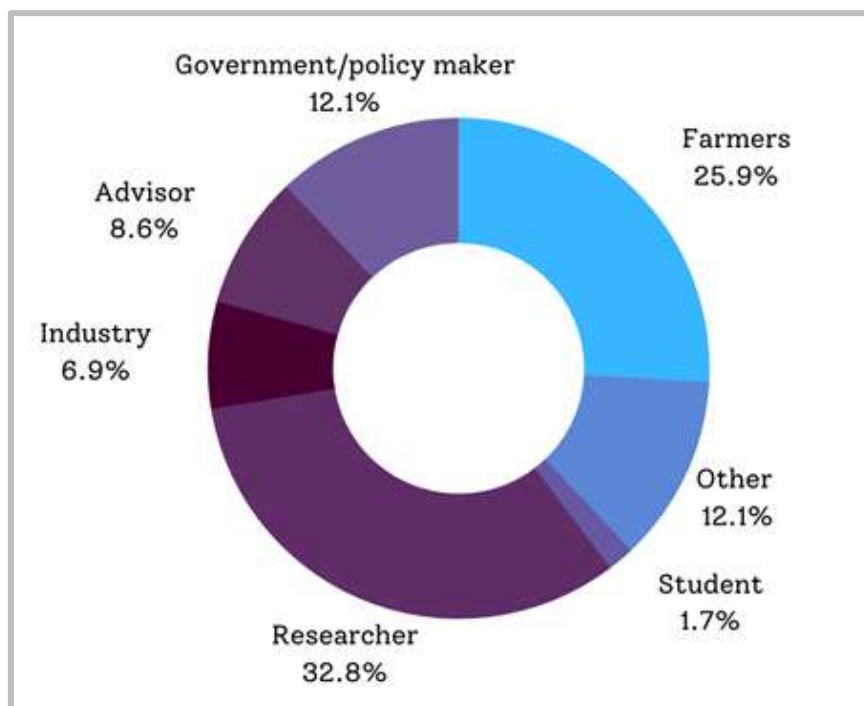


Figure 29 - Diagram showing the type of participants in the workshop

Remarkably was the presence of companies with (new) water treatment technologies. They can be very necessary in developing new ways to use reclaimed water in agriculture.

Table 9 - Participants of the train the practitioners' workshop

Participants	
Name	Organization represented
Robby Sallaets	PSKW
Alexander Opdebeeck	PSKW
Charlotte Boeckeaert	VLAKWA
Noémie Hisette	PSKW
Ado Van Assche	PSKW
Els Bercmoes	PSKW
Julien Maes	Farmer
Kelly Wittemans	KU Leuven
Kevin Pittoors	Primato
Dirk Bertels	Farmer
Hilda Claes	Other
Bart Debussche	Vlaamse overheid department landbouw & visserij
Erwin Janssens	Innovethics
Inge Van Den Bergh	PSKW
Kim Baert	Bosag
Ilse Delcour	Proefcentrum sierteelt
Andre Smets	Farmer
Kim Croes	Ugent

Participants	
Name	Organization represented
Dirk vertommen	Farmer
Sven Luyten	Farmer
Tim De Cuypere	Inagro
Mieke Planckaert	Lava
Brecht Bamps	KU Leuven
Iris Van Dosselaer	Provincie Antwerpen
Marc Schietecatte	Farmer
Bart van Calenberge	De Watergroep
Mieke Vandermersch	Praktijkpunt Landbouw Vlaams-Brabant
Stijn Renaerts	Bosag
Victoria Nelissen	Proefcentrum fruit
Danny Naenen	Farmer
Peter Cauwenberg	Hydroscan
Bert Sluyts	Farmer
Birte Raes	Aquafin
Andy Augustus	Air Liquide
Dorien Mahieu	PIDPA
Michel Boucneau	VMM
Chris Lenaerts	Farmer
Wim Van Roosbroeck	Other
Quirin Vyvey	Dovycon bv
Guy Pittoors	Pitoma
Peter Aerts	Blue Foot Membranes
Kristin Moens	Gemeente Bornem
Jef Daems	VITO
Margot Uyyerhoeven	Student Thomas More
Kris Huijskens	Provincie Antwerpen
Nicole Van Praet	Gemeente Bornem
Joris De Nies	PSKW
Jan Heulen	Farmer
Dominique Huits	Inagro
Ilse Geyskens	Boerenbond
Stan Verdonck	Provincie Antwerpen
Anke Corneille	Clarebout
Luc Lavrijsen	Farmer
Bert Sluyts	Farmer
Wim Vanden Auweele	VLACO
Tuur	Other
Jeroen De Ridder	Farmer
Yves Engels	Farmer

3.4 Workshop dissemination

A poster was designed including the logo and grant agreement of SuWaNu Europe as shown in Figure 30.



Figure 30 Poster of the workshop

PSKW used different platforms and tools to disseminate the workshop. First of all, we used the channels of the organization to disseminate. Figure 31 displays how the event was disseminated through the [website](#).

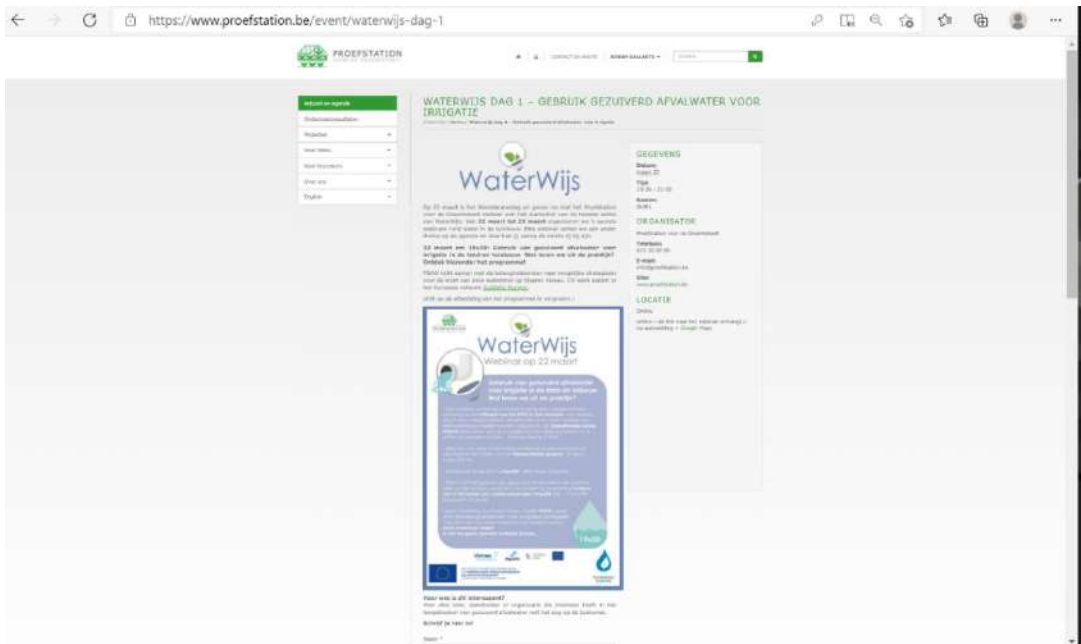


Figure 31 The workshop was published on the website of PSKW

After publishing the workshop on the website, PSKW disseminated it by sending a newsletter to their members (1.078 people), containing farmers, companies, policy makers, press and research partners. We also contacted the regional working group of SuWaNu Europe with a personal invitation for the workshop and the final conference of SuWaNu Europe at the same time. A few days before the event a reminder was sent to the same group.

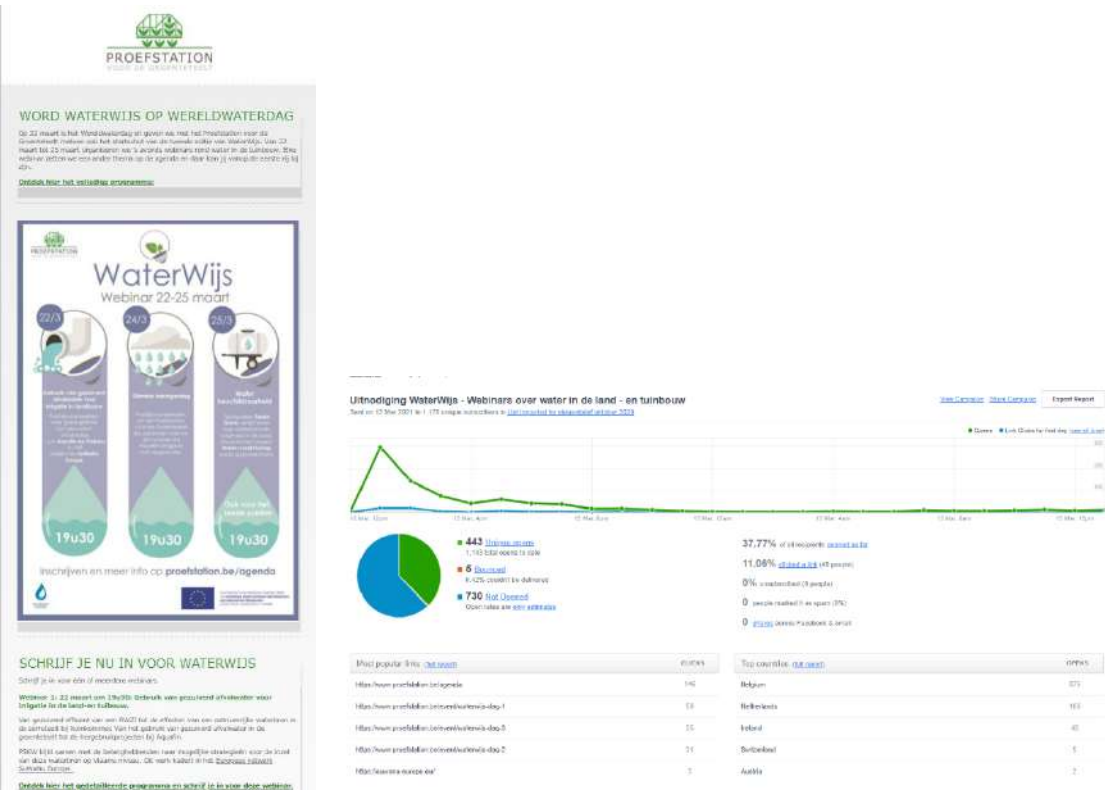


Figure 32 PSKW communicated the workshop at their members through a newsletter (left) which has been read by 443 unique readers (right)

PSKW equally disseminated the event through social media and the LinkedIn Profile of Els Berckmoes, our new director. Links to the posts:

- [Proefstation voor de Groenteteelt: Company Page Admin | LinkedIn](#)
- [Proefstation voor de groenteteelt \(@PGroenteteelt\) / Twitter](#)
- [Proefstation voor de groenteteelt | Facebook](#)
- [Els Berckmoes | LinkedIn](#)

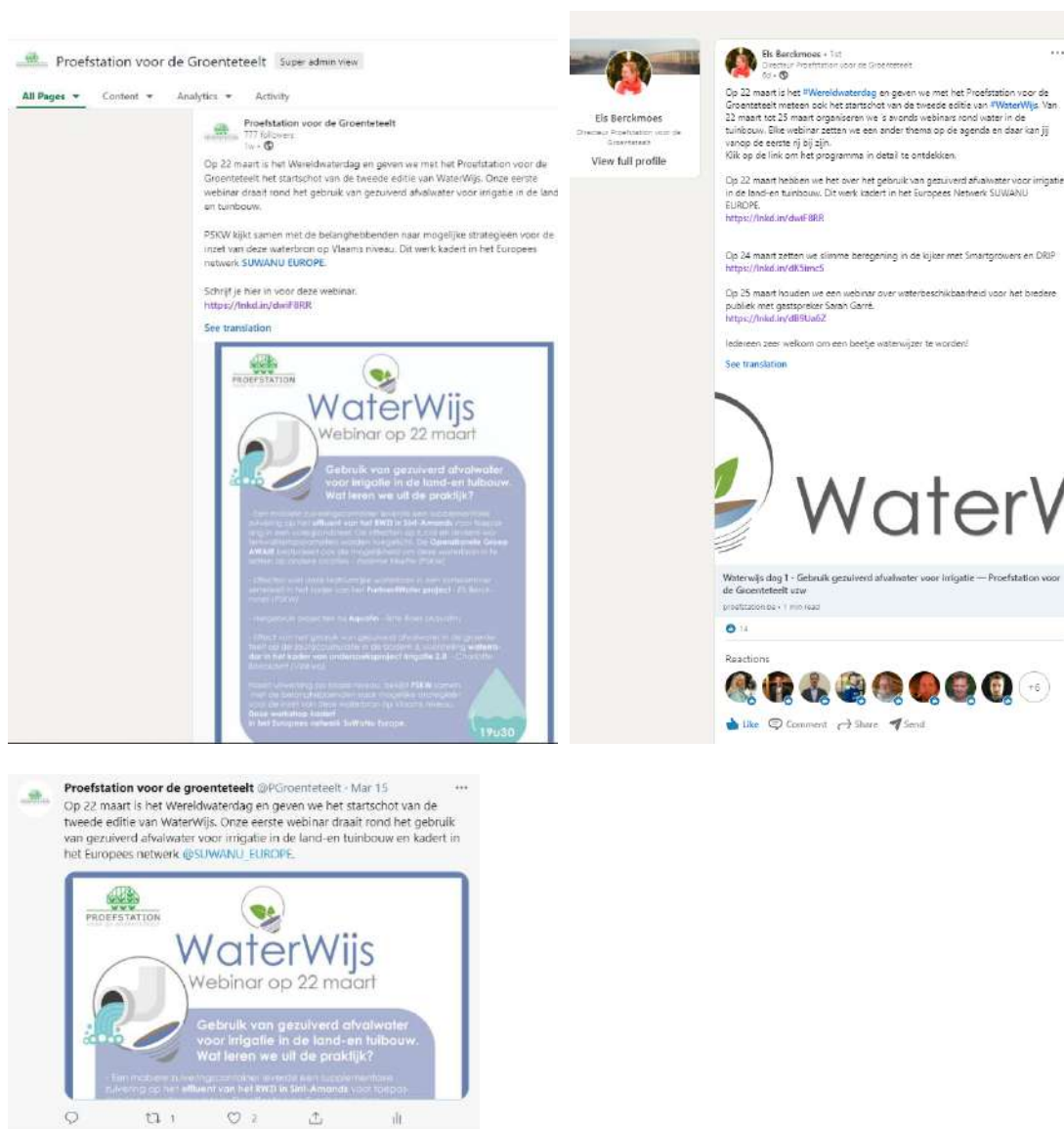


Figure 33 The event was spread through the social media channels of PSKW such as linkedin (above) and twitter (down)

The workshop was also published on channels of the trade pers (Figure 34) and of SuWaNu Europe (Figure 35).



Figure 34 Workshop published in Vilt, an information site regarding agriculture and horticulture in Flanders

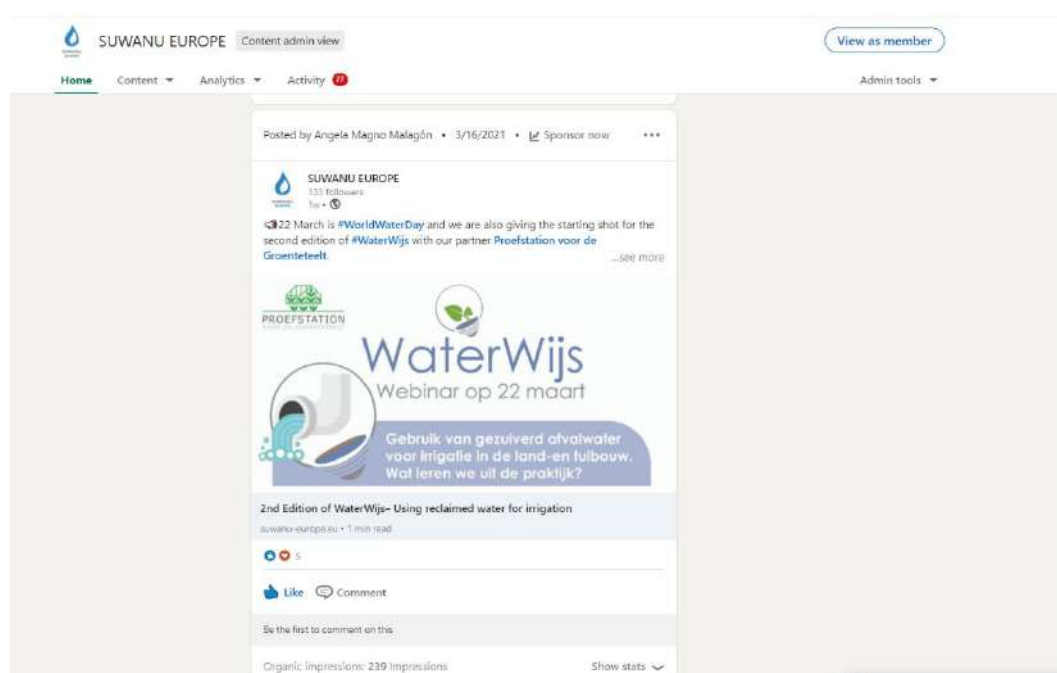


Figure 35 Workshop published on the SuWaNu Europe channels

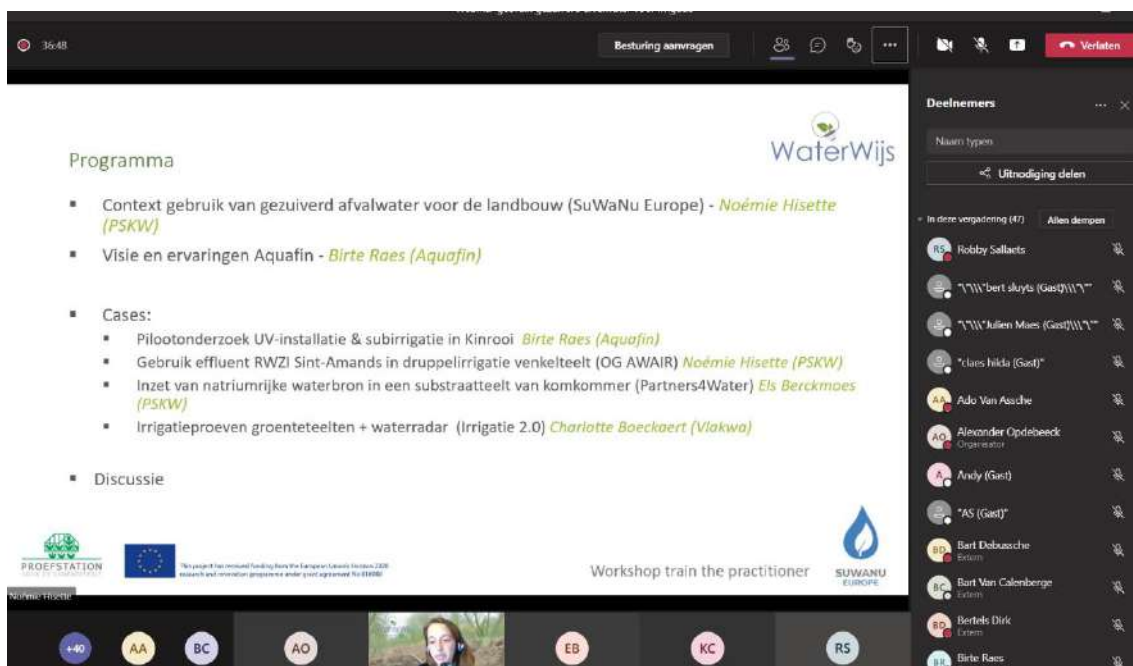
3.5 Workshop pre-work, preparation, and distributed material

Activities for the preparation of the workshop included:

- Define the content, concept, date, and length of the workshop
- Invite the speakers and their topics
- Write out the introduction text and programme
- Dissemination activities (detailed in part 5)
- Prepare the slides for workshop
- Design the lay-out of the event
- Send out the invitation to participate to the workshop

3.6 Programme-Agenda

The workshop started with an introduction of the SuWaNu Europe thematic network presented by Noémie Hisette. Birte Raes of Aquafin, the wastewater treatment operator in Flanders, discussed the vision and experiences of the company regarding water reuse. Then, four speakers presented the results of practical (research)cases regarding the use of reclaimed water for agricultural irrigation in Flanders. Figure 36 shows the programme in Dutch.



The screenshot shows a Zoom meeting interface. The main window displays a slide titled "Programma" (Programme) with the following content:

- Context gebruik van gezuiverd afvalwater voor de landbouw (SuWaNu Europe) - *Noémie Hisette (PSKW)*
- Visie en ervaringen Aquafin - *Birte Raes (Aquafin)*
- Cases:
 - Pilootonderzoek UV-installatie & subirrigatie in Kinrooi *Birte Raes (Aquafin)*
 - Gebruik effluent RWZI Sint-Amands in druppelirrigatie venketeelt (OG AWAIR) *Noémie Hisette (PSKW)*
 - Inzet van natriumrijke waterbron in een substraatteelt van komkommer (Partners4Water) *Els Berckmoes (PSKW)*
 - Irrigatieproeven groenteteelten + waterradar (Irrigatie 2.0) *Charlotte Boeckert (Vlaqua)*
- Discussie

The right sidebar shows a list of participants under the heading "Deelnemers". The bottom of the screen shows a grid of participant video thumbnails.

Figure 36 Programme of the workshop

3.7 Summary of the presentations and activities carried out during the workshop

The workshop started with an introduction of the **SuWaNu Europe** thematic network presented by Noémie Hisette. Results of the SWOT analysis and Regional Action Plan were briefly presented in order to set the water reuse context in Flanders clear.

Birte Raes of **Aquafin**, the wastewater treatment operator in Flanders, discussed the vision and experiences of the company regarding water reuse. Less than one percent of the treated wastewater is reused now in Flanders. Although, there is growing interest from different sectors due to the increasing frequency of drought and the commitments towards a circular economy. Nowadays, several barriers for reuse on a large scale are present. Nowadays Aquafin actively supports and is involved in water reuse initiatives to have insights in possible business cases.

After setting the context and strategies, four speakers presented the results of practical (research)cases regarding the use of reclaimed water for agricultural irrigation in Flanders:

- **a pilot case about UV-disinfection and the use of reclaimed water through subirrigation (Birte Raes, Aquafin)**

Results of the UV-pilot concluded to be promising as reclamation treatment in order to reduce the microbiological parameters (such as E. coli) in the treated wastewater effluent. Pre-filtration does not seem to be necessary prior to used apply to UV-disinfection if class C or D of the EU regulation need to be achieved. An economic cost-benefit analysis will be performed in order to assess this reclamation treatment.

Another initiative in which Aquafin is involved is the water reuse at the WWTP of Kinrooi by infiltrating it in the drainage system (also called subirrigation). The terrain implementation as well as the monitoring plans for water quality were presented to the audience.

- **the use of reclaimed water for drip irrigation in a fennel field (Noémie Hisette, PSKW)**

In the context of the operational group AWAIR, a demonstration found place in the summer of 2020 to reuse the water originating from the WWTP of Sint-Amands to irrigate a fennel parcel located in nearby. A treatment container containing a disinfection step with hydrogen peroxide was installed and evaluated. The experiences for the implementation were shared, as well as the results of the water quality monitoring campaign. Also, here, the focus was on disinfection in order to reduce the E. coli parameters in the water. The dosis-effect of hydrogen-peroxide were presented and discussed.

- **the use of reclaimed water as a sodium-rich water source in a greenhouse cultivation of cucumber (Els Berckmoes, PSKW)**

An increasing and important share of the Flemish horticultural sector consists of cultivations in closed greenhouses. In this farming system water is recirculated through the system. Therefore, it is important to evaluate whether this reclaimed water source could be used in this context. The focus here lies in the high sodium content of the water, which is challenging when the water is recirculated. Plants take up nutrients from

the water, but no salts (such as sodium). By recirculation of water, salts accumulate in the water and are limiting the growth of the plants once it surpasses a certain concentration. Results of an experiment applying treated water – with or without a semi selection sodium treatment (ultrafiltration) – to a cucumber cultivation were presented. The research found place in the framework of the Partners4 Water project.

- **the use of reclaimed water in open-field vegetables and the effects on soil salinization, and the presentation of the ‘WaterRadar’-tool (Charlotte Boeckeaert, Vlakwa)**

The research project ‘Irrigatie 2.0’ irrigates since two consecutive years agricultural fields (cauliflower, spinach, and potatoes) with treated wastewater (without reclamation treatment). The results were presented during the webinar assessing the effects of using this water source on the agricultural production and salinization into the soil compared to irrigation with rainwater.

Furthermore, the project developed an online tool called ‘WaterRadar’ which visualizes reclaimed water sources and the agricultural water demand on a map for the region Flanders.

The workshop ended with an interactive part where questions were answered.

The recorded workshop was held in Dutch and is available on Youtube:

[WaterWijs: gebruik van gezuiverd afvalwater voor irrigatie 22 maart 2021 - YouTube](#)

3.8 Results

The workshop aimed at informing the practitioners regarding the use of reclaimed water in Flanders. In the contrary to other target regions, the use of reclaimed water for agricultural irrigation is no common practice. For this reason, the findings, and experiences of four practical research cases in the region were presented. The results of this ‘train the practitioners’-workshop mainly consisted in informing the stakeholders based on insight of Flemish water reuse cases, and the deliverable of SuWaNu Europe.

Table 10 Summary of the lessons learnt during the workshop

Input, feedback or lesson learnt obtained during the workshop	Activity where this input was generated	How this input might be a driver for change in society.
Opportunities and barriers to use reclaimed water for agricultural irrigation in Flanders	Presentation from expert	Knowledge exchange
A reclamation treatment consisting of a disinfection is needed in order to fulfil the microbiological norms (such as <i>E. coli</i>) included in the EU regulation	Presentation from expert	Knowledge exchange

UV-disinfection and hydrogen peroxide showed significant effects on the reduction of <i>E. coli</i> in pilot treatments. More insight in the dose, time-based progress and costs will be gathered in order to assess the feasibility in certain implementation cases in Flanders	Presentation from expert	Knowledge exchange
The sodium content is an important parameter in closed greenhouses where water is recirculated.	Presentation from expert	Knowledge exchange
If reclaimed water (with generally high salt content) is frequently used as irrigation source, the salt accumulation in the soil is an important point of attention on the long-term.	Presentation from expert	Knowledge exchange
A public tool informs farmers and (wastewater)providers of the demand for agricultural water and the supply of reclaimed water in Flanders. This map intends to match the farmers with reclaimed water suppliers in the neighbourhood.	Presentation from expert	Knowledge exchange

3.9 Conclusions

The “train the practitioner” workshop took place on the 22nd of March at 7.30pm as an online webinar. There were 58 stakeholders present in the workshop. Some results from the SuWaNu Europe deliverables were presented, followed by four cases where reclaimed water is used for agricultural irrigation in Flanders in a research context. Each case was presented by a different speaker and highlighted various topics across different farming systems in Flanders. The workshop is available online and is intended to inform and reach a broader audience as the life representation.

4 BRAUNSCHWEIG | GERMANY

4.1 Executive summary

The Workshop “Water Reuse and Resource Recovery: A Prospect in Europe” aimed to present and disseminate innovative processes and technologies developed in Europe in the frame of water reuse and nutrient recovery and their potential implementation in Germany.

With more than 65 registered parties and an effective participation of 60%, the workshop was addressed to experts, academics, practitioners, researchers, farmers, companies and, in general, stakeholders interested on water management and reuse.

Due to the actual COVID-19 Pandemic restrictions, the workshop was held Online via Zoom platform, on the 26.04.2021. In order to set forth to the participants the most relevant topics, the workshop was divided in 8 sections, consisting in the presentation of 7 different projects including room for questions and a discussion panel carried out as the last activity, allowing the interaction between experts and participants to express their opinions and share relevant findings and knowledge.

4.2 Composition of the workshop organization team

Table 11 - Workshop steering Committee's members

Workshop steering Committee's members		
Name	Organization	Position to the organization
Andres Acosta	TTZ Bremerhaven	Project leader
Mirko Hänel	TTZ Bremerhaven	Head department
Claudia Fernandez	TTZ Bremerhaven	Student Assistant
Franziska Gromadecki	AV-BS Braunschweig	Director
Janina Heinze	AV-BS Braunschweig	Project manager
Workshops working teams and moderators (if applicable)		
Topics	Name	Member of the partners working team
The Braunschweig water reuse scheme (AV-BS)	M.Sc.-Ing. Janina Heinze	AV-BS Braunschweig
Nutrient and energy recovery in Braunschweig (NextGen)	Dr.-Ing. Anne Kleyböcker	Researcher- Kompetenzzentrum Wasser)
Constructed wetlands for water reuse and resource recovery	Ing. Carlos A. Arias, PhD	Aarhus University
Smart fertigation (Green Drop)	Dipl. Ing Stefan Scholz	HYDRO-AIR international
Water reuse network in Europe (SUWANU EU)	M.Sc. - Ing. Andrés Acosta	TTZ Bremerhaven
Hydroponic water reuse (HypoWave)	M.Sc. - Ing. Sybille Karwat	Technical University Braunschweig
Agricultural reuse of digestate (GreenCycle)	M.Sc. - Agr. Veiko Junghans	Humboldt University)

4.3 Workshop Participants

The workshop was addressed to experts, academics, practitioners, researchers, farmers, company's representatives and, in general, parties interested on water management and resource recovery. The diverse background of the professionals and practitioners that attended the workshop allowed the program to cover a broad range of matters and generate a comprehensive discussion by considering the experience and point of view of the different stakeholders.

The list of the registered participants, including the organization represented, is shown in the following table:

Table 12 - Registered participants to the workshop

Registered participants to the workshop		
	Name	Organization represented
1	Natalija Aleksic	Individual
2	Nauman Ali Khan Khilji	Individual
3	Felix Lühr	Gut-floto
4	Birk Ilgner	agrargesellschaft-petkus
5	Vanessa Bolivar	Individual
6	Andreas Muckwar	Ap Berfelde
7	Niklas Trautmann	Aquawaste
8	Carlos ARIAS	Aahrus University
9	Hannes Mesecke	Agrar-tauche
10	Michelle Hubert	Kreta-berlin
11	rabea hesse	Kreta-berlin
12	Stefan Scholz	Hydro-air
13	Solvei Mundbjerg Jensen	Aahrus University
14	Ulrich Sass	Braunschweig
15	Gottfried Pessl	Metos
16	Andreas Tauscher	Kreta-berlin
17	Marlen Kretschmer	Berlintownprojects
18	Mirko Haenel	ttz-bremerhaven
19	Hamza LEKHBIZI	Adiro
20	Sanchita Khandelwal	Aquawaste
21	David Hernandez	Fenacore
22	Anastasios Michailidis	Auth
23	George Ziankas	Individual
24	yvan poussade	Veolia
25	Fabian Kraus	Kompetenz-wasser
26	Tadej Stepisnik Perdih	Individual
27	Carolina Lechado	Carolinalechado
28	Rudy Lamond	Airlíquide

Registered participants to the workshop		
	Name	Organization represented
29	Günter Dr. Olfe	Agrargesellschaft-petkus
30	Hernan Ruiz Ocampo	Pontsbschool
31	Thomas Coetzee	Microdyn-nadir
32	Jungeun Kim	Bath AC
33	Lars Lundgaard	Kalfor
34	Maya Van Cleemput	KU Leuven
35	Bernhard Pucher	Boku
36	Bhagyashree Balpande	Individual
37	Amir Gholipour	Individual
38	Liese Sanchez	Individual
39	Antje Koch	ttz-bremerhaven
40	Sebastian Puin	Individual
41	Kleyböcker Anne	Kompetenz-wasser
42	Marnic Nooyens	KU Leuven
43	Philipp Dorn	Individual
44	Philipp Otter	Autarcon
45	Enrica Uggetti	UPC
46	Cora Suzanne Eichholz	Eichholzbau
47	Thomas Slegers	KU Leuven
48	Cora Suzanne Eichholz	eichholzbau
49	FABIO MASI	iridra
50	Carlos A. Ramirez-Vargas	Aahrus University
51	Sybille Karwat	TU-braunschweig
52	Sebastian Puin	Individual
53	Jonas Schneider	Pipifax
54	Janina Heinze	Abwasserverband-bs
55	Shivani Meher	Individual
56	Ibrat Sharif	Brandenburg University of Technology
57	Ali Hadi Zadeh	Brandenburg University of Technology
58	Eldho Jacob Thomas	Brandenburg University of Technology
59	Constanza Pena	Brandenburg University of Technology
60	Md Golam Rabiet Rabbani	Brandenburg University of Technology
61	Gunia	Individual
62	Wendy Bernal	Universidad Cental
63	Nivedita Sante	Individual
64	Claudia Fernandez	ttz-bremerhaven
65	DEISY VARGAS	Engineer consultant
66	Veikko Junghans	Humboldt University-berlin
67	Andres Acosta	ttz-bremerhaven

4.4 Workshop dissemination

The dissemination of the workshop was extended through the SuWaNu and TTZ Bremerhaven contact network, direct invitation to different universities, partners, farmers, practitioners, and individuals. The invitations and flyers were distributed via E-mail and social media.

4.5 Workshop pre-work, preparation, and distributed material

The outlined strategy was developed with the aim of conducting the workshop as effectively as possible, despite the restrictions of the pandemic. The decision was to carry out the workshop virtually, therefore it was necessary to choose and configure the most convenient platform. For this purpose, the platform Zoom offered the required features for the correct development of the event.

The initial step was to determine an attractive theme for the workshop and to implement a scheme that allows the exchange of relevant and useful information within the stakeholders. Therefore, the search for relevant projects with existing results and success stories that could serve as model and inspiration for parties facing similar challenges were carried out.

Once the list of projects was significant, the ones considered the most appropriate, were selected and the experts were contacted and invited to take part in the workshop.

With the confirmation of the presenters the organizational phase began. The schedule, the distribution and the Agenda was established. Additionally, the stage comprised the design and preparation of the flyers and invitations to be distributed as well as the registration form. The Figure 1 displays the flyer of the event and figure 2 and 3 the registration form employed.

The dissemination of the workshop was undertaken via E-mail and social media among Universities, Networks, SuWaNu Europe, and among practitioners, farmers and individuals in Germany interested in the water reuse and resource recovery.

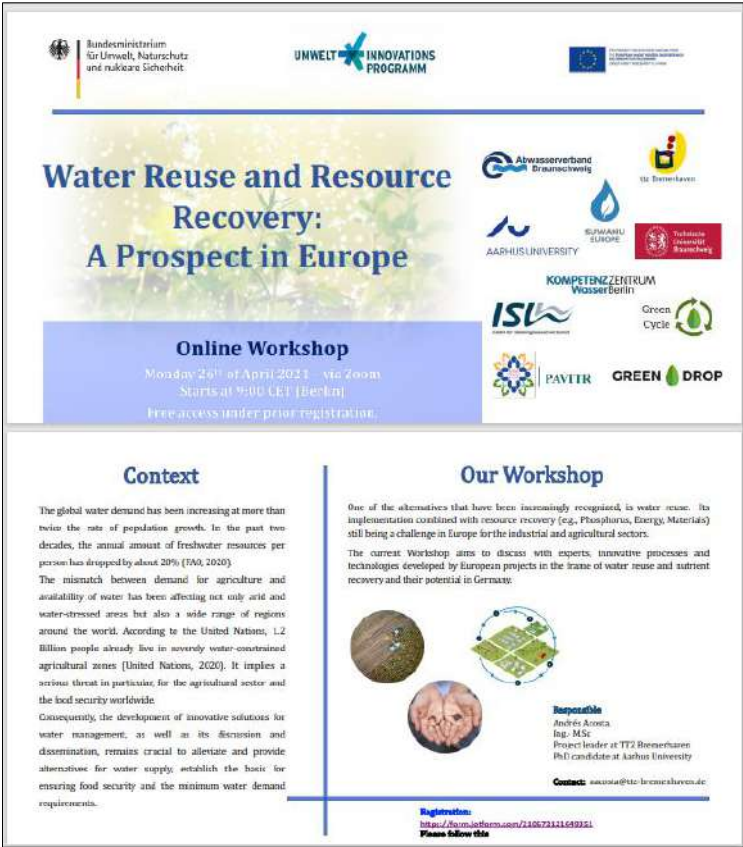


Figure 37 Workshop Flyer

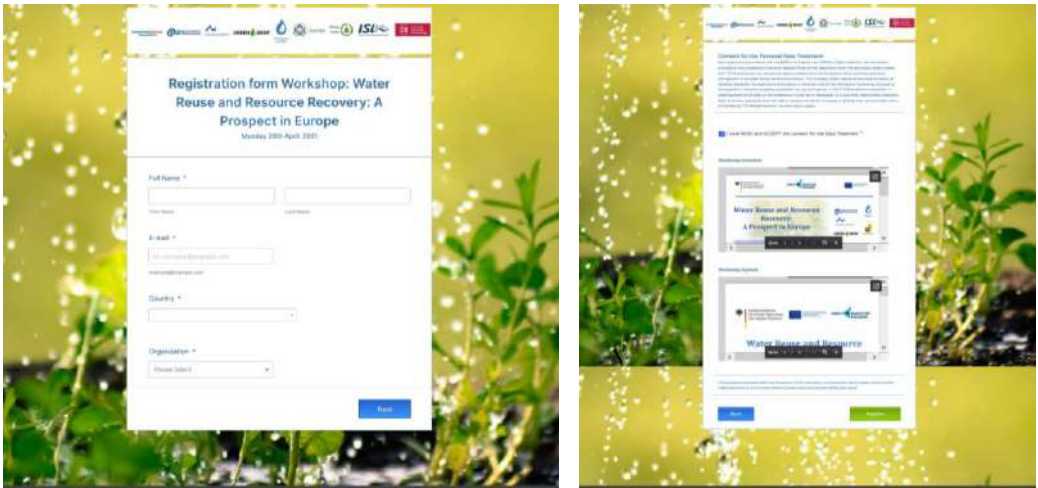


Figure 38 Workshop Registration form

4.6 Programme-Agenda

AGENDA Monday 26 th April 2021	
Time	Event
9:00 AM	Welcome and introduction ➤ Dipl.- Ing. Mirko Hänel, M.Sc. (Head department -TTZ Bremerhaven)
9:15 - 9:30	The Braunschweig water reuse scheme (AV-BS) ➤ Dr. Ing Franziska Gromadecki (Director - AV-BS Braunschweig) ➤ M.Sc.-Ing. Janina Heinze (Project Manager AV-BS Braunschweig)
9:35 - 9:50	Nutrient and energy recovery in Braunschweig (NextGen) ➤ Dr.-Ing. Anne Kleyböcker (Researcher- Kompetenzzentrum Wasser)
9:55 - 10:10	Constructed wetlands for water reuse and resource recovery ➤ Ing. Carlos A. Arias, PhD (Senior Researcher- Aarhus University) ➤ Ing. Carlos Ramírez-Vargas, PhD (Postdoc - Aarhus University)
10:15 – 10:24	<i>Coffee break</i>
10:25 - 10:40	Smart fertigation (Green Drop) ➤ Dipl. Ing Stefan Scholz (Manager director HYDRO-AIR international)
10:45 – 11:00	Water reuse network in Europe (SUWANU EU) ➤ M.Sc. - Ing. Andrés Acosta, (Project leader - TTZ Bremerhaven) PhD candidate at Aarhus University
11:05 – 11:20	Hydroponic water reuse (HypoWave) ➤ Prof.- Dr. Thomas Dockhorn (Technical University Braunschweig) ➤ M.Sc. - Ing. Sybille Karwat (Researcher - Institute for Sanitation and Water Management of the Technical University Braunschweig)
11:25 – 11:40	Agricultural reuse of digestate (GreenCycle) ➤ M.Sc. - Agr. Veiko Junghans (Researcher – Humboldt University)
11:45 – 12:50	Discussion ➤ Moderators Andrés Acosta and Mirko Hänel (TTZ Bremerhaven)
12:50 – 13:00	<i>Acknowledgements and closure.</i>

Figure 39 Workshop Agenda

4.7 Summary of the presentations and activities carried out during the workshop

The event started on time at 09:00, 5 minutes extra were given to ensure all the participants join the workshop. The hosts welcomed the participants, and an introduction was given, in which the water scarcity problem was introduced and the importance and potential of the water reuse were highlighted.

The workshop brings together 7 presentations given by experts in which the topics and systems were explained, the results and case of studies were presented along with the challenges and how they were overcome in a successful way. After each presentation, room for questions was given. As final section, the discussion panel moderated by two experts was held.

The following projects and topics were presented:

- *The Braunschweig water reuse scheme (AV-BS): Regulatory challenges and opportunities for a German reclaimed water end-user* was presented by MSc. Ing. Janina Heinze, project leader in Abwasserverband Braunschweig. In the presentation, the Braunschweig water reuse scheme was explained. Besides, the legal framework, the risk management and the challenges and opportunities of the scheme were exposed.
- Nutrient and energy recovery in Braunschweig (NextGen) presented by Dr Ing. Anne Kleyböcker Researcher at Kompetenzzentrum Wasser. An introduction to the project took place at the beginning of the presentation, in which the 10 demonstration sites within the project were briefly exhibited. The focus of the presentation was the technology implemented in Germany. The stages of the technology, equipment and processes were explained along with the operation conditions and results obtained. Lastly, the communities of practice in the case of study were introduced and how the promotion of nutrient recycling has been achieved in the region.
- Constructed wetlands for water reuse and resource recovery was presented by Ing. Carlos A. Arias PHD, senior researcher at Aarhus University. The definition and features of the system was given, and the types of treatment systems were explained. Following, the presentation of some successfully developed cases in Europe, United States, and India. Their technical characteristics and the results obtained were also discussed. Lastly, the potential of high valuable products from constructed wetlands biomass were demonstrated.
- Smart fertigation (Green Drop), Dipl. Ing Stefan Scholz, manager director at HydroAir international irrigation systems GmbH presented the main objective of the project as well as its advantages. The technological approach was explained indicating the technologies involved and their working principle. Additionally, short illustrative videos were displayed in which the functioning of the system was clearly exhibited. To conclude, the constructed prototypes in Germany and Poland and their results were depicted.

- Hydrothermal reactions biomass conversion and Water reuse network in Europe (SUWANU EU) presented by Ing. MSc. Andres Acosta, PhD student at Aarhus University and project leader at TTZ Bremerhaven. A description of his investigation was presented along with the processes involved. The viability and potential of recovering high valuable resources from the constructed wetlands biomass, implementing hydrothermal reactions were described and highlighted.

Subsequent, the presentation of SuWaNu Europe project was held, pointing out its objectives and aims and highlighting the extent of the project.

- Hydroponic water reuse (HypoWave) presented by MSc. Ing. Sybille Karwat, researcher at the institute for sanitation and water management of the technical university Braunschweig. The presenter first introduced the HypoWave's fields of activity. The presentation deepened in the description of the pilot facility, its objectives, and characteristics. The processes and variables of the wastewater treatment were described. Next, the lettuce production case of study was presented and the results obtained were discussed.
- Agricultural reuse of digestate (GreenCycle), MSc. Agr. Veiko Junghans Researcher at Humboldt University firstly presented the GreenCycle approach, its main aim and the background of the project. The scheme of the approach and the units along with the technical facts were described and discussed. Lastly, the results and advantages were shown.

To conclude the event, the discussion panel took place. In this session the experts interacted with the participants and different topics were addressed. For instance, legislation governing the water reuse, advantages and disadvantages, challenges in Germany and Denmark, challenges for farmers in terms of water availability and water pricing, among others.

4.8 Results

Table 13 - Summary of the lessons learnt during the workshop

Input, feedback or lesson learnt obtained during the workshop	Activity where this input was generated (e.g., speech from expert, roundtable with stakeholders, comments from the audience during Q&A session or participatory activity, etc.)	How this input/feedback might be implemented in the SUWANU EUROPE project and/or might be a driver for change in society.
<i>The Braunschweig water reuse scheme (AV-BS)</i>		

A success case that has been developed over time. The scheme treats wastewater in a system with high quality standards. Reclaimed water is then used by local farmers to irrigate main field crops which feed the local biogas plant where heat and electricity is produced for more than 2,000 households	Presentations from experts	• The projects presented in the workshop are successful cases within the frame of water reuse and nutrient recovery. They represent innovative and potential solutions to tackle not only the water scarcity problem but also many environmental issues. The technologies complement conventional water resources used in agricultural irrigation and serve as models for implementing them in a large scale. • The socialization of the results and expert knowledge allows to develop accurate strategies for the implementation of water reuse solutions in different contexts. • The creation of local and international networks working together, allows a better understanding and enhance the cooperation to overcome the already existing and the upcoming challenges in Europe related to water scarcity and availability of resources. The workshop leads the creation of an network that can represent a key role to accelerate the uptake of results and experiences in the field of water reuse in agriculture and water innovation in Europe. The objective then is to be upgraded as soon as more events, workshops and activities are carried out counting with the participation
<i>Nutrient and energy recovery in Braunschweig (NextGen)</i> Demonstration and development of new generation of water systems and water services in line with the concept of circular economy.		
<i>Constructed wetlands for water reuse and resource recovery</i> Treatment wetlands can treat different kinds of polluted water and sludge and can meet stringent discharge standards. In addition, they can be useful to keep some nutrients and to produce a considerable amount of biomass. The biomass has the potential to be used as raw material to produce valuable products such as feed, proteins bio char, bio crude, chemicals etc.		
<i>Smart fertigation (Green Drop)</i> Provide an eco-friendly and highly efficient fertigation solution using a mix of data based on crop needs. Allowing an increase on crop yield, less fertilizer use and less water consumption.		
<i>Hydrothermal reactions Biomass conversion & Water reuse network in Europe (SUWANU EU)</i>		

Importance of the research in the biomass field. Recover of high valuable resources through hydrothermal reactions and production of sustainable products.		of more stakeholders worldwide.
<i>Hydroponic water reuse (HypoWave)</i> Growth of plants in hydroponic systems with wastewater obtaining high quality products, high resource efficiency and high transferability.		Evidence of the potential of the implementation of the concept of circular economy to achieve a sustainable development.
<i>Agricultural reuse of digestate (GreenCycle)</i> Reuse and recovery of nutrients and seasonal application of liquid manure complying with the Legal fertilization aspects.		

4.9 Conclusions

Despite the challenges presented due to the Corona pandemic, the workshop was successfully carried out and the topics were presented in a clear and understandable way for all the stakeholders.

The development of this program allowed the socialization and dissemination of relevant results among experts, researchers, farmers, industry representatives and other interested parties involved in the field of water reuse and nutrient recovery as well as circular economy and resource efficiency. With the development of this workshop, we were able to connect different stakeholders and join efforts to work together to obtain effective solutions to the challenges that arise in this area.

It is important to highlight the importance of this workshops as a mean to create a wider network which as result can provide solutions and building capacity for stakeholders around the world and to tackle the actual environmental problems in an effective and sustainable way.

5 OCCITANIE | FRANCE

5.1 Executive summary

During the regional workshop (Task 2.4) organised on December 6th, 2019 in Narbonne (Occitanie, France) a wide range of stakeholders involved in water reuse for agriculture in Occitanie have been gathered. The exchanges were rich, and multiple subjects were discussed raising interest and questions from the participants. The main topics that raised the interest of participants were:

- Water quality evolution in storage system;
- Salinity of reclaimed water;
- Current and future regulation;
- Funding & Economic profitability.

In order to provide more answers and details to these questions, it has been decided to organise other specific training workshops. Considering the pandemic affecting the entire world since February 2020 and the resulting restrictions on travel and gathering, it was not possible to organize a face-to-face workshop in the Occitanie Region, France. Ecofilae, responsible partner for this region, decided to organize a series of 3 online workshops in the form of 1h-webinars. The 3 sessions, detailed below, were built to respond in general to the topics that interested the participants. SUWANU objectives, actions and available deliverables were presented during each workshop.

Workshop n°1: How to build a water reuse project?

Workshop n°2: European regulation and case study about water reuse

Workshop n°3: Learning from water reuse experiences. Special Agri & Viti

These 3 workshops gathered in total 166 people from different fields and all over France. Even if the workshops were online, they generated a great interaction from the participants by chatting and asking questions throughout the presentation.

5.2 WORKSHOP N°1: “How to build a water reuse project?”

5.2.1 Composition of the workshop organization team

For this workshop and the two others, we have defined the “steering committee’s members” as the speakers during the webinar. The “working team and moderators” are people involved in the preparation, power point presentation, invitation and general logistic.

Table 14 - Workshops steering Committee’s members

Workshop steering Committee’s members		
Name	Organization	Position to the organization
Nicolas Condom	Ecofilae	CEO
Workshops working teams and moderators (if applicable)		
Topics	Name	Member of the partners working team
Rémi Declercq	Ecofilae	Project manager
Nicolas Condom	Ecofilae	CEO
Martin Perrin	Ecofilae	Project engineer
Simon Delarque	Ecofilae	Project engineer
Marie Lahire	Ecofilae	Business Developer

5.2.2 Workshop Participants

The workshop was attended by 39 people. Most of the participants are from local or departmental communities all over France, organizations apt to carry out a water reuse project. There were also people from French government, universities, and students, and also sanitation operators (Veolia).

Table 15 - Participants of the train the practitioners’ workshop

Participants	
Name	Organization represented
Amandine Amat	CCI Alsace Eurométropole
Melissa Bahloul	Arup
Christophe Barré	VE
Jolanda Boisson	IRH IC
Didier Boulard	CERA
Estelle Boutant	TOULOUSE METROPOLE
Erwan Carré	Cereg
Manon Cassagnole	Sorbonne Université
Cédric Cibert	Communauté d'Agglomération Royan Atlantique
David Cinier	Montpellier Méditerranée Métropole

Participants	
Name	Organization represented
Barbara Decobecq	AD'OCC
Jacques Delagnes	SETE AGGLOPOLE MEDITERRANEE
Françoise Dubos	CAGV
Cécile Ducos	CARA
Julie Ducrot	Toulouse Métropole
Abdallah El Mahboul	Administration publique
Ehssan El meknassi	IAV Hassan II
Yahia Eladssi	USMBA
Valery Estier	FNCCR
Flor Etchebarne	EURODIA Group
Clotilde Fressinet	Eau de Toulouse Métropole - assainissement
Anne Genain	Veolia Eau
Francois Genain	VEOLIA EAU
Marie Gueydan	Région Occitanie
Nicolas Klopocki	Veolia
Stephane Laurent	Veolia Eau
Veronique Michel	Agglo du grand dax
Alban Mille	CONSEILS 2000
Caroline Muller	Conseil départemental de l'Hérault
Sandrine Noël	Cohin environnement
Agathe Pin	Albs
Maxime Pomies	Eurométropole de Strasbourg
Léna Rainteau	SICOVAL
Bruno Rakedjian	MTES
Samy Soyah	communauté de communes vallée de l'hérault
Bruno Taillandier	Mairie /communauté des communes CCEV
Audrey Venturino	Métropole Toulon Provence Méditerranée
Marie Wuithier	Recherche d'emploi
Frederique Zimmerlin	EUROMETROPOLE DE STRASBOURG

5.2.3 Workshop dissemination

The event has been launched on the Webinar platform Livestorm. Here is the link to the registration page: <https://app.livestorm.co/p/45097365-6c31-4c84-9bb9-652f26d6d9ea>

This page has been sent by email to our contacts, posted on LinkedIn and sent through our newsletter.

LinkedIn: <https://www.linkedin.com/feed/update/urn:li:activity:6676838183935758336>

5.2.4 Workshop pre-work, preparation, and distributed material

The webinar is based on an expert speech and a power point presentation. This one has been prepared by the working team.

A work on communication has also been done by the team, creating a registration page and a programme published and sent to our contacts.

5.2.5 Programme-Agenda



Network for effective knowledge transfer on safe and economic wastewater reuse in agriculture in Europe
HORIZON 2020 - GA number: 818088

SUWANU EUROPE

WORKSHOP N°1

Comment réussir un projet de réutilisation des eaux sur un territoire?

PROGRAMME

24 juin 2020 – 10h30 – WEBINAIRE (LIVESTORM)

- Introduction à la réutilisation des eaux
- La promesse : créer de la valeur écologique et économique
- S’inspirer de l’existant
- Le chemin : de l’idée au projet durable
- Et vous ? Etes-vous prêts pour l’économie circulaire de l’eau ?

Figure 40 - Workshop's programme

5.2.6 Summary of the presentations and activities carried out during the workshop

- Introduction to water reuse
- The promise: creating ecological and economic value
- Case study and feedback
- The path: from the idea to the sustainable project
- What about you? Are you ready for the circular water economy?
- Q&A

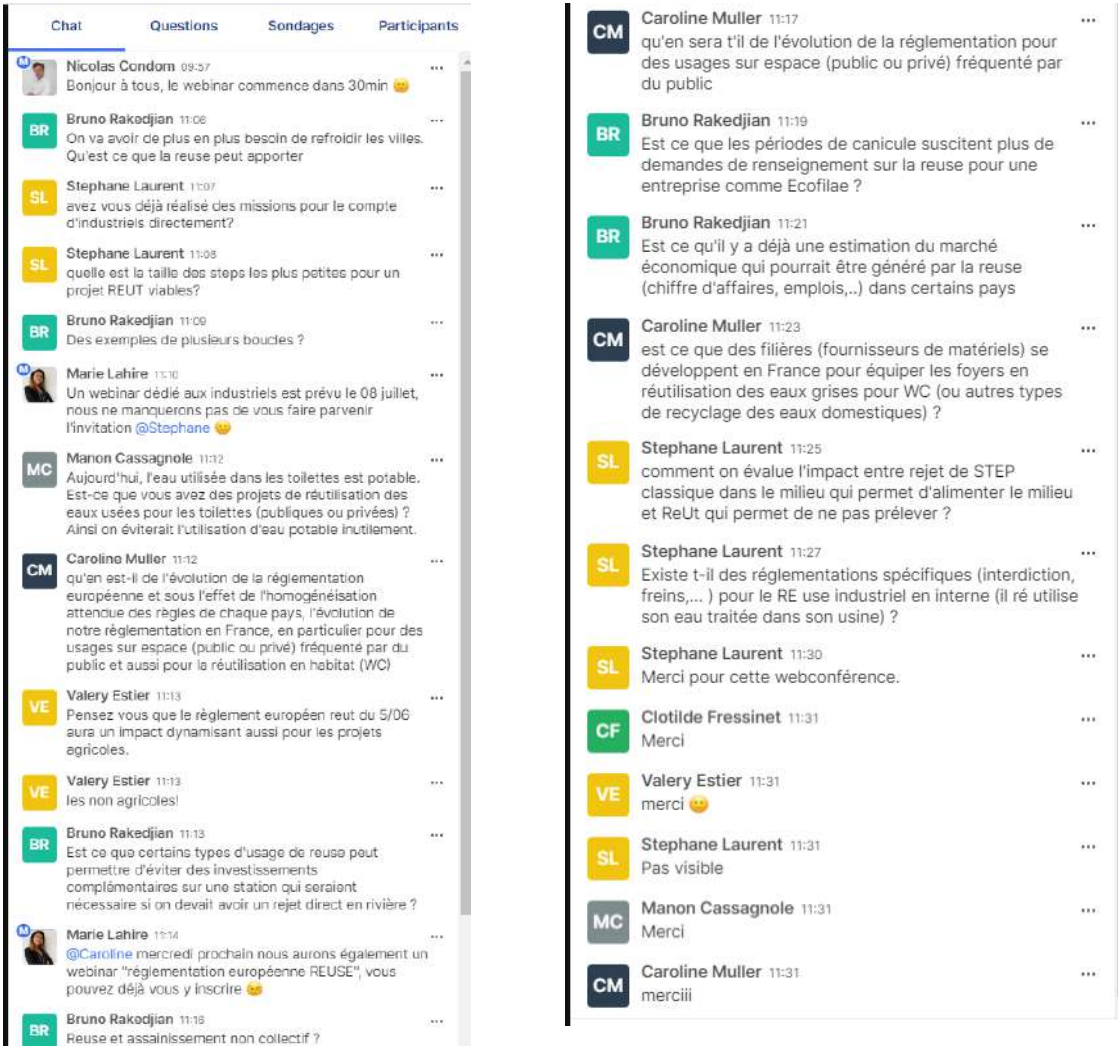
5.2.7 Results

Through this workshop, we wanted to answer questions raised during the regional working group. The thematic was focus on the methodology to build a water reuse project. Nevertheless, a lot of questions has been asked by the participants about the presentation and more, as described in the table and screenshot below.

Table 16 - Main results of the workshop

Input, feedback or lesson learnt obtained during the workshop	Activity where this input was generated (e.g., speech from expert, roundtable with stakeholders, comments from the audience during Q&A session or participatory activity, etc.)	How this input/feedback might be implemented in the SUWANU EUROPE project and/or might be a driver for change in society.
Discovery of water reuse	Speech from expert during the presentation	Awareness rising
Create ecological and economic value	Speech from expert during the presentation	That was a topic raised during 2.4 Workshop.
Case study and feedback	Speech from expert during the presentation	Case study is always appreciated because it shows that water reuse projects are feasible
Steps from the idea to the sustainable project	Speech from expert during the presentation	Water reuse project need to be structured. The methodology has been presented.
European regulation and its application to member states.	Speech from expert during the presentation + Q&A	That was a topic raised during 2.4 Workshop.
Decentralized water reuse	Q&A	Other possibilities for water reuse (urban agriculture)
Water reuse for industry	Q&A	Other possibilities for water reuse (reuse if industrial

Input, feedback or lesson learnt obtained during the workshop	Activity where this input was generated (e.g., speech from expert, roundtable with stakeholders, comments from the audience during Q&A session or participatory activity, etc.)	How this input/feedback might be implemented in the SUWANU EUROPE project and/or might be a driver for change in society.
		wastewater for agricultural purposes)
Link between water reuse interest and heatwave period	Q&A	Water reuse is a way of climate change adaptation (green areas)
Water reuse and non-collective sanitation	Q&A	Other possibilities for water reuse
Economic market and water reuse	Q&A	That was a topic raised during 2.4 Workshop.



The chat window displays a list of messages from participants. The messages are as follows:

- Nicolas Condom 09:57**: Bonjour à tous, le webinar commence dans 30min 🍌
- Bruno Rakedjian 11:06**: On va avoir de plus en plus besoin de refroidir les villes. Qu'est ce que la reuse peut apporter
- Stephane Laurent 11:07**: avez vous déjà réalisé des missions pour le compte d'industriels directement?
- Stephane Laurent 11:08**: quelle est la taille des steps les plus petites pour un projet REUT viables?
- Bruno Rakedjian 11:09**: Des exemples de plusieurs boucles ?
- Marie Lahire 11:10**: Un webinar dédié aux industriels est prévu le 08 juillet, nous ne manquerons pas de vous faire parvenir l'invitation @Stephane 🍌
- Manon Cassagnole 11:12**: Aujourd'hui, l'eau utilisée dans les toilettes est potable. Est-ce que vous avez des projets de réutilisation des eaux usées pour les toilettes (publiques ou privées) ? Ainsi on éviterait l'utilisation d'eau potable inutilement.
- Caroline Muller 11:12**: qu'en est-il de l'évolution de la réglementation européenne et sous l'effet de l'homogénéisation attendue des règles de chaque pays, l'évolution de notre réglementation en France, en particulier pour des usages sur espace (public ou privé) fréquenté par du public et aussi pour la réutilisation en habitat (WC)
- Valery Estier 11:13**: Pensez vous que le règlement européen reut du 5/06 aura un impact dynamisant aussi pour les projets agricoles.
- Valery Estier 11:13**: les non agricoles!
- Bruno Rakedjian 11:13**: Est ce que certains types d'usage de reuso peut permettre d'éviter des investissements complémentaires sur une station qui seraient nécessaires si on devait avoir un rejet direct en rivière ?
- Marie Lahire 11:14**: @Caroline mercredi prochain nous aurons également un webinar "réglementation européenne REUSE", vous pouvez déjà vous y inscrire 🍌
- Bruno Rakedjian 11:15**: Reuse et assainissement non collectif ?
- Caroline Muller 11:17**: qu'en sera t'il de l'évolution de la réglementation pour des usages sur espace (public ou privé) fréquenté par du public
- Bruno Rakedjian 11:19**: Est ce que les périodes de canicule suscitent plus de demandes de renseignement sur la reuse pour une entreprise comme Ecofilae ?
- Bruno Rakedjian 11:21**: Est ce qu'il y a déjà une estimation du marché économique qui pourrait être généré par la reuse (chiffre d'affaires, emplois,...) dans certains pays
- Caroline Muller 11:23**: est ce que des filières (fournisseurs de matériels) se développent en France pour équiper les foyers en réutilisation des eaux grises pour WC (ou autres types de recyclage des eaux domestiques) ?
- Stephane Laurent 11:25**: comment on évalue l'impact entre rejet de STEP classique dans le milieu qui permet d'alimenter le milieu et ReUt qui permet de ne pas prélever ?
- Stephane Laurent 11:27**: Existe t-il des réglementations spécifiques (interdiction, freins,...) pour le RE use industriel en interne (il ré utilise son eau traitée dans son usine) ?
- Stephane Laurent 11:30**: Merci pour cette webconférence.
- Clotilde Fressinet 11:31**: Merci
- Valery Estier 11:31**: merci 🍌
- Stephane Laurent 11:31**: Pas visible
- Manon Cassagnole 11:31**: Merci
- Caroline Muller 11:31**: merci

Figure 41 - Chat of the workshop

5.3 WORKSHOP N°2: “European regulation and case study about water reuse”

5.3.1 Composition of the workshop organization team

Table 17 - Workshop steering Committee's members

Workshop steering Committee's members		
Name	Organization	Position to the organization
Rémi Declercq	Ecofilae	Project manager
Nicolas Condom	Ecofilae	CEO
Workshops working teams and moderators (if applicable)		
Topics	Name	Member of the partners working team
Rémi Declercq	Ecofilae	Project manager
Nicolas Condom	Ecofilae	CEO
Ophélie Pratx	Ecofilae	Project engineer
Simon Delarque	Ecofilae	Project engineer



Figure 42 - Nicolas Condom and Remi Declercq, speakers during the workshop n°2

5.3.2 Workshop Participants

The workshop was attended by 92 people including 11 farmers representative. This workshop was focused on French and European regulation. A much-appreciated subject because of its complexity especially because France is currently working on an application of the European regulation.

Table 18 - Participants of the train the practitioners' workshop

Name	Organization represented
Carinne Mangeruca	GACHES CHIMIE
Bruno Molle	INRAE
Julien Martens	privé
Kristell Pichodou	CD17
Hélène Taghipour	ISA
Christelle Dehaine	Chambre d'agriculture de la Somme
Joël Lapique	Netafim
Christian Massé	SUEZ
Elise Gilleron	ISA Lille
Albane Vandeplanque	Junia Isa Lille
Cyril Zawieja	ISA Lille
Julie Catherinot	INRAE - Carnot Eau & Environnement
Myriam Puyo	Aucun
Floriane Dybul	INSTITUTION ADOUR
Claire Grangeat	Institution Adour
Marinne Gourcerol	Participation à titre personnel
Yasmine Razavi Ebrahimi	AgroParisTech
Alvaro Buoro	equinocio
Moshi Berenstein	NETAFIM
Thierry Montigaud	ddt 49
Elisabeth Bergé	ARS-PDL
Dorian Jornet	Altereo
Dominique Courault	Inrae
Youssef Mouacha	Aqualter
Jolanda Boisson	IRH IC
Maxime Pomies	Eurométropole de Strasbourg
Taliby Keita	Communauté Urbaine de Dunkerque
Arnaud Leblanc	Rain Bird
Emmanuel Courtin	CD49
Fleur Martin	Irrigazette
Vincent Trottet	Rain Bird

Name	Organization represented
Yoann Corvaisier	CHAMBRE D'AGRICULTURE DES PAYS DE LA LOIRE
Trevor Boussard	GRS VALETCH _ SARPI VEOLIA
Romain Uthayakumar	conseil aux collectivités
Marion Galaup	CC Albères Côte Vermeille Illibèris
Jérôme Meillon	Département du Gers
Marie-Christine Huau	veolia
Manon Albarède	Veolia Eau France
Benoit Voltaire	Chambre d'Agriculture Charente-Maritime
Maëla Mancip	Chambre d'agriculture de la Haute Garonne
Fabien Poussin	SYRES 17
Ka Ho Yim	APCA
Thierry Baqué	Chambre d'Agriculture du Gers
Jonathan Perot	Chambre Agriculture 66
Margaux Lhenry	Veolia
Assia Dahmane	master spécialisé gestion de l'eau AgroParisTech
Marie Prezelib	SIARP
Ehssan El Meknassi	IAV H2
Rebecca Portail	DG Trésor
Najet Gharbi	MARHP TUNISIE
Houda Bilrha	Direction générale de l'eau
Thierry Menanteau	SUEZ
Brahim Soudi	IAV Hassan II, Rabat
Yvan Poussade	Veolia
Thierry Trotouin	VEOLIA
Marie Gantet	Chambre d'agriculture de l'Indre
Caroline Isabey	DIEPPE MARITIME
Fabienne Guyot	Chambre Agriculture 04
Yann Bougio	DDT 36
Audrey N'Diaye	FNSEA
Vincent Deloor	Cinor
Enzo Ricard	Université de Montpellier
Emilie Belon	ASCOMADE
Victor Faraut	Strane innovation
Thomas Philppeau	sens urbain
Célia Martinez	GL BIOCONTROL
Emmanuel Scuto	WeYield
Clément Thureau	Bee Engineering
Léo Tanret	Etudiant

Name	Organization represented
Flor Etchebarne	EURODIA Group
Vincent Garnier	Chambre d'Agriculture de Vaucluse
Géraud Gamby	VEOLIA EAU
Juliette Guichard	chambre d'agriculture du var
Michel Lafforgue	SUEZ CONSULTING
Marine Desaphy	Lycée Louis Pasteur La Canourgue Lozère
Bertrand Barrois	Golf de Rhuys Kerver
Loïc Dominicé	Chambre d'agriculture
Coralie Miguel	SMBVA
Fabrice Dassonville	ARS PACA
Béatrice Lanzi	ENGES/SDEA
Jaen Luc Launois	DOSATRON international SAS
Julie Mendret	IEM
Emmanuel Tellier	SOLYPICTO
Michel Dubost	serpol
Florian Urban	Institution Adour
Franck Perru	sdea
Maria Galiana	Le Grand Chalon
Dominique Bakour	BRL Ingénierie
Veronique Julien	VEOLIA
Cyrille Royer	Région Occitanie
Cédric Cibert	Communauté d'Agglomération Royan Atlantique
Nicolas Klopocki	Veolia

5.3.3 Workshop dissemination

The event has been launched on the Webinar platform Livestorm. Here is the link to the registration page: <https://app.livestorm.co/p/865a5670-f388-4d08-a22a-5ca4fa06d4ad>

This page has been sent by email to our contacts, posted on LinkedIn and our website and also sent through our newsletter.

LinkedIn: <https://www.linkedin.com/feed/update/urn:li:activity:6737388760494825472>

<https://www.linkedin.com/feed/update/urn:li:activity:6741738014843654144>

Website: <https://www.ecofilae.fr/publications/ecofilae-vous-invite-a-son-webinar-reutilisation-des-eaux-le-point-sur-le-reglement-ue-et-sur-les-retours-d-experiences-europeens>

5.3.4 Workshop pre-work, preparation, and distributed material

The webinar is based on a speech with two experts and a power point presentation. This one has been prepared by the working team.

A work on communication has also been done by the team creating a registration page and a program published and sent to our contacts.

5.3.5 Programme-Agenda



Network for effective knowledge transfer on safe and economic wastewater reuse in agriculture in Europe
HORIZON 2020 - GA number: 818088

SUWANU EUROPE

WORKSHOP N°2

Réutilisation des eaux : le point sur le règlement UE et sur les retours d'expérience européens !

PROGRAMME

10 décembre 2020 – 10h30 – WEBINAIRE (LIVESTORM)

- Retours d'expérience sur deux projets européens : SUWANU EUROPE et FIT 4 REUSE
- Réglementation REUSE en France
- Réglementation européenne

Figure 43 - Workshop's programme

5.3.6 Summary of the presentations and activities carried out during the workshop

- Presentation of two European projects: SUWANU EUROPE and FIT4REUSE
- French water reuse regulation
- European water reuse regulation
- Q&A

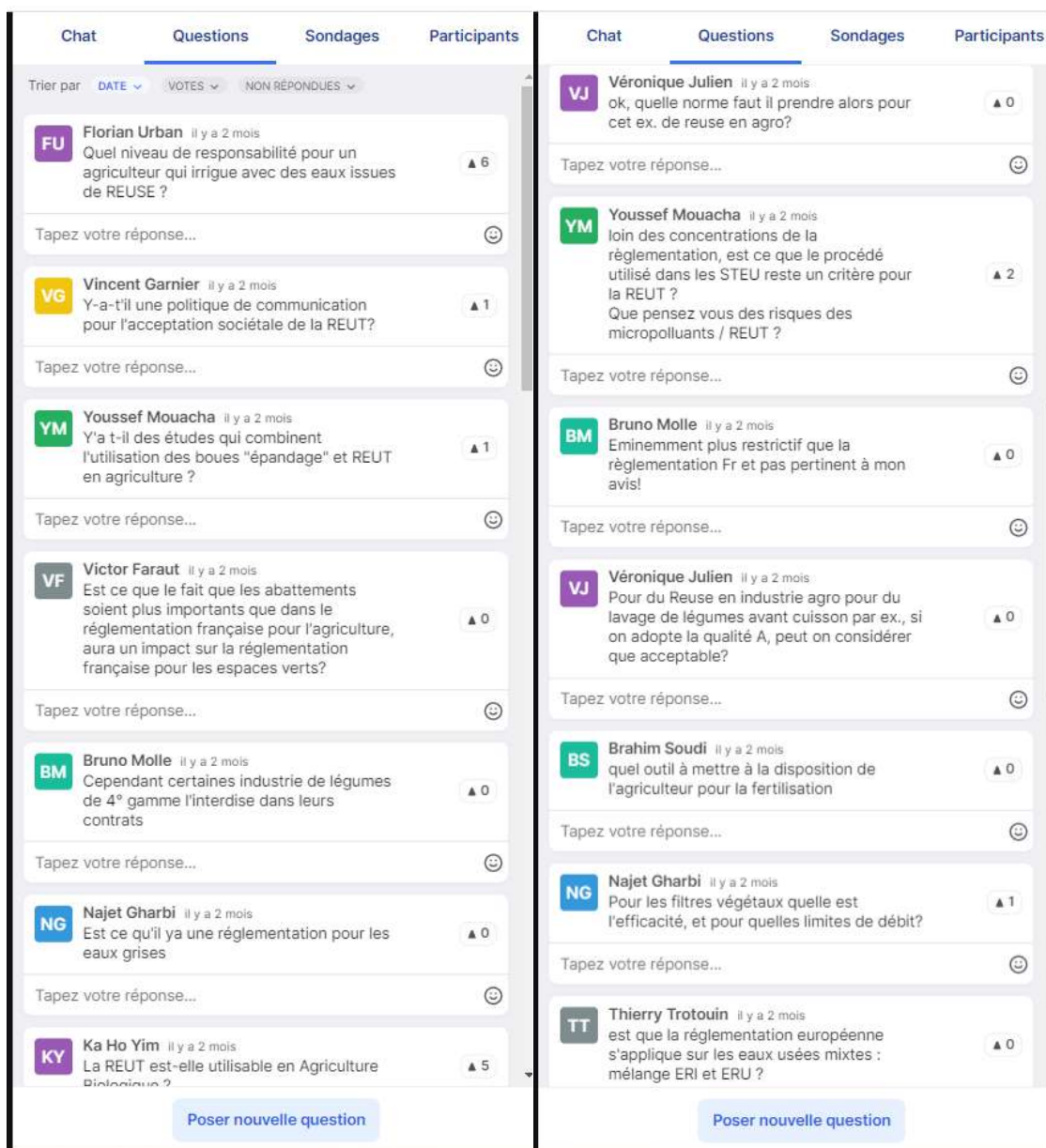
5.3.7 Results

Through this workshop, we wanted to answer questions raised during the regional working group. The thematic was focus on the French and European water reuse regulation. It's a topic very appreciated and quite complex so a lot of questions has been asked by the participants (see table and screenshot below). We also use this workshop to present in more details the SuWaNu Europe project and its deliverables.

Table 19 - Main results of the workshop

Input, feedback or lesson learnt obtained during the workshop	Activity where this input was generated (e.g., speech from expert, roundtable with stakeholders, comments from the audience during Q&A session or participatory activity, etc.)	How this input/feedback might be implemented in the SUWANU EUROPE project and/or might be a driver for change in society.
French regulation	Speech from experts during the presentation	That was a topic raised during D2.4 Workshop.
European regulation	Speech from experts during the presentation	Answers to the topics raised during D2.4 Workshop and Occitanie RAP (D2.4)
SUWANU presentation and deliverable	Speech from experts during the presentation	Way to disseminate SUWANU deliverables
French case study of water reuse in irrigation	Q&A + Speech from experts	Answers to the topics raised during D2.4 Workshop and Occitanie RAP
Water reuse and organic agriculture	Q&A	Answers to the topics raised during D2.4 Workshop and Occitanie RAP
Regulation for water reuse from grey wastewater	Q&A	Answers to the topics raised during D2.4 Workshop and Occitanie RAP
Regulatory analysis program	Q&A	Answers to the topics raised during D2.4 Workshop and Occitanie RAP

Water reuse possibility for a food factory	Q&A	Other possibilities for water reuse of industrial wastewater in agriculture
Water reuse and responsibility for the farmers	Q&A	Answers to the topics raised during D2.4 Workshop and Occitanie RAP
Best quality/price ratio of treatment processes	Q&A	Answers to the topics raised during D2.4 Workshop and Occitanie RAP



The image displays two side-by-side screenshots of a workshop chat interface. Both screenshots show a header with tabs for 'Chat', 'Questions', 'Sondages', and 'Participants'. Below the header, there are filters for 'Trier par' (DATE, VOTES, NON RÉPONDUES) and a list of questions from participants. Each question entry includes the participant's initials, name, a timestamp 'il y a 2 mois', the question text, and a vote count (indicated by a triangle and a number). Below each question is a text input field for responses, labeled 'Tapez votre réponse...'. At the bottom of each chat window is a button labeled 'Poser nouvelle question'.

Left Screenshot Questions:

- FU Florian Urban** il y a 2 mois: Quel niveau de responsabilité pour un agriculteur qui irrigue avec des eaux issues de REUSE ? (6 votes)
- VG Vincent Garnier** il y a 2 mois: Y'a-t'il une politique de communication pour l'acceptation sociétale de la REUT ? (1 vote)
- YM Youssef Mouacha** il y a 2 mois: Y'a-t-il des études qui combinent l'utilisation des boues "épandage" et REUT en agriculture ? (1 vote)
- VF Victor Faraut** il y a 2 mois: Est ce que le fait que les abattements soient plus importants que dans le réglementation française pour l'agriculture, aura un impact sur la réglementation française pour les espaces verts ? (0 votes)
- BM Bruno Molle** il y a 2 mois: Cependant certaines industrie de légumes de 4° gamme l'interdisent dans leurs contrats (0 votes)
- NG Najet Gharbi** il y a 2 mois: Est ce qu'il ya une réglementation pour les eaux grises (0 votes)
- KY Ka Ho Yim** il y a 2 mois: La REUT est-elle utilisable en Agriculture Biologique ? (5 votes)

Right Screenshot Responses:

- VJ Véronique Julien** il y a 2 mois: ok, quelle norme faut il prendre alors pour cet ex. de reuse en agro ? (0 votes)
- YM Youssef Mouacha** il y a 2 mois: loin des concentrations de la réglementation, est ce que le procédé utilisé dans les STEU reste un critère pour la REUT ? Que pensez vous des risques des micropolluants / REUT ? (2 votes)
- BM Bruno Molle** il y a 2 mois: Eminemment plus restrictif que la réglementation Fr et pas pertinent à mon avis ! (0 votes)
- VJ Véronique Julien** il y a 2 mois: Pour du Reuse en industrie agro pour du lavage de légumes avant cuisson par ex., si on adopte la qualité A, peut on considérer que acceptable ? (0 votes)
- BS Brahim Soudi** il y a 2 mois: quel outil à mettre à la disposition de l'agriculteur pour la fertilisation (0 votes)
- NG Najet Gharbi** il y a 2 mois: Pour les filtres végétaux quelle est l'efficacité, et pour quelles limites de débit ? (1 vote)
- TT Thierry Trotouin** il y a 2 mois: est que la réglementation européenne s'applique sur les eaux usées mixtes : mélange ERI et ERU ? (0 votes)

Figure 44 - Chat of the workshop

5.4 WORKSHOP N°3: “Learning from water reuse experiences. Special Agri & Viti”

5.4.1 Composition of the workshop organization team

Table 20 - Workshop steering Committee's members

Workshop steering Committee's members		
Name	Organization	Position to the organization
Nicolas Condom	Ecofilae	CEO
Laetitia Carbonell	Grands Domaines du Littoral	Vineyard manager
Workshops working teams and moderators (if applicable)		
Topics	Name	Member of the partners working team
Rémi Declercq	Ecofilae	Project manager
Nicolas Condom	Ecofilae	CEO
Ophélie Pratz	Ecofilae	Project engineer
Romain Bayetti	Ecofilae	Project manager



Figure 45 : Laetitia Carbonell and Nicolas Condom, speakers during the workshop n°3

5.4.2 Workshop Participants

The workshop was attended by 35 people including 6 farmers representative. This workshop was focused on the agricultural sector, that's why a lot of attendants were either farmers or from organization of farmers consultancy (INRAE, Chambre d'Agriculture, IFV). There was a lot of local or departmental communities all over France, organizations apt to carry out a water reuse project (department, region, collectively).

Table 21 - Participants of the train the practitioners' workshop

Name	Organization represented
Gabriel Mengin	Indépendant
Farouk Aichouche	Université Montpellier SupAgro
Pierre Gourdon	BRL Exploitation
Antoine Delbart	Indépendant
Jean Desseigne	IFV
Marie Michel	CDC Albères et Côte Vermeille illibéris
Salem Hayar	Université Libanaise
Margaux Lhenry	Veolia
Stéphane Bernon	Département 71
Jolanda Boisson	IRH
Clémence Coetsier	LGC-UT3
Arnaud Paret	AE Adour Garonne
Gabriel de Lantivy	Cabinet Merlin
Gildas Delencre	ACOA Conseil
Pierre-Nicolas Mallard	Etudiant Master Environnement
Magali Gardes	Conseil Départemental de la Réunion
Maddy Tintinger	Inrae
Béatrice Lanzi	ENGEE / SDEA (stage)
Marion Derochet	Antea Group
Denis Cornillon	Mairie Allex
Guillaume Nourrit	NEREUS
Léna Rainteau	SICOVAL
Gaetan Deffontaines	BRL Exploitation
Valérie Rouvet	Laboratoires AQMC
Claire Gaffier	Chambre agriculture 30
Kristell Pichodou	Département 17
Jérôme Roullet	CA Saint-Dié
Nicolas Badier	Suez
Julien Cabanes	AE Adour Garonne
Loïc Dominicé	Chambre agriculture de l'Yonne
Nicolas Saurin	Inrae

Léa Dominique	EPTB Lez
Mathieu Delahaye	Suez
Valérie Vithe	CA Albigeois
Nathalie Georges	Veolia

5.4.3 Workshop dissemination

The event has been launched on the Webinar platform Livestorm. Here is the link to the registration page: <https://app.livestorm.co/p/e5baa235-3ea9-4244-8735-29d02ded95d5>

This page has been sent by email to our contacts, posted on LinkedIn and our website and also sent through our newsletter.

LinkedIn: <https://www.linkedin.com/feed/update/urn:li:activity:6754339717011017729>

<https://www.linkedin.com/feed/update/urn:li:activity:6757310587534888960>

Website: <https://www.ecofilae.fr/publications/ecofilae-vous-invite-a-son-webinar-reutilisation-des-eaux-usees-traitees-les-territoires-deja-lances-viennent-en-parler>

5.4.4 Workshop pre-work, preparation, and distributed material

The webinar is based on a speech with an expert and a farmer (Laetitia Carbonell) who came to testify about her water reuse project currently in progress. A power point presentation has been prepared by the working team and the farmer.

A work on communication has also been done by the team, creating a registration page and a program published and sent to our contacts.

5.4.5 Programme-Agenda



SUWANU
EUROPE

Network for effective knowledge transfer on safe and
economic wastewater reuse in agriculture in Europe
HORIZON 2020 - GA number: 818088

SUWANU EUROPE

WORKSHOP N°3

Réutilisation des eaux usées traitées → Les territoires déjà lancés viennent en parler ! Spécial Agri & Viti

PROGRAMME

21 janvier 2021 – 10h30 – WEBINAIRE (LIVESTORM)

- Retours d'expérience européens : SuWaNu Europe
- Irrigation par eaux usées traitées : Cas d'étude européens
- Grands Domaines du Littoral → Un projet économique et écologique ambitieux

Témoignage de Laetitia Carbonell sur le projet d'irrigation des Grands Domaines du Littoral à partir des eaux épurées de la station d'épuration de Marseillan

Figure 46 - Workshop's programme

5.4.6 Summary of the presentations and activities carried out during the workshop

- European case study: SuWaNu Europe
- Irrigation with treated wastewater: European and French case studies
- Grands Domaines du Littoral → An ambitious economic and ecological project

Testimony of Laetitia Carbonell about the vineyard irrigation project using purified water from the Marseillan wastewater treatment plant

- Q&A

5.4.7 Results

Table 22 - Main results of the workshop

Input, feedback or lesson learnt obtained during the workshop	Activity where this input was generated (e.g., speech from expert, roundtable with stakeholders, comments from the audience during Q&A session or participatory activity, etc.)	How this input/feedback might be implemented in the SUWANU EUROPE project and/or might be a driver for change in society.
SUWANU presentation and deliverables	Speech from experts during the presentation	Dissemination of SUWANU deliverables
European and French case studies	Speech from experts during the presentation	Dissemination of SUWANU deliverables
Project building	Speech from experts during the presentation	Methodology to implement a project
Agronomic risks	Expert speech + Q&A	That's a topic important to consider for an agricultural water reuse project
Financing projects: studies and realization	Q&A	That was a topic raised during 2.4 Workshop
Water reuse and organic agriculture	Q&A	That was a topic raised during 2.4 Workshop
Support for farmers who want to carry out a water reuse project	Q&A	That was a topic raised during 2.4 Workshop
Cost: obstacle to a water reuse project	Expert speech + Q&A	That was a topic raised during 2.4 Workshop
European regulation	Expert speech + Q&A	That was a topic raised during 2.4 Workshop
Climate change and sea-level rise	Q&A	Water reuse is a way of climate change adaptation

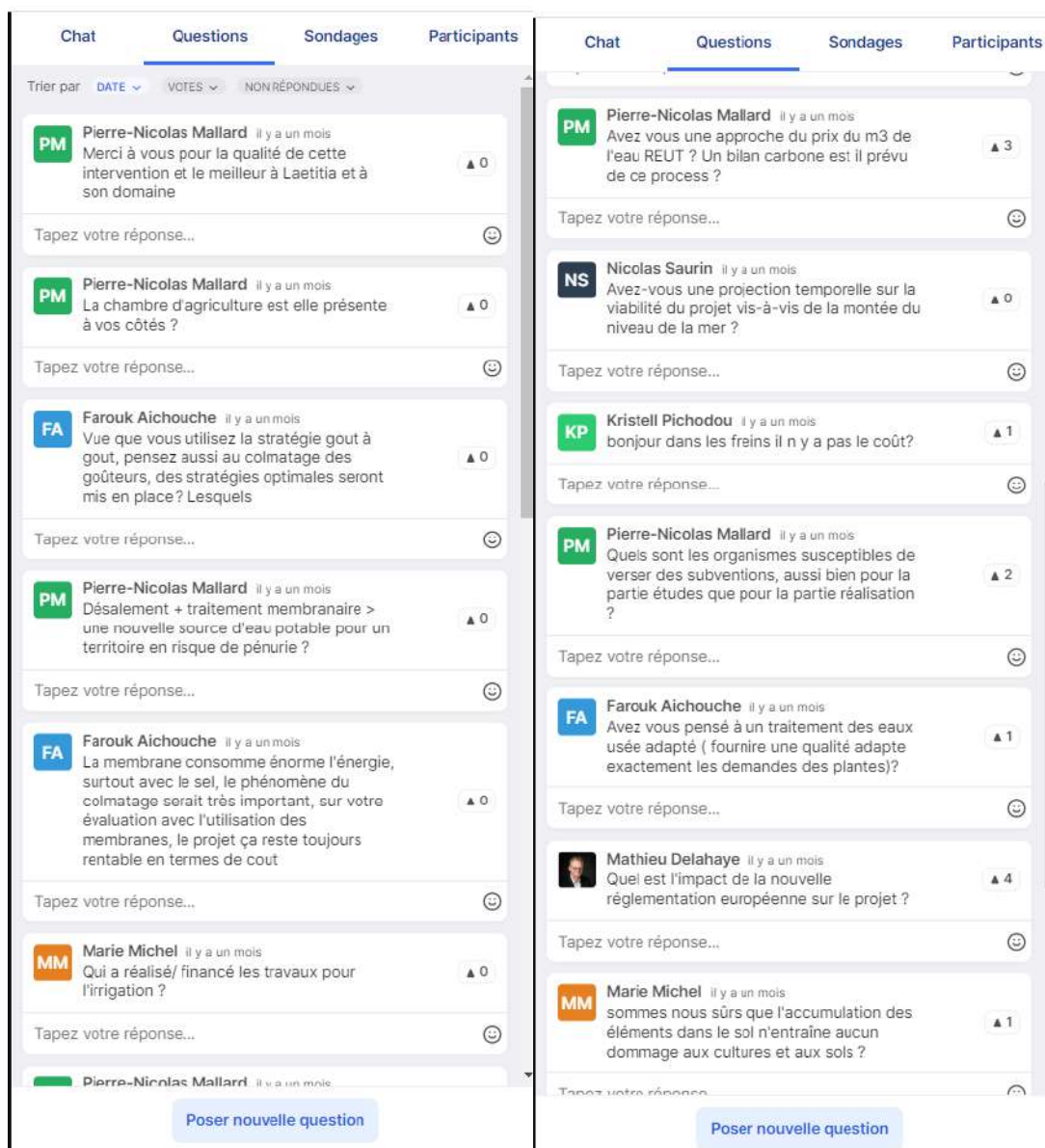


Figure 47 - Chat of the workshop

5.5 Conclusions

Through these 3 online workshops, 166 people from different fields (farmers, community, sanitation operators, etc) have received various information about water reuse especially regarding agriculture, regulation, and project building. Each workshop ended by 30 minutes of free Questions & Answers which broadened the discussion topics.

The main questions/topics raised during the Regional Workshop were covered and a farmer currently leading a water reuse project in Occitanie came to testify about her project and give advice.

6 PLOVDIV | BULGARIA

6.1 Executive summary

The workshop "Train the practitioners", organized by Agricultural University – Plovdiv, was held virtually on January 26, 2021, because of the pandemic. Plenary online presentations replaced face-to-face communication, chat questions & answers section, and "online survey of attitude among specialists". The workshop aimed to train the practitioners on current regional and overall results from SuWaNu Europe project and present the expected outcomes, from which the stakeholders can benefit e-learning platform, info sheets and successful initiatives, and lighthouse projects.

The workshop was previously announced in various general and specialized regional and national media, online platforms, and companies' websites obtaining more than 20 different communications. Personal e-mails sent to the regional working group (RWG), professional organizations, and partners' networks had the most decisive impact on the number of workshop attendees. Eighty-eight different stakeholders, including farmers and farmer associations, irrigation companies representatives, researchers, water companies, National agricultural advisory service (NAAS), experts from the public and private sector, NGOs, general consumers, and journalists from almost all regions of Bulgaria, joined the meeting and used the opportunity to obtain useful information and successful practices, to share their expectations and to ask questions through the ZOOM Meetings virtual platform.

The first workshop session presentations were related to the project and its results, such as SWOT and PEST, stakeholder and AKIS analyses of the reclaimed water use in Bulgaria and particularly in the Plovdiv region, and the Regulation EC 741/2020. The topics were completed with those from the RWG partners concerning the support of NAAS to the small farms and young farmers, EU Horizon 2020 project NEFERTITI, the irrigation infrastructure restoration, and successful cases of water re-use from Plovdiv region. During the afternoon session, the Regional action plan was presented and discussed. The Bulgarian project team demonstrated the SuWaNu Europe website's tools and the partners' success stories, which attracted significant interest from participants. They explained that the project activities would continue, and new platform features are envisaged soon to train the stakeholders in 6 course topics. Finally, an online survey on water re-use was promoted among the workshop participants.

At the end of the workshop, the participants agreed that the event was beneficial for them. Still, additional efforts are needed on both stakeholders and government to encourage the water re-use for irrigation in agriculture. This should be achieved through joint research and educational projects where all interested parties, including NGOs, are involved.

6.2 Composition of the workshop organization team

The AUP team organised the workshop. In the event, partners from the Regional working group presented their work related to the water sector, especially in water re-use. The speakers presented their topics sequentially, leaving 3-5 min at the end of the presentation to discuss the topic.

Table 23 - Workshop steering Committee's members

Workshop steering Committee's members		
Name	Organization	Position to the organization
Stefan Shilev	Agricultural University-Plovdiv	Associate Professor
Violeta Dirimanova	Agricultural University-Plovdiv	Associate Professor
Antoniya Danailova	Agricultural University-Plovdiv	external expert
Workshops working teams and moderators (if applicable)		
Topics	Name	Member of the partners working team
Introducing SUWANU EU project; SWOT and PEST analyses; General and Regional Action Plans; Successful stories across Europe; E-learning platform and shared materials; Online survey	Assoc. Prof. Stefan Shilev	AUP
Stakeholders and AKIS analysis	Assoc Prof. Violeta Dirimanova	AUP
Regulation 741/2020; Successful stories across Europe; Questions and answers in chat	Antoniya Danailova	AUP
Consultation packs; Nefertiti project; Video with the topic "Water use efficiency" in Alentejo, Portugal	Petya Kumanova	National Agricultural Advisory Service
Current and future projects for rehabilitation of irrigation infrastructure and their impact on the price of irrigation water	Eng. Katya Paralska	Expert from the state company Irrigation Systems EAD, Maritsa branch
Application of membrane technologies for industrial wastewater purification	Eng. Ivan Zaykov	Eco Plant Service Ltd.
Utilization of wastewater from steam distillation of rose blooms in rose breeding	Eng. Mihail Mihaylov	Zlatna Roza-Farm and factory
Irrigation systems for reclaimed water in agriculture	Assoc. prof. Rositsa Meranzova	Agricultural University-Plovdiv

6.3 Workshop Participants

The invitations to the interested parties to participate in the workshop were sent with a link to a Google Form with a short questionnaire for obtaining primary registration data. At the end of the registration, the participant received a link to join a meeting on the ZOOM platform.

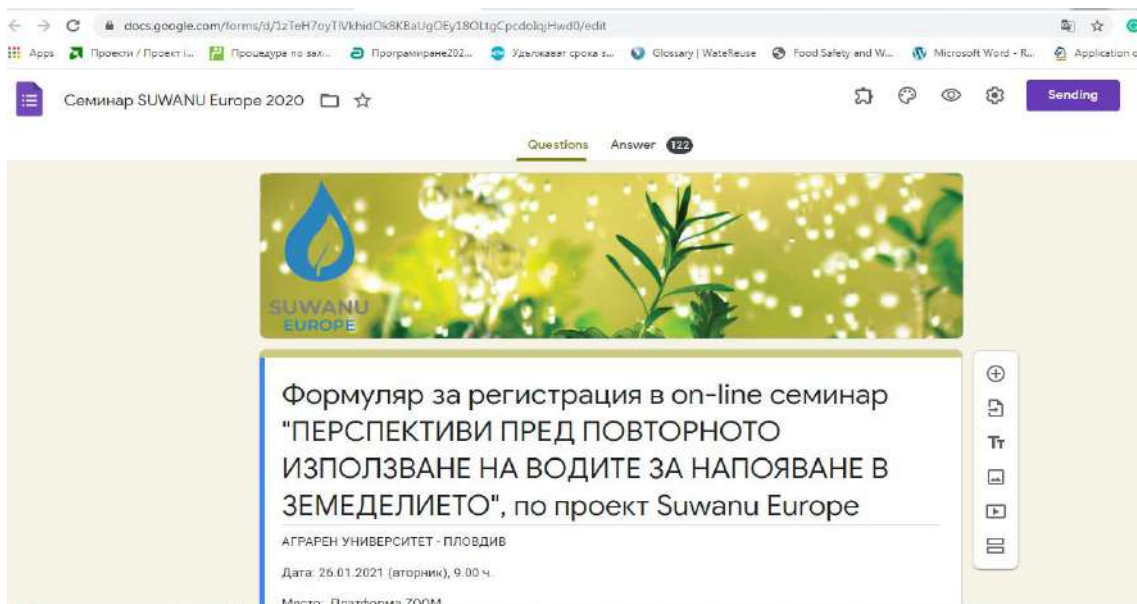


Figure 48 - Screenshot of the registration form in Google Forms

The 99 participants registered to the workshop belonging to six groups, as follows:

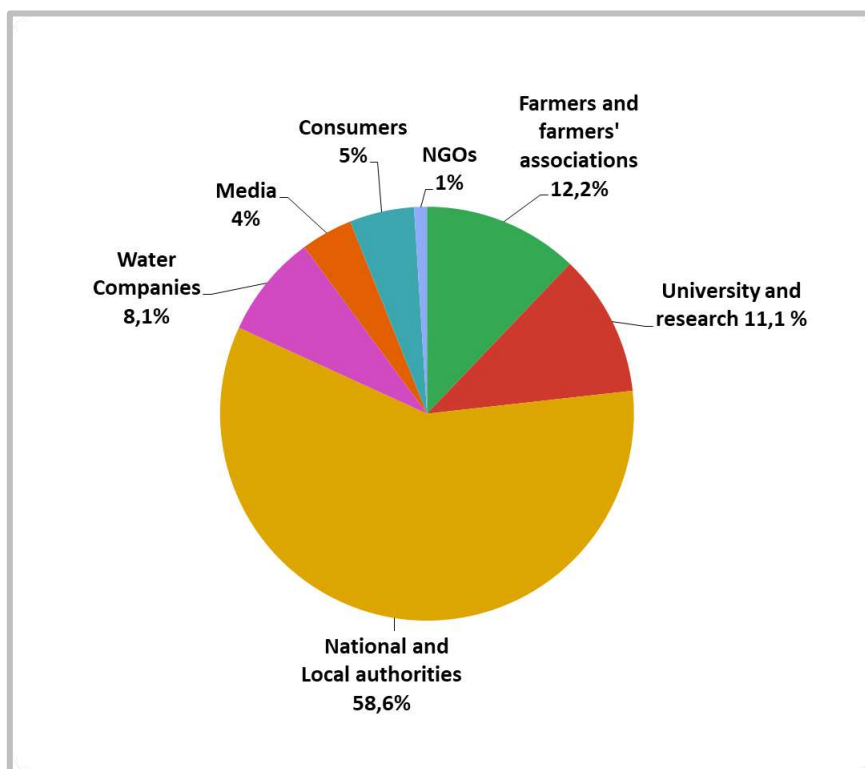


Figure 49 - Stakeholders' group distribution in the training workshop of Plovdiv region

Although there was a great interest from the NAAS, the rest of the participants were very diverse and covered the other target stakeholders of Suwanu Europe project:

Table 24 - Participants of the train the practitioners' workshop

Participants	
Name	Organization represented
Albena Vatlarova	7 Climate, Atmosphere and Water Research Institute
Militza Zikatanova	8 Vila Melnik, vineyard owner
Borislav Panalov	BSc. student, Agricultural University-Plovdiv
Ekaterina Valcheva	Agricultural University-Plovdiv
Dobrinka Paneva	Hydrolia SA
Petya Raycheva	BSc. student, Agricultural University-Plovdiv
Bozhura Fidanska	Institute for agricultural Economics
Nikolay Mihalkov	Water and sewerage system Plovdiv
Liliya Blagoeva	Farmer
Irena Topalova	NAAS
Gancho Ganchev	NAAS - Stara Zagora
Galya Dimitrova	NAAS
Darinka Nikolova	NAAS
Ivan Georgiev	NAAS-Sliven
Yuri Zarev	NAAS
Alexander Tuykov	NAAS-Pazardzhik
Galina Angelova	NAAS-Kardzhali
Veselka Georgieva	NAAS
Teodora Krasteva	Bulgarian greenhouse growers' association - Executive
Mariya Dancheva	State Fund "Agriculture"
Dimitar Popov	NAAS
Veliha Velieva	NAAS
Yordanka Kartalska	Agriculture University-Plovdiv
Kirilka Kalamova	NAAS
Rumyana Georgieva	BSc. student, Agricultural University-Plovdiv
Rositza Meranzova	Agricultural University-Plovdiv
Dimka Belitova	State Fund "Agriculture"

Participants	
Name	Organization represented
Hristina Nikolova	Farmer
Mihaela Kozovska	District Information Center-Dobrich
Elitsa Malamova	New Science
Svetla Sirakova	NAAS-Pazardzhik
Yulia Encheva	NAAS Sliven
Karsya Kolcheva	Climate, Atmosphere and water research Institute
Ivanka Todorova	NAAS-Management Board
Elena Gernilova	NAAS - Stara Zagora
Velka Redzhova	Farmer
Mirela Spasovaa	AGRO TV
Georgi Pankin	MSc. student, Agricultural University-Plovdiv
Zoya Todorova	NAAS-Yambol
Nadia Petrova	Agro Plovdiv LTD
Mariya Beleva	NAAS
Galina Patamanska	Institute of Science, Agrotechnology and Plant protection
Emiliya Petrova	NAAS – Vratza
Cvetina Ilieva	NAAS – Vratza
Stiliyan Rupov	NAAS
IVANKA MIHOVA	NAAS
Iliana Tashevaa	NAAS –Dobrich
Petya Kumanova	NAAS-Management Board
Margarita Gospodinova	NAAS-Plovdiv
Desislava Stoyanova	NAAS
Adelina Harizanova	Agricultural University-Plovdiv
Lyubka Koleva-Valkova	Agricultural University-Plovdiv
Atanas Kunchev	Bulgarian greenhouse growers' association
Radina Ivanova	"Bulgarian Framer" newspaper
Genoveva Zaneva	NAAS-Dobrich
Petya Stoyanova	NAAS-Yambol
Zhivka Miteva	NAAS

Participants	
Name	Organization represented
Biserka Boeva	NAAS
Borislava Borisova	NAAS
Galina Metodieva	NAAS
Mariya Vasileva	NAAS
Valya Vulova	NAAS
Stanimir Stefanov	NAAS
Svetoslava Kochovska	KBC Agro Bulgaria Ltd.
Lubomir Kochovski	Agricultural producer Lubomir Nikolaev Kochovski
Georgi Georgiev	NAAS
Stanimir Damyanov	Farmer
Deyan Simeonov	District directorate Agriculture – Burgas
Radka Bodurova	NAAS
Marinela Georgieva	NAAS – Dobrich
Petar Petrov	ST Petrov Invest-CROP PRODUCER
Mihail Mihaylov	Zlatna Roza OOD farm
Mihaela Dineva	Stara Zagora Regional Economic Development Agency
Angel Tarpov	NAAS
Vanya Zayakova	ECO PLANT SERVICE Ltd.
Dimitar Vanev	NAAS
Ivona Novakova	NAAS
Evgeniya Borisova	NGO
Angel Kuzmanov	Agricultural University-Plovdiv
Plamen Izamski	Municipality of Brezovo
Vasilka Chopkova	EAST AEGEAN REGION Basin Directorate, director
Petar Angelov	State Administration
Nadezhda Atanasova	Farmer
Pavel Ivanov	Farmer
Plamena Petkova	Agronewspaper
Daniela Ivanova	NAAS-Veliko Tarnovo
Team of the NAAS VIDIN	NAAS- Vidin

Participants	
Name	Organization represented
Valentin Byalkov	NAAS
Lubka Petrova	NAAS
Tatyana Petkova	NAAS
Denitsa Dimitrova	NAAS
Marin Marinov	NAAS
Galina Marinova	NAAS
Dimitar Atanasov	Netafim Ltd & Irisit Ltd
Desislava Yordanova	NAAS
Ivan Zayakov	Eco plant Service Ltd., owner
Polina Komitska	"Butterfly" 66
Plamen Banchev	NAAS

6.4 Workshop dissemination

The overall objective of the training workshop was to communicate and disseminate at multi-level the sectorial / thematic informational materials and project's best practices to reach a high number of practitioners' participation. The announcement of workshop is of primary importance to obtain high visibility and participation from stakeholders, thus achieving the indicators of success. For such purpose, the specific invitation activities were undertaken:

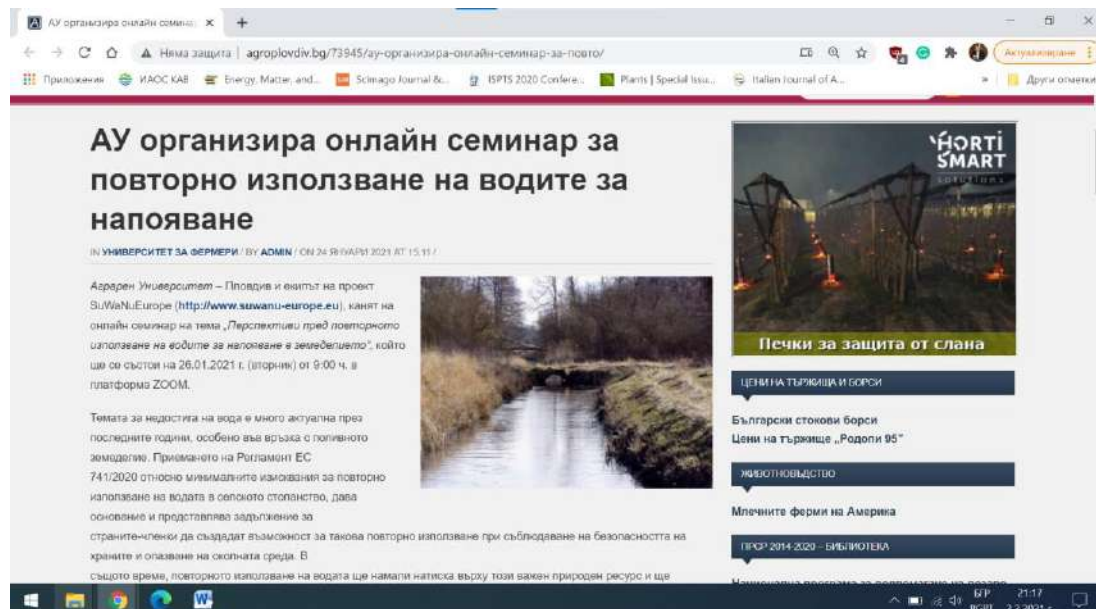
1. Developing and disseminating of press-releases and communicate together with the agenda to general and specialized media from agricultural and water sectors (radios, internet-based media, newspapers, etc.);
2. Uploading of announcements on important specialized websites for high visibility;
3. Announcements through the social networks (Facebook, Linked-in);
4. Sending E-mails to more than 100 stakeholders (individuals and organizations) that AUP and *SuWaNu Europe* work with;
5. Dissemination of the future event among professional networks such as National Research Programs in which AUP participates;
6. Sharing dissemination material to a wide range of stakeholders announcing the event.

The information listed below with 21 links and print-screens of articles and press releases is related to the dissemination of announcements before the event, results, and discussions after the workshop realisation.

Announcing the online workshop

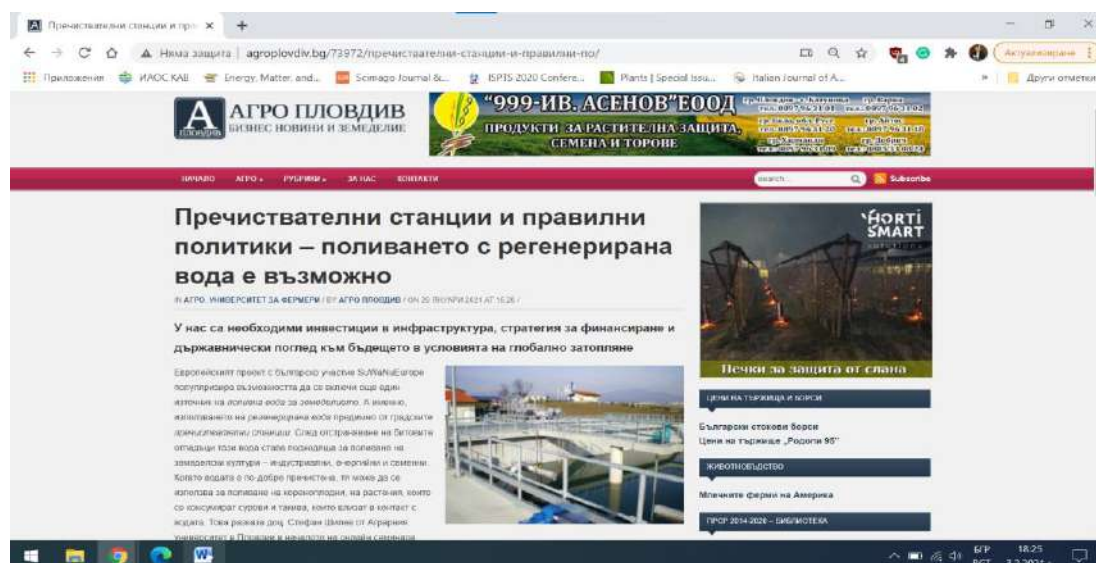
1. AUP organizes an online workshop for water re-use in agriculture

<http://agroplovdiv.bg/73945/%D0%B0%D1%83-%D0%BE%D1%80%D0%B3%D0%B0%D0%BD%D0%B8%D0%B7%D0%B8%D1%80%D0%B0-%D0%BE%D0%BD%D0%BB%D0%B0%D0%B9%D0%BD-%D1%81%D0%B5%D0%BC%D0%B8%D0%BD%D0%B0%D1%80-%D0%B7%D0%B0-%D0%BF%D0%BE%D0%B2%D1%82%D0%BE/>



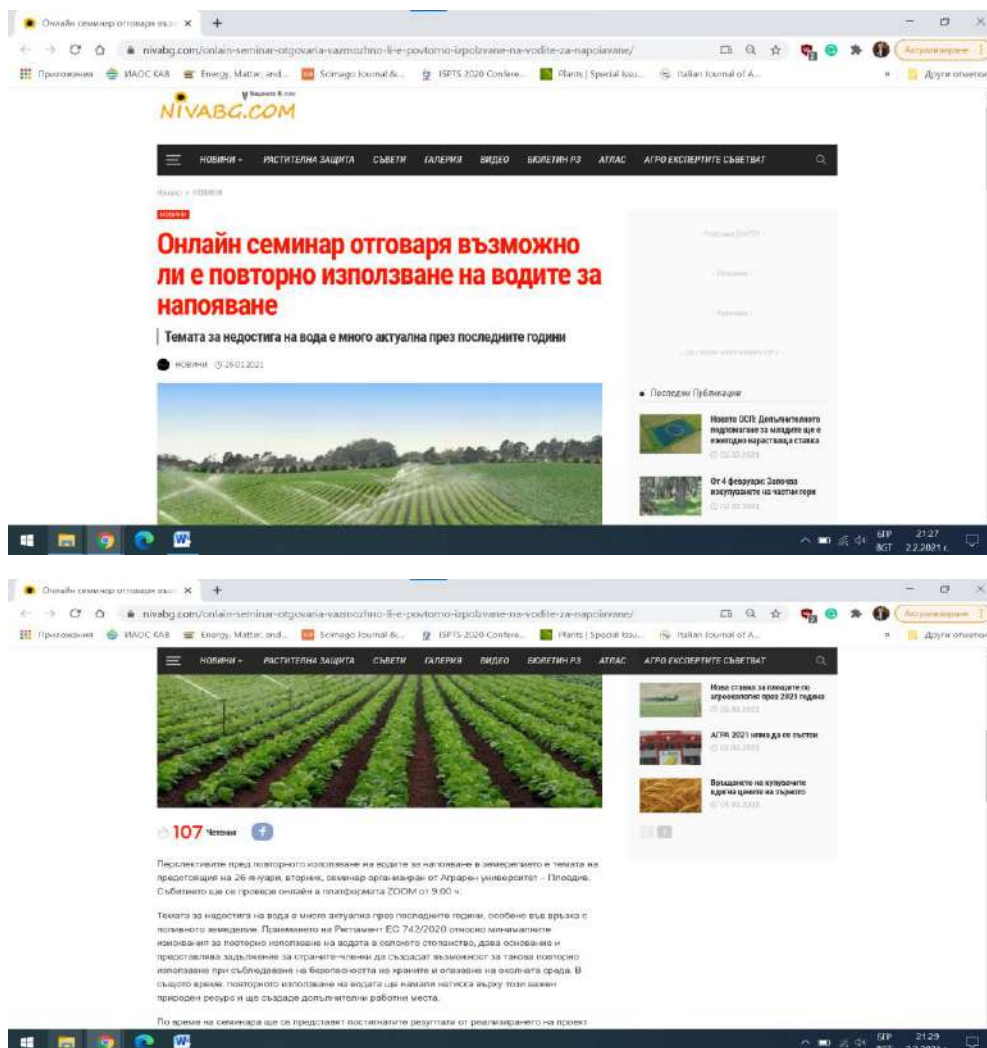
2. Wastewater treatment plants and correct policies – irrigation with regenerated water is possible

<http://agroplovdiv.bg/73972/%D0%BF%D1%80%D0%B5%D1%87%D0%B8%D1%81%D1%82%D0%B2%D0%B0%D1%82%D0%B5%D0%BB%D0%BD%D0%B8-%D1%81%D1%82%D0%B0%D0%BD%D1%86%D0%B8%D0%B8-%D0%B8-%D0%BF%D1%80%D0%B0%D0%B2%D0%B8%D0%BB%D0%BD%D0%B8-%D0%BF%D0%BE/>



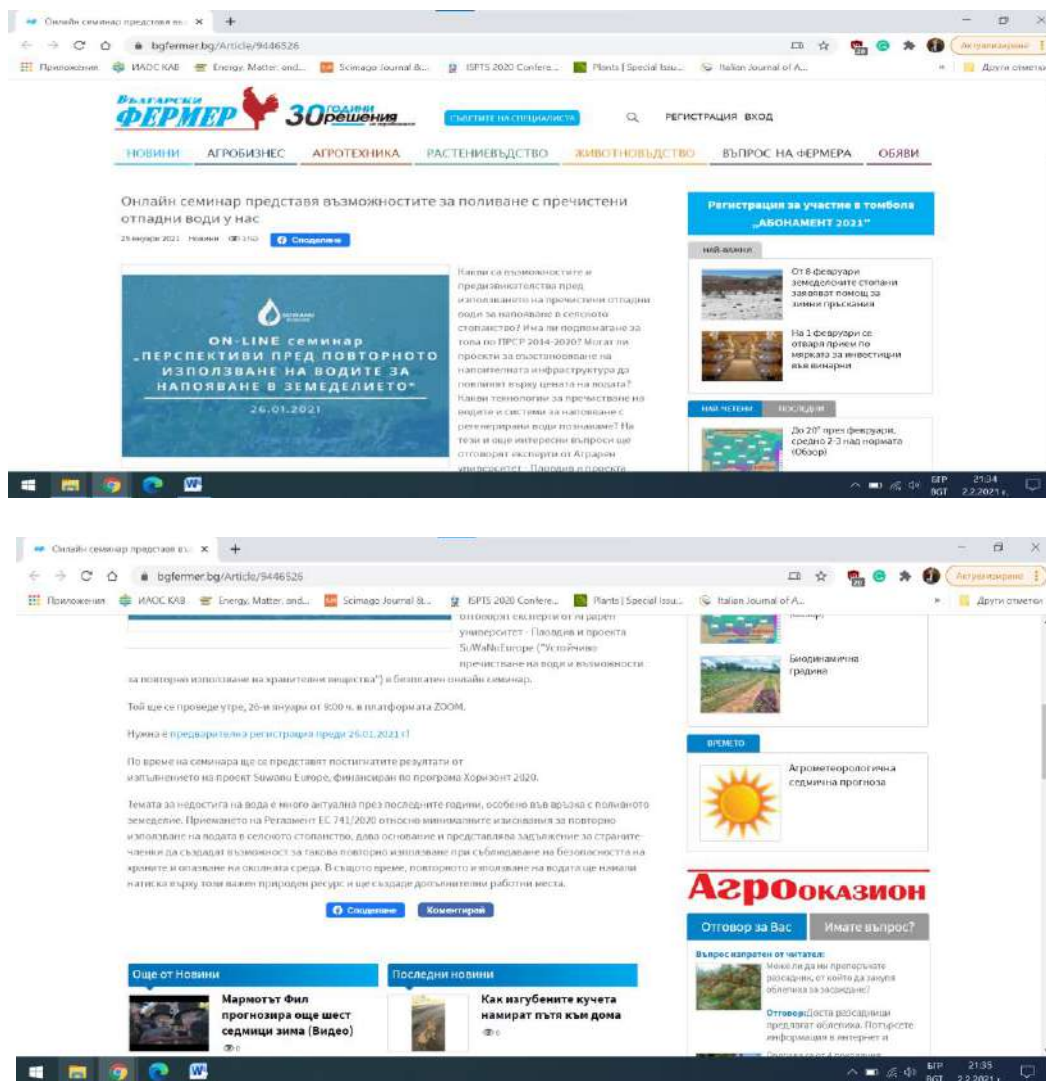
3. An online workshop answers whether it is possible to re-use water for irrigation

<https://nivabg.com/onlain-seminar-otgovaria-vazmozhno-li-e-povtorno-izpolzvanie-na-vodite-za-napoiavane/>



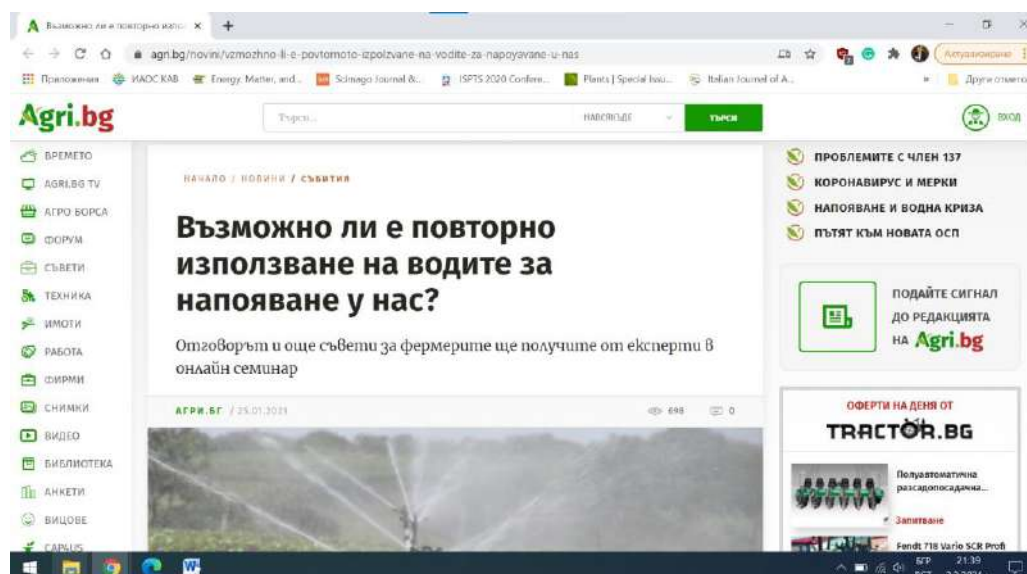
4. An online workshop presents the possibilities for irrigation with treated wastewater in our country

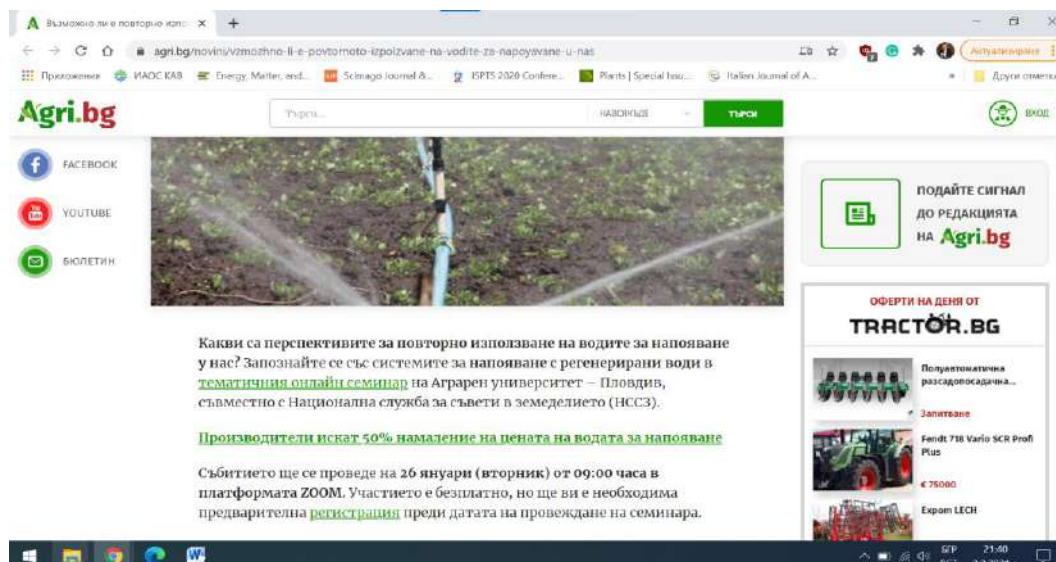
<https://www.bgfarmer.bg/Article/9446526>



5. Is it possible to re-use the water for irrigation in our country??

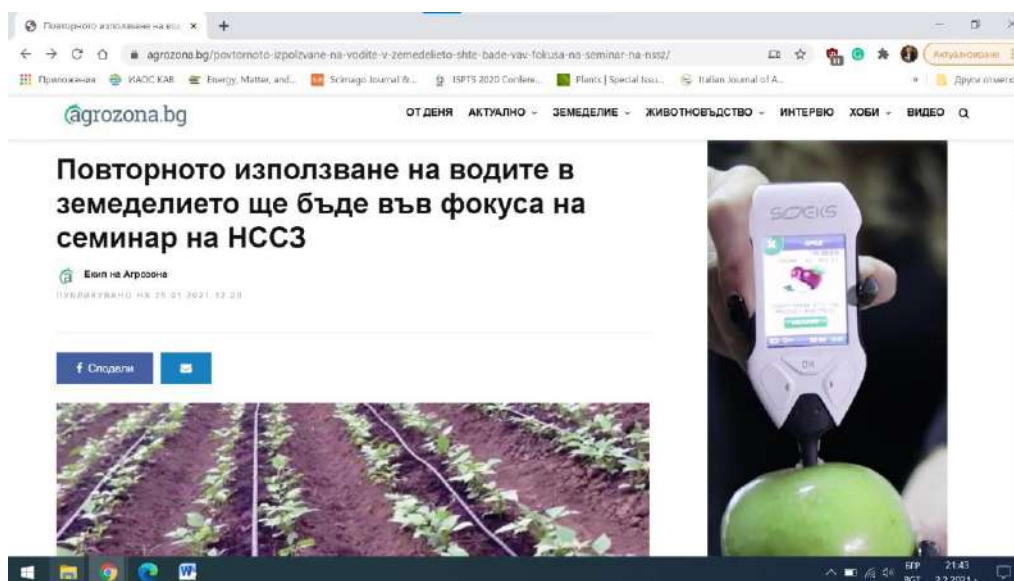
<https://agri.bg/novini/vzmozno-li-e-povtorno-izpolzvane-na-vodite-za-napoyavane-u-nas>





6. Water re-use in agriculture will be the focus of a workshop with the participation of NAAS

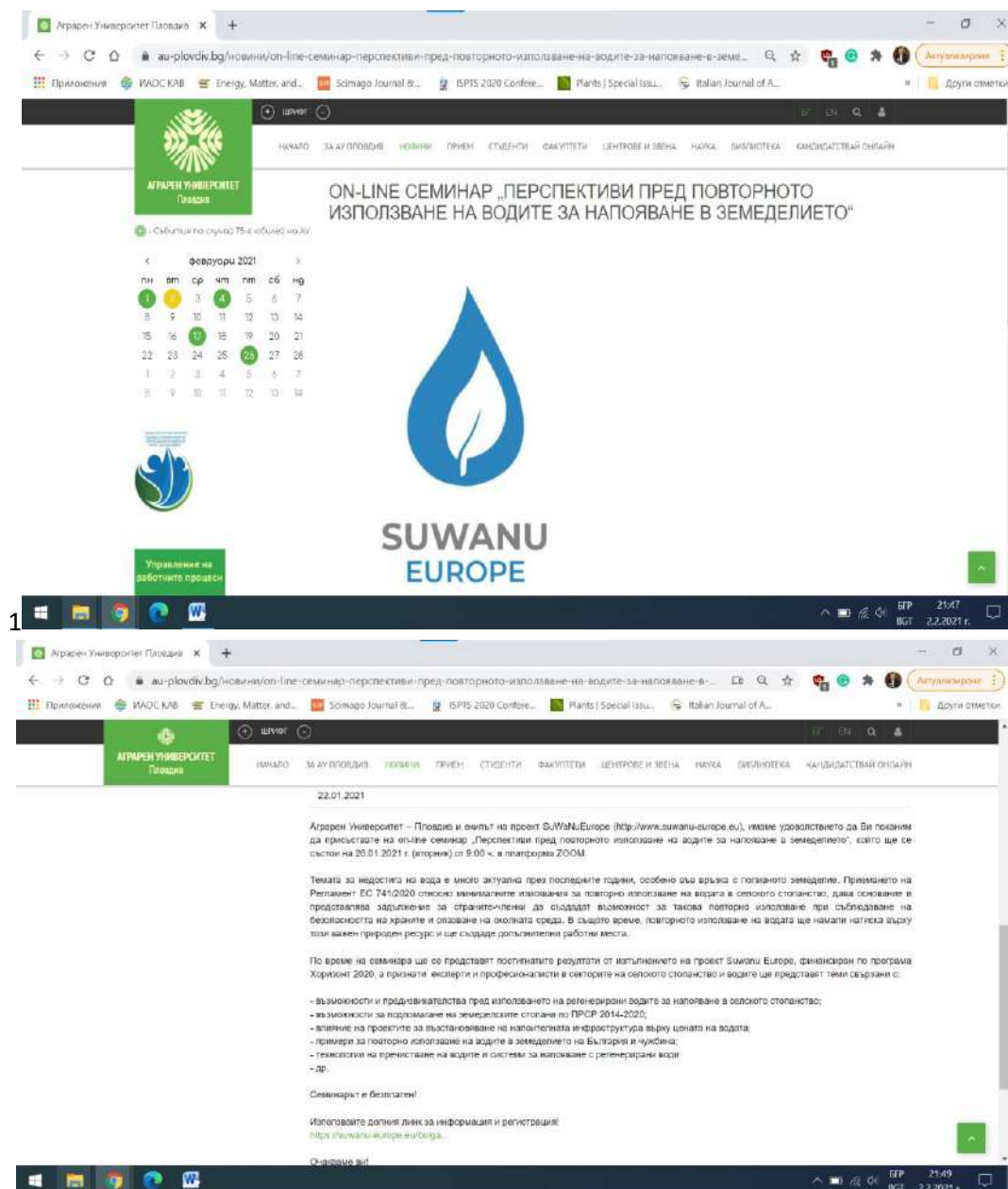
<https://agrozona.bg/povtorno-to-izpolzване-na-vodite-v-zemelieto-shte-bade-vav-fokusa-na-seminar-na-nssz/>



7. Online workshop "Perspectives for the use of irrigation water in agriculture"

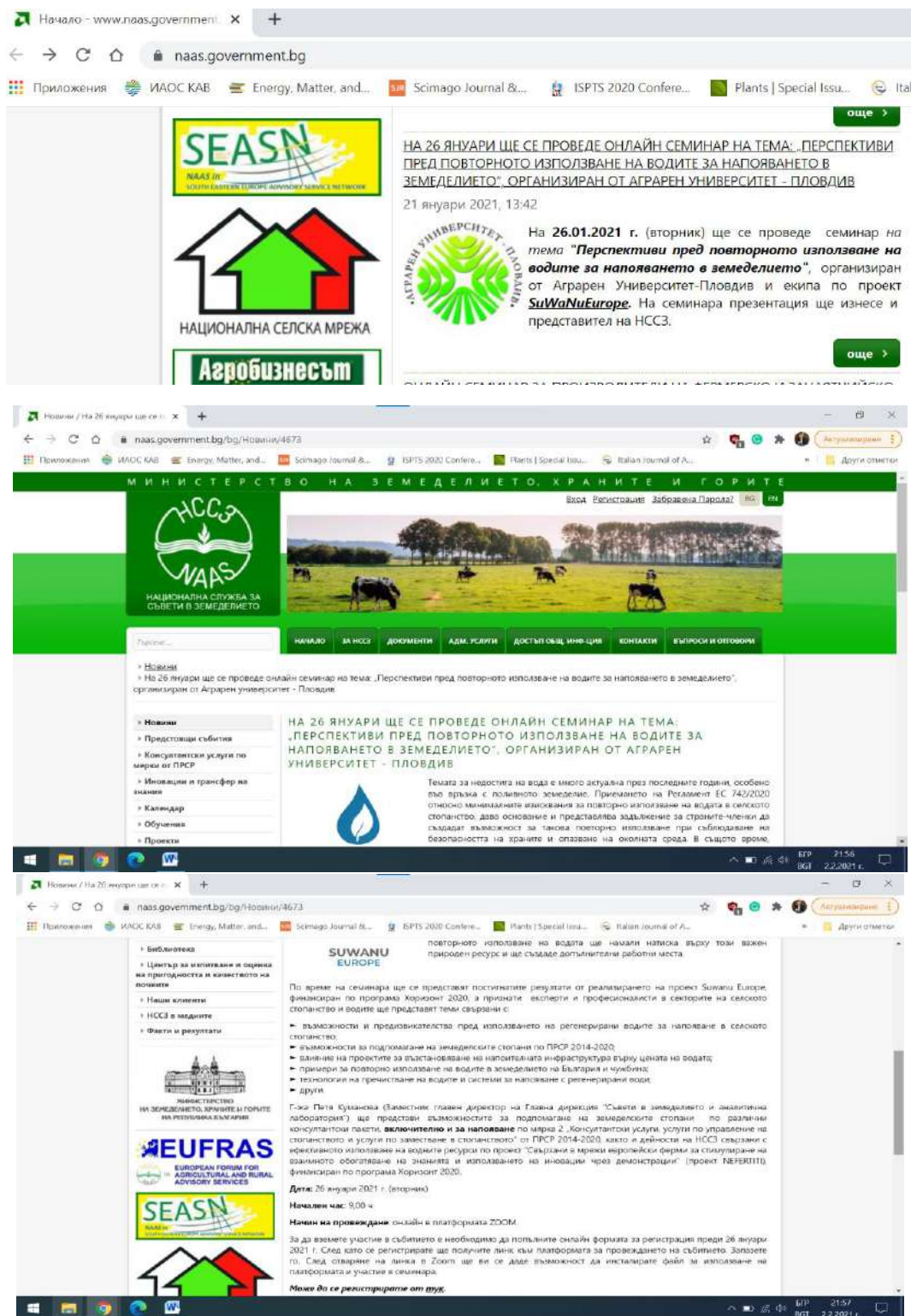
<https://www.au-plovdiv.bg/%D0%BD%D0%BE%D0%B2%D0%B8%D0%BD%D0%B8/on-line-%D1%81%D0%B5%D0%BC%D0%B8%D0%BD%D0%B0%D1%80-%D0%BF%D0%B5%D1%80%D1%81%D0%BF%D0%B5%D0%BA%D1%82%D0%B8%D0%B2%D0%B8-%D0%BF%D1%80%D0%B5%D0%B4-%D0%BF%D0%BE%D0%B2%D1%82%D0%BE%D1%80%D0%BD%D0%BE%D1%82%D0%BE-%D0%B8%D0%B7%D0%BF%D0%BE%D0%BB%D0%B7%D0%B2%D0%B0%D0%BD%D0%B5-%D0%BD%D0%B0-%D0%B2%D0%BE%D0%B4%D0%B8%D1%82%D0%B5-%D0%B7%D0%B0->

<https://www.naas.government.bg/>



8. An online workshop on "Perspectives for the re-use of water for irrigation in agriculture" organized by the Agricultural University – Plovdiv will be held on January 26 *Ministry of agriculture, foods and forests*

<https://www.naas.government.bg/>



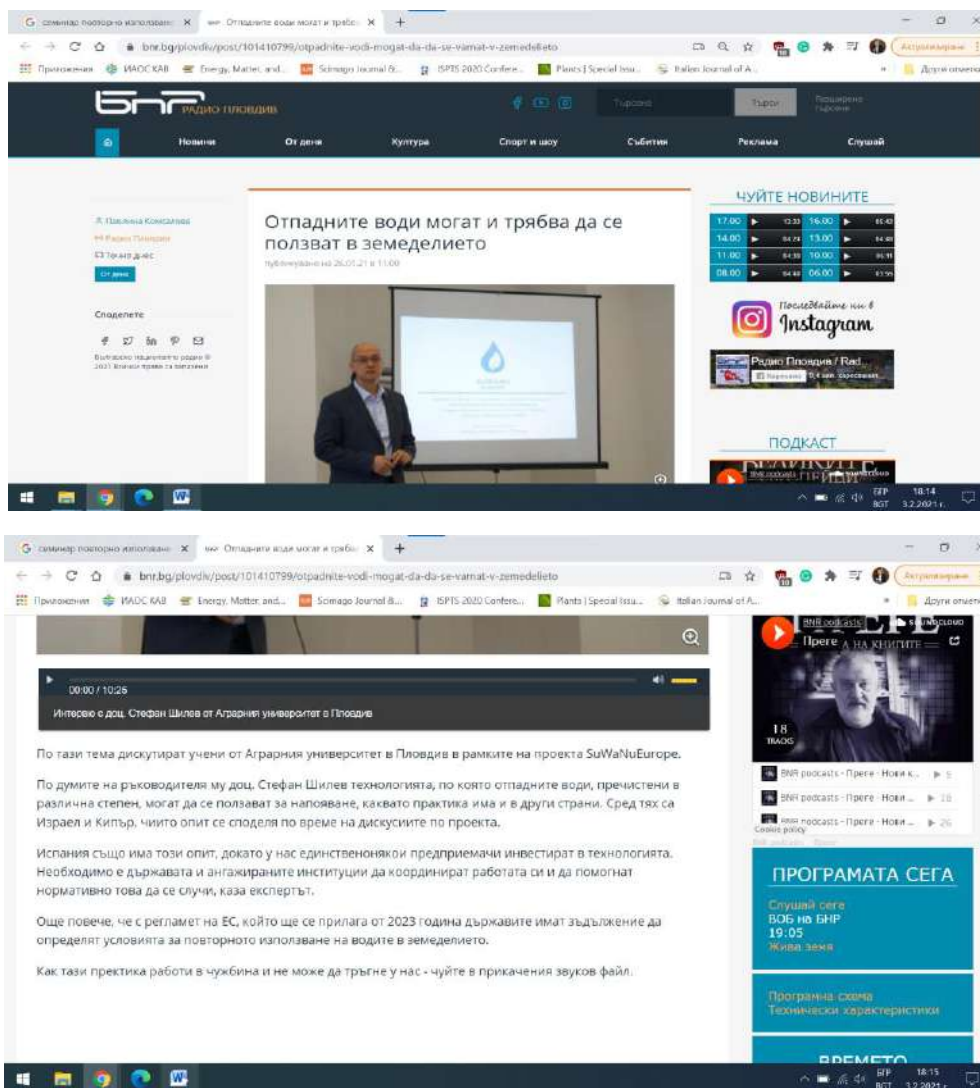
The screenshot displays the official website of the National Agricultural Advisory Service (NAAS) in Bulgaria. The main banner features the SEASN logo and the text: "НА 26 ЯНУАРИ ШЕ СЕ ПРОВЕДЕ ОНЛАЙН СЕМИНАР НА ТЕМА: „ПЕРСПЕКТИВИ ПРЕД ПОВТОРНОТО ИЗПОЛЗВАНЕ НА ВОДИТЕ ЗА НАПОЯВАНЕТО В ЗЕМЕДЕЛИЕТО“, ОРГАНИЗИРАН ОТ АГРАРЕН УНИВЕРСИТЕТ - ПЛОВДИВ". The date "21 януари 2021, 13:42" is shown. Below the banner, there is a section titled "МИНИСТЕРСТВО НА ЗЕМЕДЕЛИЕТО, ХРАНИТЕ И ГОРИТЕ" (Ministry of Agriculture, Food and Forestry) with the NAAS logo and the text "НАЦИОНАЛНА СЕЛСКА МРЕЖА" (National Rural Network) and "Агробизнесът" (Agribusiness).

The main content area includes a sidebar with navigation links such as "НОВОСТИ" (News), "ПРЕДСТАВИТЕЛНИ СЪБИТИЯ" (Representative Events), "КОНСУЛТАТИВНИ УСЛУГИ ПО МЕРКИ ОТ ПРСР" (Consultative Services for PSR Measures), "ИНОВАЦИИ И ТРАНСФЕР НА ЗНАНИЕ" (Innovation and Knowledge Transfer), "КАЛЕНДАР" (Calendar), "ОБУЧЕНИЕ" (Training), and "ПРОЕКТИ" (Projects). The main text area contains the seminar details, including the topic "ПЕРСПЕКТИВИ ПРЕД ПОВТОРНОТО ИЗПОЛЗВАНЕ НА ВОДИТЕ ЗА НАПОЯВАНЕТО В ЗЕМЕДЕЛИЕТО" (Perspectives on the reuse of water for irrigation in agriculture) and the organizer "АГРАРЕН УНИВЕРСИТЕТ - ПЛОВДИВ" (Plovdiv University of Agriculture, Food and Forestry).

The seminar is scheduled for January 26, 2021, at 9:00 AM. The topic is "ПЕРСПЕКТИВИ ПРЕД ПОВТОРНОТО ИЗПОЛЗВАНЕ НА ВОДИТЕ ЗА НАПОЯВАНЕТО В ЗЕМЕДЕЛИЕТО" (Perspectives on the reuse of water for irrigation in agriculture). The seminar is organized by the Plovdiv University of Agriculture, Food and Forestry. The seminar will be held online via the Zoom platform. The seminar is free of charge. The seminar is open to all interested parties. The seminar is organized by the Plovdiv University of Agriculture, Food and Forestry. The seminar is organized by the Plovdiv University of Agriculture, Food and Forestry.

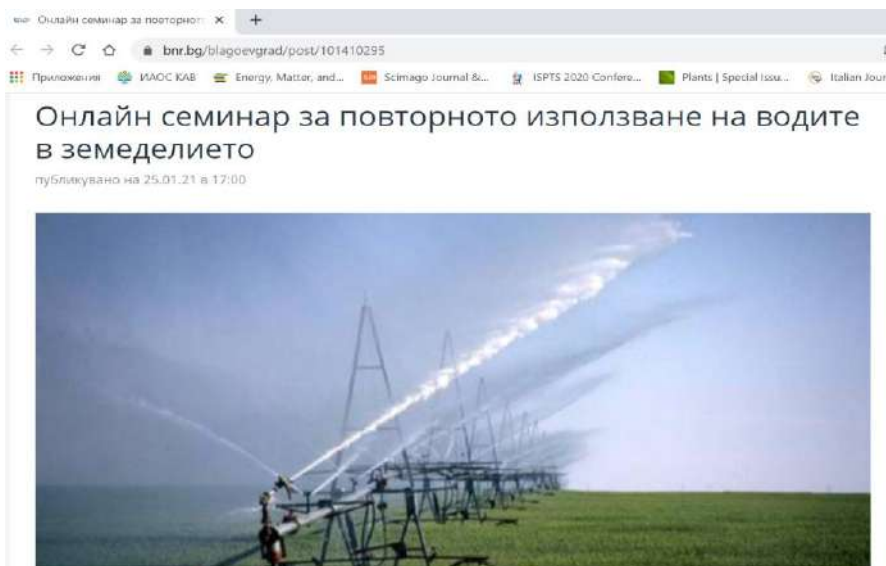
9. Wastewaters can be and should be used in agriculture

<https://bnr.bg/plovdiv/post/101410799/otpadnite-vodi-mogat-da-da-se-varnat-v-zemedeleteto>



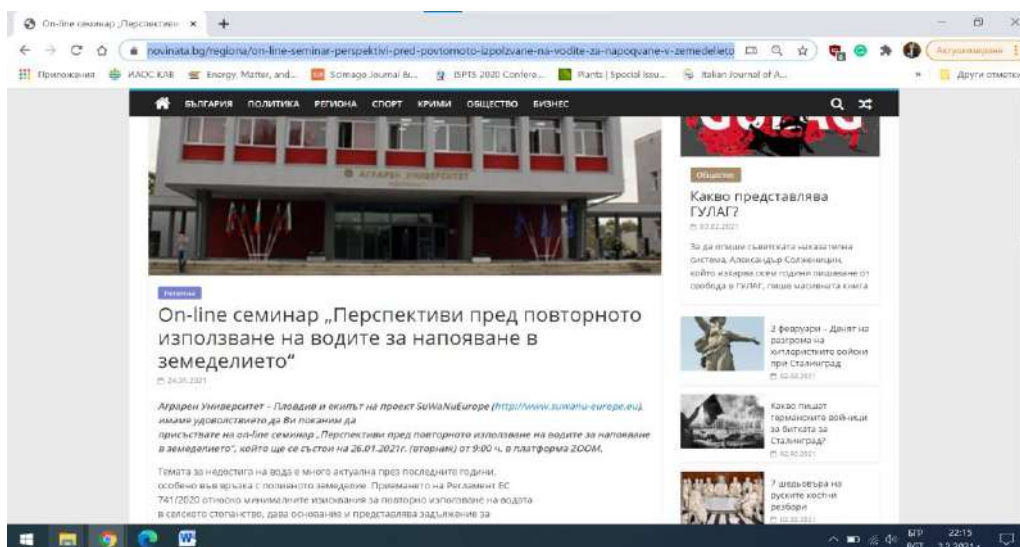
10. Online workshop on water re-use in agriculture

<https://bnr.bg/blagoevgrad/post/101410295>

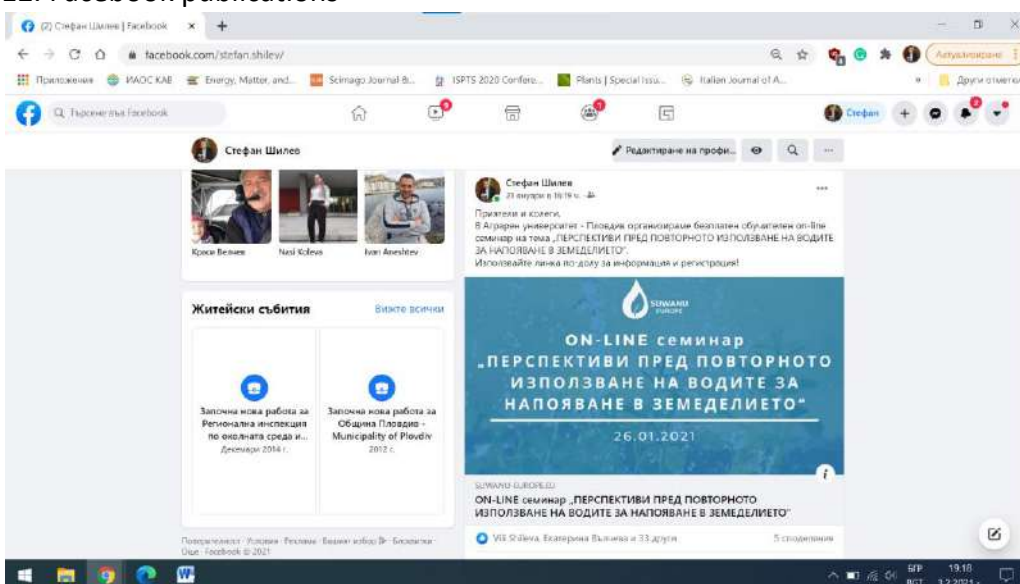


11. Online workshop "Prospects for the water re-use for irrigation in agriculture"

<https://novinata.bg/regiona/on-line-seminar-perspektivi-pred-povtorno-izpolzvanie-na-vodite-za-napoyvane-v-zemedeliето/>

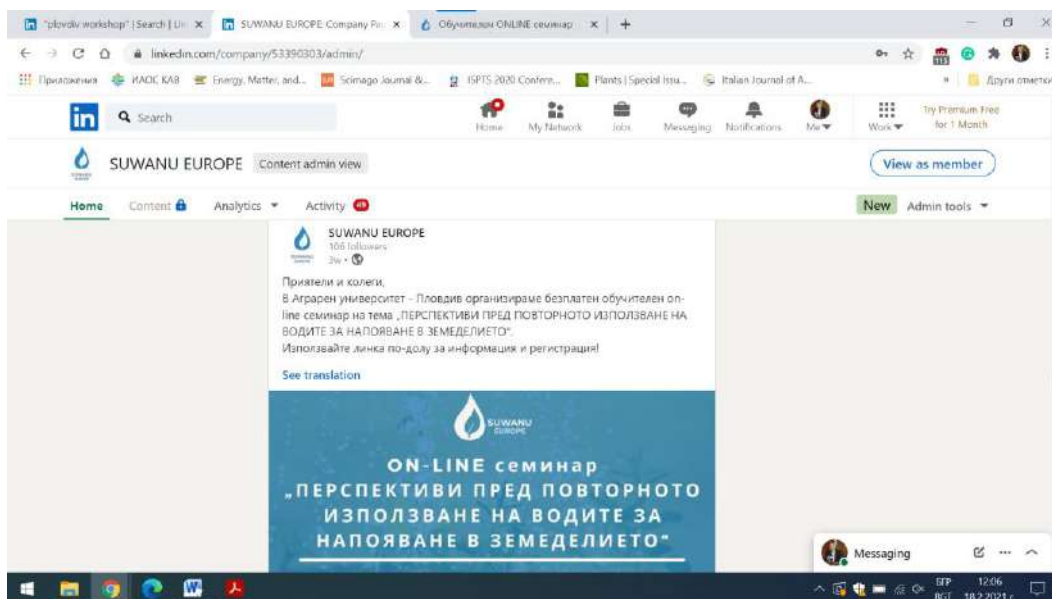


12. Facebook publications



13. Linked-in publication

<https://www.linkedin.com/company/53390303/admin/>



Announcement of the workshop results

14. News plus – video: how it is possible to re-use water for irrigation,

author: Kameliya Karadocheva

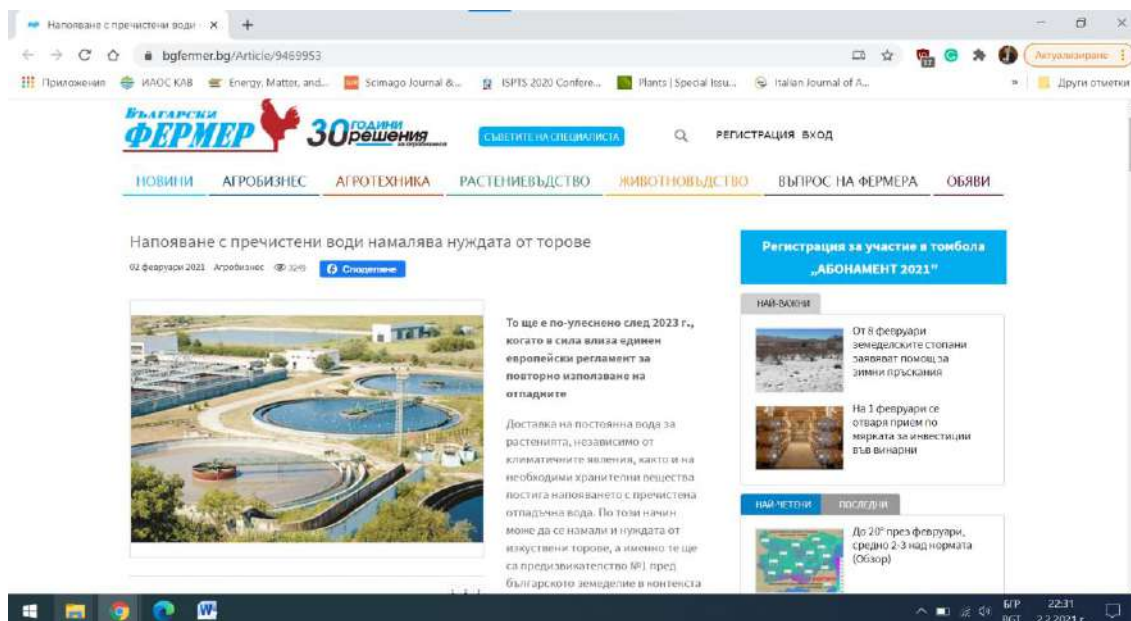
https://agrotv.bg/p_17605Novina-plus---VIDEO:-Kak-e-vyzmozno-povtorno-izpolzvane-na-vodite-za-napoyvane,-avtor:-Kamelik-Karadocheva.html

<https://www.youtube.com/watch?v=v9JQZ213Z0M>



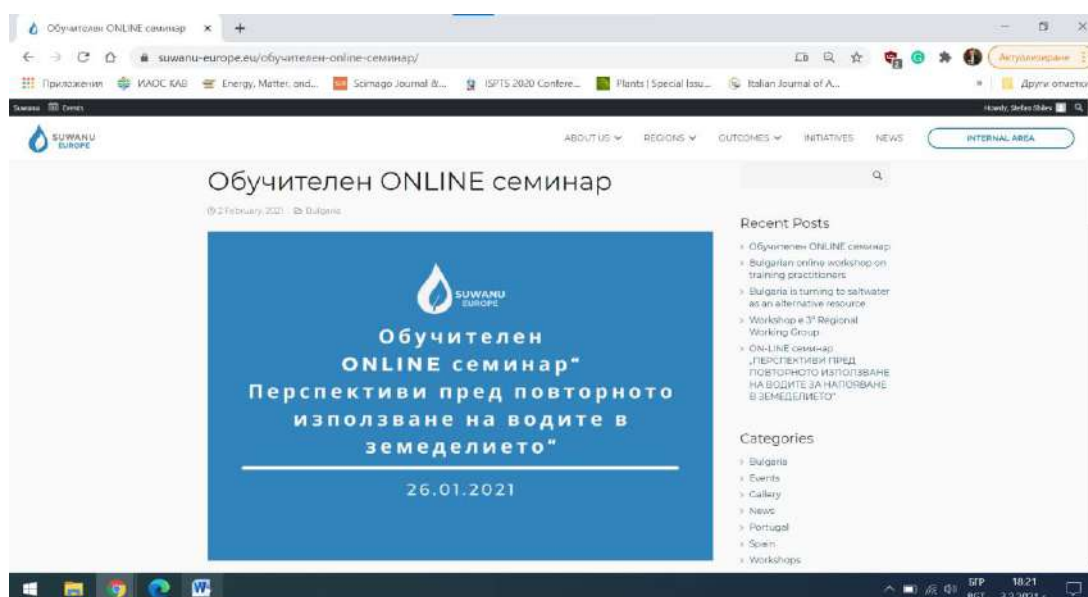
15. Irrigation with reclaimed water reduces the need of fertilizers

<https://www.bgfermer.bg/Article/9469953>



16. ONLINE training workshop

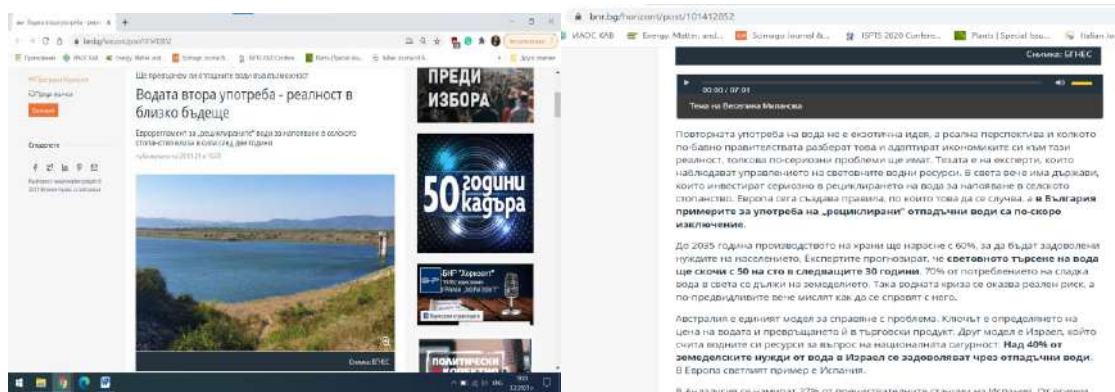
<https://suwanu-europe.eu/%d0%be%d0%b1%d1%83%d1%87%d0%b8%d1%82%d0%b5%d0%bb%d0%b5%d0%bd-online-%d1%81%d0%b5%d0%bc%d0%b8%d0%bd%d0%b0%d1%80/>



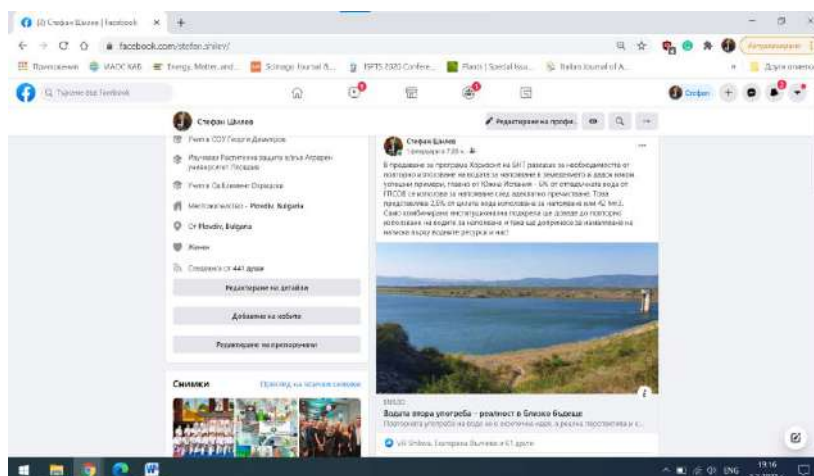
17. Second-hand water – a reality in the near future (National radio, interview, and publication)

<https://bnr.bg/horizont/post/101412852>

Will we turn wastewater into an opportunity? European Regulation on "recycled" irrigation water in agriculture enters into force after two years



18. Facebook publications



19. The best effect of irrigation with reclaimed water is in the case of pepper

<https://www.bgfermer.bg/Article/9469986>

bgfermer.bg/Article/9469986

Проекти / Проект i... Процедура по зал... Програмиране202... Удължават срока з... Glossary | WaterReuse

Най-добър е ефектът от пречистени отпадни води за отглеждане на пипер

04 февруари 2021 Агробизнес 7917 [Сподели](#)



Няколко полеви проучвания на SuWaNu Europe стигат до заключението, че качеството на реколтата и добивът при използване на повторно използвани води варира в различните култури. За пример са дадени диня, пипер, домати и краставица.

Производството на диня се увеличава с до 13%, поради повишената физиологична активност. В напояваните с регенерирана вода растения съдържанието на елементи в листата като N, K, P и Ca е по-високо.

20. English version of the National radio' interview

<https://bnr.bg/en/post/101415473/water-recycling-takes-baby-steps-in-bulgaria>

bnr.bg/en/post/101415473/water-recycling-takes-baby-steps-in-bulgaria

Apps Проекти / Проект i... Процедура по зал... Програмиране202... Удължават срока з... Glossary | WaterReuse

БНР Новини Слушай БНР Програми на БНР Radio Bulgaria (languages) Бинар Музикална кт

BНР RADIO BULGARIA

News Life Politics Economy Tourism Sport Music

Radio Bulgaria

Life

Bulgarian National Radio © 2021 All Rights Reserved

Water recycling takes baby steps in Bulgaria

published on 2/3/21 12:04 PM



21. Spanish version of the publication

<https://bnr.bg/es/post/101416316/el-agua-reciclada-entra-en-bulgaria-con-timidos-pasos>

El agua reciclada entra en Bulgaria con pasos tímidos, Publicado el 04/02/21 14:53



6.5 Workshop pre-work, preparation, and distributed material

The specific preparation approach applied for the training workshop is the following:

A multi-thematic approach in the agenda preparation is used, linking farmers, advisors, researchers, businesses, and other actors for communication and dissemination of practical-oriented outcomes.

We used traditional and proven methods for disseminating and communicating the upcoming online workshop: e-mails, university website for news, the website of NAAS, private invitations, social media, etc., that have a strong link with all targeted stakeholders to guarantee optimum dissemination and communication of the event.

The statistics made by the registrations in the Google form showed 122 registrations belonging to 99 different individuals or organizations. Private invitations by E-mail (44.3%) or by phone (11.5%) had a greater impact, followed by the Facebook announcements (15.6%), the website of AUP (14.8%), and the publication on the website of the partners from NAAS (9.8%).

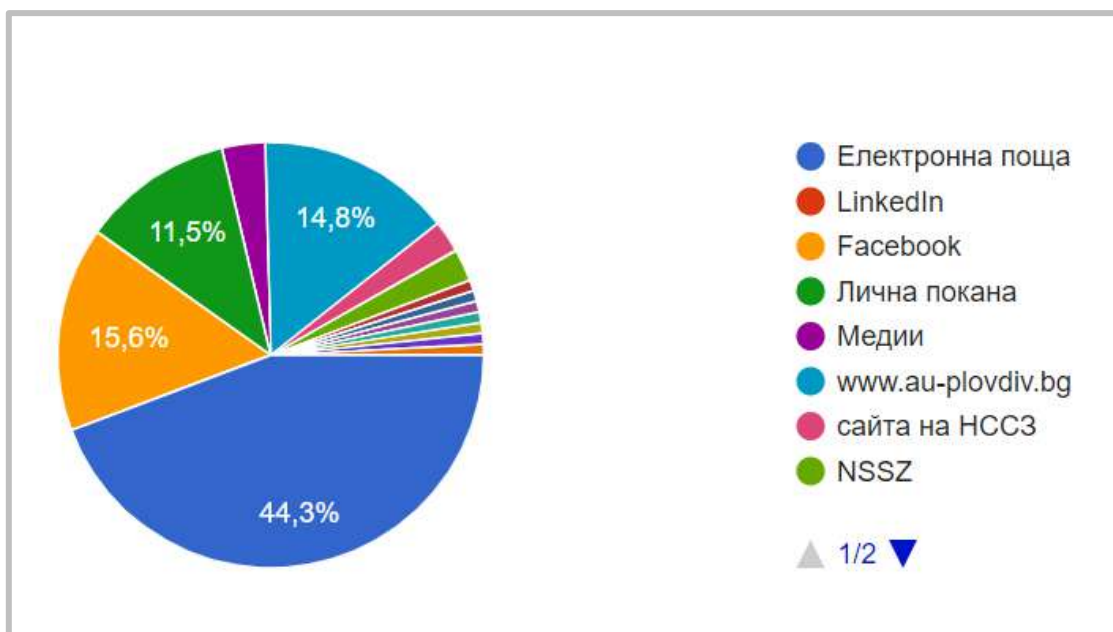


Figure 50 - Distribution of the effectiveness of the ways for announcing the workshop

The workshop presentations of all the AUP team possessed the distinctive features of the SuWaNu Europe project, both in the footer and in the header. The SuWaNu Europe roll-up banner was placed behind one of the presenters, so the logo and the acronym were visible during most of the workshop. All dissemination materials were co-designed and translated to Bulgarian to be used by stakeholders involved in the project and reach a wider audience. Existing widespread communication channels for the dissemination materials such as those of Regional working group were used. An invitation and agenda were made available in Bulgarian in the project's website five days before the workshop date to increase the actors' involvement. A European-level impact was achieved sharing of project results using Initiatives Platform and SuWaNu Europe Lighthouse practice abstracts. We have selected essential print screens presenting how the workshop has been performed.

Disseminating the workshop results:

1. Adapt at a local level the project web-based info-materials;
2. Select relevant multimedia material (videos, demonstration summaries, etc.);
3. Interviews to online media, including online TV;
4. Interview to program Horizon of Bulgarian National Radio;
5. Announcements through the social networks (Facebook, Linked-in);
6. Interact with local and national media channels;
7. E-mail to the participants showing the SuWaNu Europe website as a place from where the attendees could download the presentations from the workshop and other relevant information produced by the project (info-packages, SWOT and PEST analysis, General and Regional Action Plans, etc.);

6.6 Programme-Agenda



Network for effective knowledge transfer on safe and economic
wastewater reuse in agriculture in Europe

HORIZON 2020 - GA number: 818088

SUWANU EUROPE WORKSHOP "Train the practitioners"

PROGRAMME

January 26 2021 – ONLINE (ZOOM)

- 09:00 Opening by Prof. Dr. Hristina Yancheva, Rector of the Agricultural University – Plovdiv
- 09:10 Presentation of the SUWANU EUROPE project. SWOT and PEST analyses
Assoc. Prof. Stefan Shilev, Agricultural University – Plovdiv, local project coordinator
- 09:30 NAAS in support of small farms and young farmers; Opportunities for support under various consulting packages, including for irrigation under measure 2 "Consulting services, farm management services and on-farm replacement services" of the RDP 2014-2020; Networked European farms to stimulate mutual enriching knowledge and using innovation through demonstrations (NEFERTITI), Horizon 2020 program
Petya Kumanova, DG National Agricultural Advisory Service, Deputy Director
- 10:00 SuWaNu Europe – Stakeholders and AKIS Analysis
Assoc. Prof. Violeta Dirimanova, Agricultural University – Plovdiv
- 10:15 Current and future projects for rehabilitation of irrigation infrastructure and their impact on the price of irrigation water
Eng. Katya Paralska, Irrigation Systems EAD, Maritsa branch
- 10:45 Regulation 741/2020 on minimum requirements for water re-use in agriculture
Antoniya Danailova, environmental expert, SuWaNu Europe team
- 11:15 Practical cases from Bulgaria:
- Application of membrane technologies for industrial wastewater reclamation
Eng. Ivan Zayakov, Eco Plant Ltd.
 - Utilization of wastewater from steam distillation of pink colour in rose production
Eng. Mihail Mihailov, Golden Rose farm Ltd.
- 12:00 Lunch break

- 12:30 SuWaNu Europe – an action plan to promote the use of reclaimed water in the agriculture of Bulgaria
Assoc. Prof. Stefan Shilev, Agricultural University – Plovdiv
- 13:00 Presentation of successful stories for irrigation with reclaimed water from abroad (Germany, France, Spain, etc.)
SuWaNu Europe team
- 13:20 Irrigation systems with reclaimed water in agriculture
Assoc. Prof. Rositsa Meranzova, Agricultural University – Plovdiv
- 13:40 What's next in *SuWaNu Europe*?
SuWaNu Europe team
- 14:00 Attitude survey: an online survey on irrigation
Assoc. Prof. Violeta Dirimanova, Agricultural University – Plovdiv
- 14:15 Closing of the workshop and sharing of electronic material

6.7 Summary of the presentations and activities carried out during the workshop

6.7.1 Summary of the presentations.

In the beginning, Assoc. Prof. Stefan Shilev welcomed the attendees and announced the agenda for the workshop, which was planned in two sessions, 9:00 - 12:00 and 12:30 to 14:30.

During the first session, Mr. Shilev, the local coordinator, presented SWOT and PEST analysis, the General results, and the Regional Action Plan (RAP) for the Plovdiv region. He showed three examples for reclaimed water irrigation from Spain to the participants, available in the Initiative area of the project's website.

A useful discussion arose about the RAP, where several suggestions from the participants were addressed, linking the RAP's measures with the Third River Basin Management Plan, which is in preparation.

An update on the status of the country's irrigation infrastructure was considered of high importance. For that reason, an expert from the state company Irrigation Systems EAD, Maritsa branch, was invited as a lecturer. Eng. Katya Paralska explained the submission of 26 project proposals for funding under the sub-measure 4.3 "Support for investments in infrastructure related to the development, modernization or adaptation of agriculture and forestry" of the Rural Development Program 2014-2020. Their total value is BGN 114,762,927, with a specific budget in the application conditions BGN 88,831,016. For the first year, Irrigation Systems EAD will be a beneficiary under Sub-measure 4.3. The submitted 26 projects cover facilities throughout the country to restore the main irrigation infrastructure, culverts, and pumping stations, extremely important for irrigation. Also, it is planned to purchase machinery and equipment for the infrastructure maintenance. "Irrigation Systems" JSC will invest in measuring

devices, which consider the exact amount of water. In this way, real-time water management will be achieved.



Figure 51 - Chanel of Irrigation systems EAD

Implementing the 26 project proposals will achieve potential water savings of at least 50% while also providing farmers an opportunity to increase irrigated areas by at least 20,000 ha. Besides, the system will also allow distributing the reclaimed water from the source to the fields.

The National agricultural advisory service (NAAS) presentation in the workshop was to explain the ways to support and consult the activities implemented in Bulgaria in several consultation packs focused on different topics, including irrigation. The lecturer was Mrs. Petya Kumanova, Deputy Director of General Directorate "Agricultural Advices and Analytical Laboratory" of the NAAS.

According to the information given by Mrs. Petya Kumanova the role of NAAS is to provide:

- consulting assistance to farmers, associations, and other organizations related to agriculture;
- free consulting services through sub-measure 2.1.2 "Consulting services for small farms" and sub-measure 2.1.1 "Consulting services for farmers and foresters" of Measure 2 of the Rural Development Program 2014-2020 funded by the European Agricultural Fund for Rural Development.
- assists by information and advice for the establishment of organizations of agricultural producers following the common agricultural policy of the European Union;
- supports the transfer and application of scientific and practical achievements in the field of agriculture;
- organizes and conducts training of agricultural producers;
- advice, information and training materials and specialized services in the field of agriculture;
- performs laboratory tests related to the main activity of NAAS.



Figure 52 - NAAS' territorial offices' structure

Mrs. Kumanova emphasized the critical role that the Agricultural Advisory System will play to implement the new Common Agricultural Policy after 2020. The new programming period is expected to bring together in common database information on advisory organizations from across Europe and to improve their interactions. In this way, better results will be achieved in reducing pesticide use in crop production, tackling the effects of change in crop production, climate change and crises resulting from adverse climatic and other events, as well as to support the entry of innovative practices and technologies in agriculture to support farmers across the 30 territorial offices by district in Bulgaria.

The second presentation made by Mrs. Kumanova was related to the project Nefertiti "Networking European Farms to Enhance cRoss ferTilisation and Innovation Uptake Through demonstration", that focuses on creating added value from the exchange of knowledge, actors, farmers, and technical content between networks to boost innovation uptake and to improve peer to peer learning and network connectivity between farming actors across Europe. In the end, it all contributes to a more competitive, sustainable, and climate-smart agriculture, including water efficiency in irrigation. In the project frame, a practical video linked to the reclaimed water irrigation topics is produced with Bulgarian transcripts and was shown to the participants.

The workshop included a presentation on the Regulation (EU) 2020/741 of the European parliament and the Council of May 25, 2020 on minimum requirements for water re-use. It discussed the challenges that set the Regulation for the water treatment sector and the authorities and reliable opportunities for the farmers, new possibilities for the local business, and wide research field.

Eng. Ivan Zaykov presented membrane technology for wastewater treatment. One of their advantages is the reduced cost of the membrane technology using a significantly popular material – teflon. The energy cost and the membrane surfaces of the technologies themselves have lowered the price. Membrane technology is installed in Kapitan Dimitriev village, Peshtera municipality, fully automated, which has been successfully operating for eight years. Eng. Zayakov answered the participants' questions about the sludge and the ability to auto reverse the system. These systems have become preferred.

Assoc. prof. Violeta Dirimanova drew attention to the actors in SuWaNu Europe' AKIS analysis. The presentation contributed to the participants for understanding the definition of AKIS. It was explained that for the successful implementation of networks like the one in SuWaNu Europe, there is an exchange of knowledge and experiences at the national level (Regional working group) and interactions within and between partners at the consortium level.

Part of the agenda was an online survey targeting to examine the specialists and stakeholders' attitude on the reclaimed water use in agriculture and the obstacles of their point of view. The short questionnaire received 31 responses.

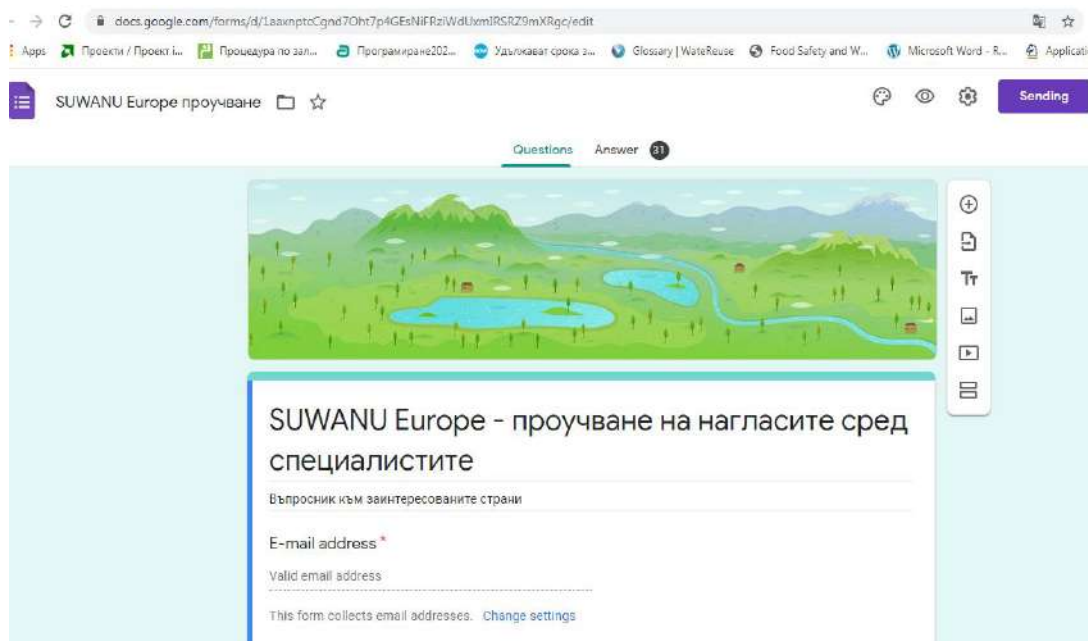


Figure 53 - Screenshot of the survey among the participants on "the attitudes among the professionals to the water re-use for irrigation in agriculture"

The afternoon session continued with the presentations of Eng. Mihail Mihaylov, regarding cases study of water re-use from the distillery for irrigation the rose plantation. He explained the technology of vapour distillation of the rose blossom and the treatment of the wastewater, followed by a description of the case study of water re-use for rose breeding.

Assoc. Prof. Rositsa Meranzova explained the methods and the latest irrigation systems for water re-use in agriculture. The materials showed by prof. Meranzova were very useful, comprehensive, and informative for the practitioners. Special attention was paid to the need of measures to avoid clogging of sprinklers and other water supplies.

After the workshop, a discussion was held between the participants that resulted in a suggestion for preparation of an official opinion to the MoEW, Water Directorate, on the Third Period of River Basin Management Plans, where to set measures for the use of water resources in periods and areas of drought and accelerating the reclaimed water use for irrigation, etc.

There was a dissemination session consisted of project outcomes, presentation of the project website and sources of additional information for the farmers and all the stakeholders.

6.7.2 Summary of the survey

The training workshop participants were asked to fulfil a survey on "the attitudes among the professionals to the water re-use for irrigation in agriculture". Thirty-one participants took part in it during or after the workshop conclusion. There were some exciting and at the same time, very encouraging and compelling answers. In the beginning, the question was if the workshop participants were aware before the seminar about the possibility of re-using irrigation water in agriculture. Seventy-four percent replied positively, which means that 25.8% heart and get acquainted for the first time at the workshop with the possibility of using regenerated water in agriculture (fig. 7A). A high percentage of the stakeholders (74.2%) did not worry that the re-use of water for irrigation in agriculture may threaten soil quality and agricultural products. In comparison, only 16.1% have their concerns about this.

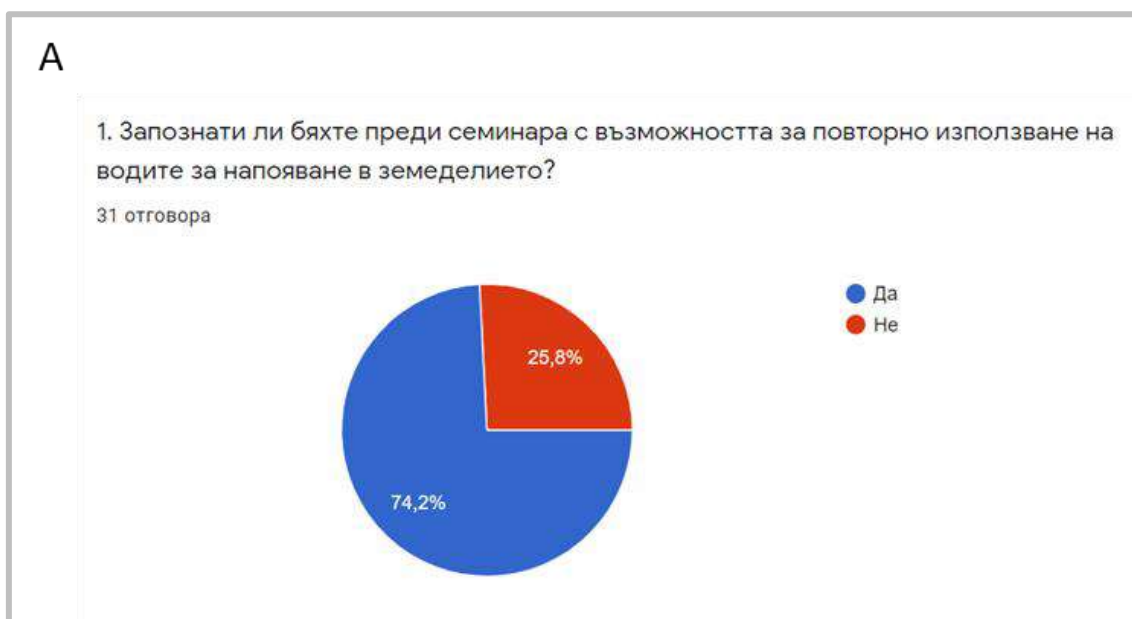


Figure 54 - Representation of the answers to some questions from the workshop participants

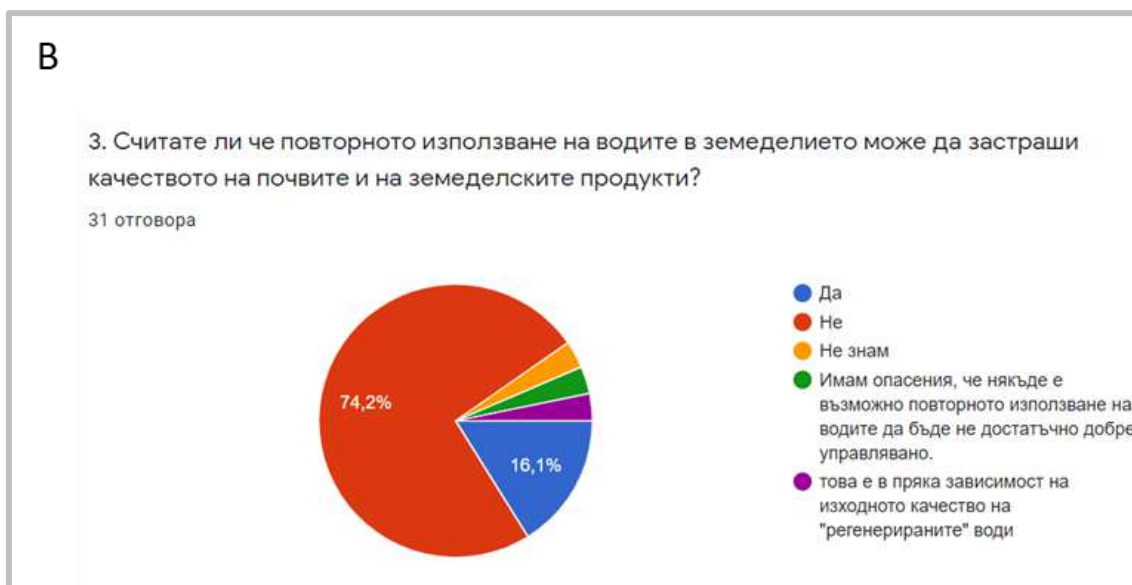


Figure 55 - Representation of the answers to some questions from the workshop participants

In addition, 77.4% believed that the water re-use will decrease the pressure on freshwater resources and partially satisfy the needs of water for irrigation. Fifty-five percent of the stakeholders considered that water re-use would decrease water reclamation costs.

All farmers who participated in the training workshop will use the reclaimed water for irrigation according to the Regulation EC 2020/741, if they have the opportunity, although other stakeholders have seen potential problems in the farmers' reluctance to use non-traditional water sources. Other problematic issues were related to the costs, water distribution, partnership among the stakeholders, reclaimed water monitoring, etc. The attendees were completely convinced that they would buy agricultural products irrigated with reclaimed water, and this alternative source of water must receive strong state support.

6.8 Results

Table 25 - Main results of the workshop

Input, feedback or lesson learnt obtained during the workshop	Activity where this input was generated (e.g., speech from expert, roundtable with stakeholders, comments from the audience during Q&A session or participatory activity, etc.)	How this input/feedback might be implemented in the SUWANU EUROPE project and/or might be a driver for change in society.
Measures for water re-use in regions and periods subjected to drought are proposed to be introduced in the third River Basin Management Plan and the second Flood Risk Management Plan.	Discussion about the General and Regional Action plans	An RWG' meeting is planned as soon as the Covid-19 situation allows, at which an official opinion will be prepared and sent to the International Bank for Reconstruction and Development – part of the World Bank group, to support the preparation of the Plans.
Cases study for implementation of water re-use in lavender fields rise as one of the most interesting questions.	In the chat section, during discussion about success stories in Bulgarian and Europe.	Additional materials regarding the specific topic were sent to the attendees.
The concepts of using of membrane technologies for water reclamation were clarified including from the investment point of view.	During the presentation of Eng. Ivan Zaykov.	Wide dissemination of this information will be very important for Plovdiv region.
Participants from various type of stakeholders were involved	Invitations based on previous contacts and cooperation	Strengthening the regional working group for subsequent dissemination of knowledge
There is more and more talk about the re-use of water in the agriculture of Bulgaria	Thanks to the workshop realization and the dissemination activities	This will help at national level to increase the knowledge about the water re-use
Preconditions have been created for the formation of teams for participation in water re-use projects in agriculture	Overall workshop realization	Further participation in international research project, especially calls of Horizon Europe
New steps were planned for the work of the RWG to promote water re-use in Bulgaria	During the discussions followed the presentations	Opportunities will be created to encourage the water re-use for irrigation in agriculture
Water re-use for irrigation is widely accepted by farmers and other stakeholders as an alternative to irrigation with fresh water	A survey Q&A was conducted among stakeholders on water re-use	It makes it possible to correctly assess the current attitudes among practitioners regarding the re-use of water in agriculture

6.9 Conclusions

Water re-use has its important place in Bulgarian agriculture, supporting the yield increment and reducing the pressure on freshwater resources. The workshop participants agreed that all stakeholders should use the tools and knowledge generated by the SuWaNu Europe in their everyday work to be more informed and to be able to disseminate this information. Furthermore, all stakeholders must apply more efforts to ensure strong interest in and easier access to reclaimed water and promote its use in agriculture. This could be achieved through joint research and educational projects where all interested parties, including NGOs, are involved. Because of the great interest in the topic, the participants agreed that future workshops or conferences must be organized to discuss the place of water re-use for irrigation in agriculture in the presence of politicians and decision-makers.

More sustainable relationships have been established between government officials, scientists, engineers, and farmers, leading to future cooperation and, particularly, the implementation of national and European water re-use projects. Although many practitioners are aware of water re-use possibilities in agriculture, they do not have sufficient knowledge about this alternative water supply source. It is closely related to the additional efforts that must be applied to convince the politicians and decision-makers to create tools for promotion because this alternative water source is highly underestimated.

Finally, the water re-use has regional significance, but also regional features. The training workshop participants agreed that serious research is needed at the regional level to convince consumers, NGOs, and farmers themselves of the benefits and safety of using reclaimed water for irrigation. In this sense, the government must purposefully fund various types of projects for water re-use implementation.

9 PO VALLEY | ITALY

9.1 Executive summary

The workshop was held on 14 October 2020, virtually. The participants were representing all the involved sectors, in particular farmers were represented by their association and by the Consorzi di Bonifica. The workshop opened with a short introduction to SuWaNu project followed by three presentations. The first speaker was focusing on the discussion of the advantages, disadvantages and of the potential barriers and limitation as emerged from the SWOT and PEST analysis. Aim of the presentation was to stimulate the participant to consider not only disadvantages and limitations, but also to take in the due account the advantages water reuse offers. The second discussion topic was presented by D. Rossi (Confagricoltura). The Regional Action Plan was introduced to the audience, presenting the solutions SuWaNu is suggesting to the local decision makers in order to cope with the points raised in the previous presentation. The third presentation was framing the local reality into the recently approved EU Regulation 741/2020. The presentation was aiming to let the stakeholders understand how to take advantage from the EU Regulation and what they should expect in the next future. The suggestions and the indications gathered during the discussion will guide the next interactions with the stakeholders.

9.2 Composition of the workshop organization team

Table 26 - Workshop steering Committee's members

Workshop steering Committee's members		
Name	Organization	Position to the organization
Adriano Battilani	Cons. Bon. CER	Senior Researcher-Project Manager
Gioele Chiari	Cons. Bon. CER	Researcher
Daniele Rossi	Confagricoltura	Policy Adviser
Maurizio Previati	UniTO	Researcher

9.3 Workshop Participants

The participants were representing the major agricultural associations, the agricultural water boards at the highest level (regional and national). Farmers are referring to both their association and the local Consorzio di Bonifica, which they participate and control, to take decisions on water management, drainage, and irrigation, thus on water reuse as well.

The decision makers were involved as well, as well as the academy and the innovation providers.

Table 27 - Participants of the train the practitioners' workshop

Participants	
Name	Organization represented
G. Tuffarelli	ANBI
A. Ruffini	Consorzio Bonifica Emilia Centrale
F. Cavazza	UniBO
S. Giampreti	--
F. Bonatti	--
M. Babini	--
I. Bevilacqua	EnviCons
D. Rossi	Confagricoltura
M. Previati	UniTO
M. Zanotti	Regione Piemonte
T. Pellitteri	ANBI Lombardia
A. Angheben	--
S. L. Gentile	CER
A. Faliero	AIES
P. Merlin	--
C. Carli	CIA
F. Olivotti	ANBI Lombardia
E. Trombi	--
G. Alampi	Regione Piemonte
S. Lavrnic	UniBO
F. Avolio	--
S. Panizzi	--
A. Bignami	Cons. Bonifica Ferrara
M. Turci	Cons. Bonifica Romagna Occidentale
A. Frongia	ANBI Lombardia
G. Panza	--
A. Crestani	ANBI Veneto
G. Panza	--
E. Possiedi	--
G. Lucchelli	ANBI Lombardia
A. Ghetti	Coldiretti/ANBI Emilia Romagna

9.4 Workshop dissemination

The dissemination of the invitations to the event were made by email. The mailing list prepared by the Workshop Steering Committee Include more than 100 relevant contacts. The contacted stakeholders are more and more over-exposed to virtual meetings, events, webinar, and expressed deep uneasiness for the increasingly pressure to take part to virtual events. In order to secure adequate participation of relevant stakeholders, the Workshop Steering Committee contacted each of them personally by phone.

9.5 Workshop pre-work, preparation, and distributed material

To prepare the workshop were organized several peer-to-peer meetings and phone calls among the members of the steering group. The presentation was shared among the steering group and cross checked. A pdf brochure has been sent to invite the stakeholders to the meeting.



Figure 56 - Invitation brochure sent to the stakeholders

9.6 Programme-Agenda

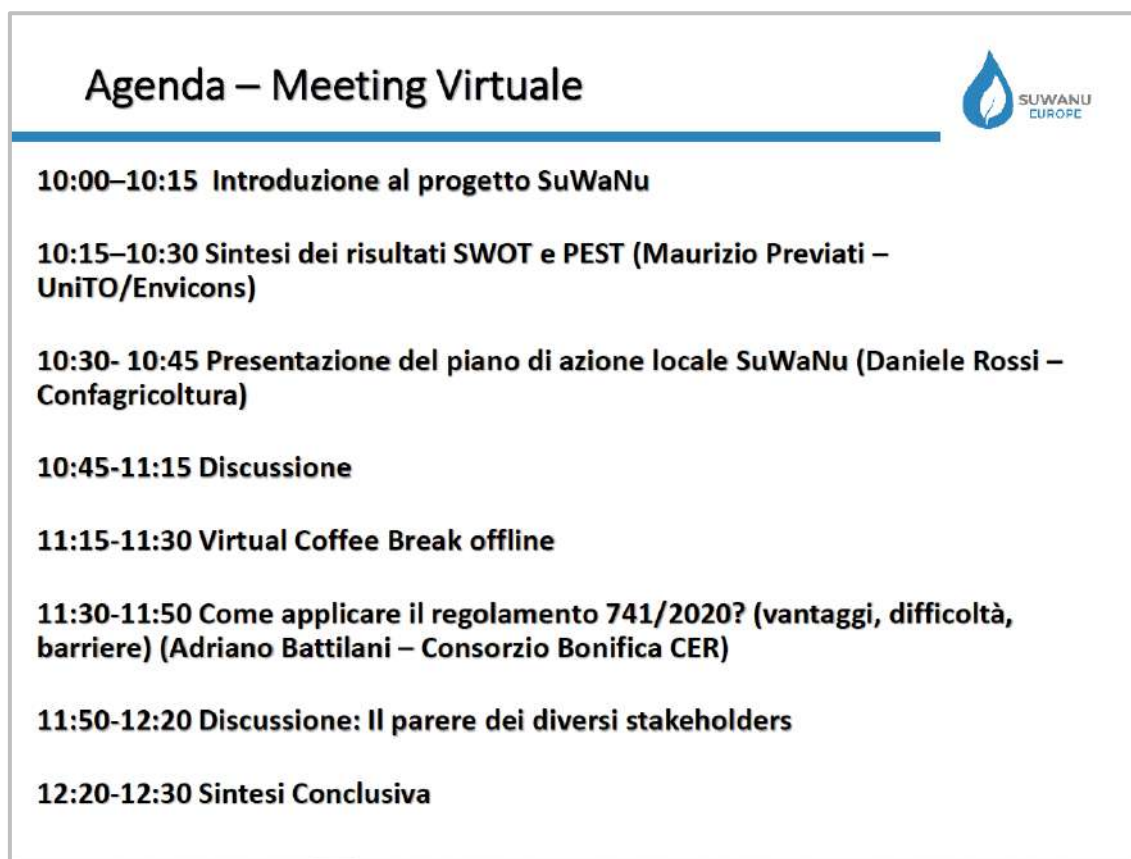


Figure 57 - Workshop's agenda

9.7 Summary of the presentations and activities carried out during the workshop

The workshop has been registered. The full video registration is available at the following link <https://web.microsoftstream.com/video/28a7eb7f-08c8-4d3e-bfab-ba29edf9a084>

The workshop started with a short introduction of the SuWaNu Europe project and activities (A. Battilani).

The first discussion topic was presented by M. Previati (UniTO) and was focusing on the discussion of the advantages, disadvantages and of the potential barriers and limitation as emerged from the SWOT and PEST analysis. Aim of the presentation was to stimulate the participant to consider not only disadvantages and limitations, but also to take in the due account the advantages water reuse offers. The persisting negative attitude towards water reuse for food production, and the incertitude with respect to the market reaction and acceptance are still driving stakeholders to reject the reuse as first reaction. This reaction is justified by the barriers food trade contracts still represent. Number of the potential users of regenerated water are still asked to sign contracts with large retailers' organisations that expressly exclude the use of reused water.

The second discussion topic was presented by D. Rossi (Confagricoltura). The Regional Action Plan was introduced to the audience, presenting the solutions SuWaNu is suggesting to the local decision makers in order to cope with the points raised in the previous presentation.

In the third presentation A. Battilani was framing the local reality into the recently approved EU Regulation 741/2020. The presentation was aiming to let the stakeholders understand how to take advantage from the EU Regulation and what they should expect in the next future. The implementation of the regulation and the possibility to increase the reuse in a context where existing infrastructures could be at the same a constraint and an opportunity was discussed.

9.8 Results

Table 28 - Main results of the workshop

Input, feedback, or lesson learnt obtained during the workshop	Activity where this input was generated (e.g., speech from expert, roundtable with stakeholders, comments from the audience during Q&A session or participatory activity, etc.)	How this input/feedback might be implemented in the SUWANU EUROPE project and/or might be a driver for change in society.
Better interaction between Water Industries and Agriculture	Question from stakeholders on the expert speech	This reinforces the willingness of the Agricultural water boards to find an agreement with Water Industries.
Bring the regenerated water production close to the farm	Speech from expert, roundtable	Proposal for decentralized water treatment and wastewater plant downscaling
Agriculture should adapt	Roundtable with stakeholders	Agriculture must undertake an effort to adapt cropping systems incorporating water reuse. Need to investments and financing plans.
Small size of farms	Roundtable with stakeholders	Collective management to gather the necessary critical mass.
Extra treatment costs	Comments from the audience during Q&A session	Make clear the balance for Water Industries between extra costs and savings, coming from the fit for purposes approach. Agriculture cannot be

		charged of wastewater treatment costs
Responsibilities	Comments from the audience during Q&A session	The doubts about the roles and the responsibilities must be clarified.
Risk analysis	Comments from the audience during Q&A session	The risk analysis concept needs to be clarified and better understood.
Regenerated water production and use are not yet aligned	Comments from the audience during Q&A session	Bring together WWTP managers and farmers to effectively calibrate the treatments on the uses.

9.9 Conclusions

The audience was informed about the activities, progresses and proposals made by SuWaNu, as well as about the pros and cons related with the implementation of the new European Regulation on water reuse for irrigation (741/2020).

The suggestions and the indications gathered during the discussion will guide the next interactions with the stakeholders.

The points raised during the workshop Q&A by the participants will be considered and answered during the ongoing discussion between Utilitalia, representing the water industries, and ANBI, representing agriculture and agricultural water governance.

10 THESSALONIKI | GREECE

10.1 Executive summary

The workshop was held on 26th February 2021, virtually, using the following WEBEX ROOM: <https://meetingsemea21.webex.com/meet/pr951867216>. A total of 73 participants were connected while the maximum number of simultaneous participants was 64 participants. 59 participants attended and participated in the whole workshop (3 hours) while the average duration of participation was 2 hours and 45 minutes. Most of the participants were farmers (47,85%) or agricultural advisors (16,44% while 13,70% of them were wastewater treatment operators, 10,96% were university staff members or PhD candidates and 8,22% of them were water engineers.

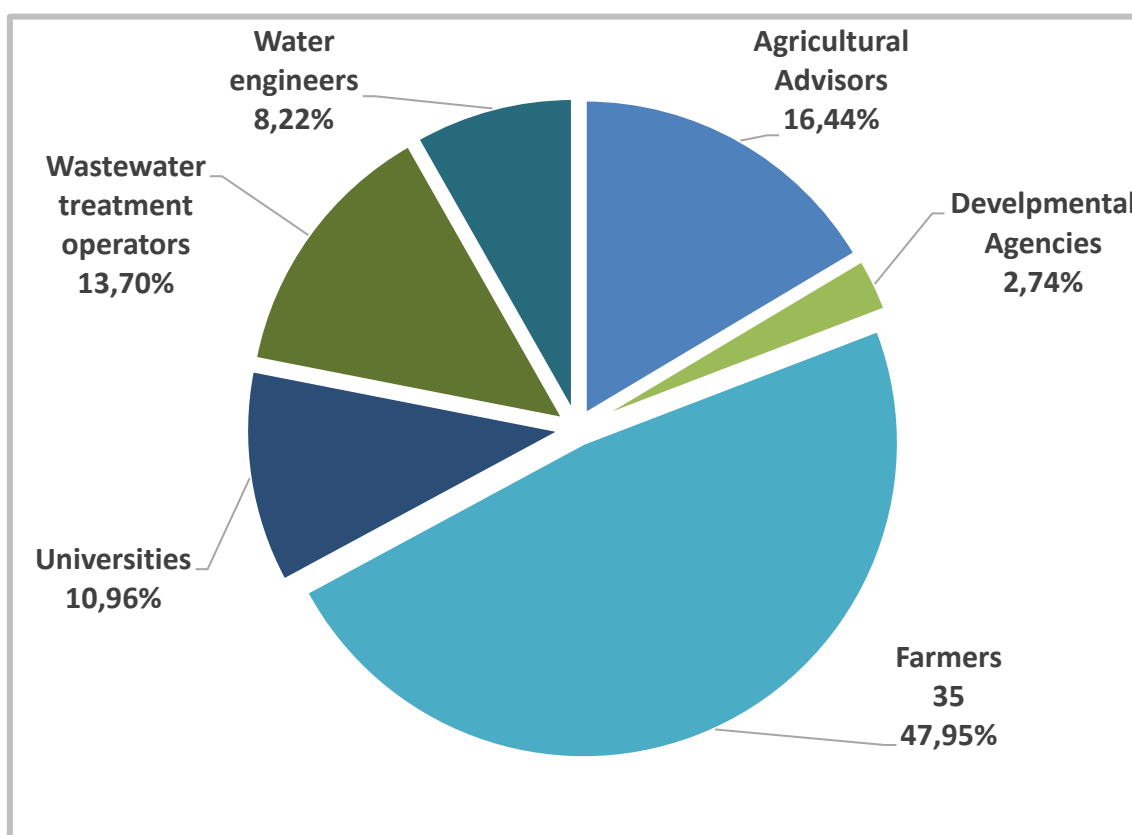


Figure 58 - Profile of the participants

The workshop opened with a short introduction to SuWaNu project followed by five presentations.

- To Farmers -> Impact of recycled water on crop quality and quantity: facts and figures
- To Agricultural Advisors -> Cost-benefit analysis and feasibility of using recycled water
- To Water Managers -> Phosphorus recovery in water reuse
- To Consumers -> AKIS & Stakeholder Analysis: Improving Knowledge Transfer Channels to Promote Innovation
- To Policy Makers -> Addressing obstacles to agricultural irrigation with recovered water and promoting synergies in geographical clusters

The workshop closed with a short presentation of the Role of Development Agency of Thessaloniki (ANETH) in SUWANU-EUROPE while also the Regional Action Plan was introduced to the audience.

10.2 Composition of the workshop organization team

Table 29 - Workshop steering Committee's members

Workshop steering Committee's members		
Name	Organization	Position to the organization
Konstadinos MATTAS	Aristotle University of Thessaloniki	Staff Member (Professor)
Elena TZANOY	Development Agency of Thessaloniki	Contractor
Georgios ZIAGKAS	Development Agency of Thessaloniki	Contractor
Stefanos NASTIS	Aristotle University of Thessaloniki	Staff Member (Professor)
Anastasios MICHAILIDIS	Aristotle University of Thessaloniki	Staff Member (Professor)

10.3 Workshop Participants

The participants were representing the **major water and agricultural associations and private companies** at both regional and national level. Independent **Farmers and advisors**, as well as members of cooperative units, participated to control and take decisions on water reuse management, drainage, and irrigation. Finally, **decision makers** were also involved represented by the academy and the developmental agencies.

Table 30 - Participants of the train the practitioners' workshop

Participants	
Name	Organization represented
1. Dimitra LAZARIDOY	AUTH-Department of Forest and Natural Environment
2. Aikaterini PALTAKI	AUTH-Department of Agricultural Economics
3. Konstadina MPYROY	AUTH-Department of Forest and Natural Environment
4. Epusrimi AMERANI	AUTH-Department of Agricultural Economics
5. Konstadinos MATTAS	AUTH-Department of Agricultural Economics
6. Elena TZANOY	Development Agency of Thessaloniki
7. Georgios ZIAGKAS	Development Agency of Thessaloniki
8. Stefanos NASTIS	AUTH-Department of Agricultural Economics
9. Anastasios MICHAILIDIS	AUTH-Department of Agricultural Economics

Participants	
Name	Organization represented
10. Maria KARASAVVIDOY	Advisor
11. Konstadinos PAPACHRISTOS	Farmer
12. Anna AGALIADOY	Farmer
13. George KALEMOS	Advisor
14. Stefanos POLITIS	AUTH-Department of Agricultural Economics
15. Dimitrios MICHAS	Farmer
16. Konstadinos MILIS	Advisor
17. Vasiliki VASILEIOY	Farmer
18. Vaitsa NTANI	Advisor
19. Alexandra KAMINIOTI	Advisor
20. Rafail SANDRAVELIS	Farmer
21. Ariadni PAPAFOTI	Farmer
22. Eleni KOTSAGGELI	Farmer
23. Konstadina SERTSI	Farmer
24. Andreas LIASIDIS	Farmer
25. Christos KOTSAGGELIS	Farmer
26. Ioannis SOTIRIADIS	Farmer
27. Georgia AVRAMIDOY	Farmer
28. Sofia CHATZITHEODOROU	Farmer
29. Eleni KADIANAKI	Farmer
30. Theodoa AVDELIADOU	Farmer
31. Athina VOULGARAKI	Farmer
32. Christina KOCHLIARIDOU	Farmer
33. Tryfon SAVVIDIS	Farmer
34. Dimitrios DELIDIS	Farmer
35. Aikaterini GKINA	Farmer
36. Anna SIOSIOU	Farmer
37. Ismyini PANAGIOTOPOULOU	Wastewater treatment operator
38. Ioannis CHATZIEFREMIDIS	Wastewater treatment operator
39. Antonios CHATZIPAVLIDIS	Wastewater treatment operator
40. Kyriakos NIKOLAIDIS	Wastewater treatment operator
41. Stavroula OLOKTSIDOU	Wastewater treatment operator
42. Christos KARAGIANNIDOS	Wastewater treatment operator
43. Agathoklis BASINOS	Wastewater treatment operator
44. Evaggelia LIAKOU	Wastewater treatment operator
45. Konstadinos KOULLIAS	Wastewater treatment operator
46. Athanasios THOMOPOULOS	Advisor
47. Manolis-Rafails TOMZAS	Advisor
48. Andriana GANOPOULOU	Advisor
49. Gogo STREPKOU	Advisor

Participants	
Name	Organization represented
50. Eleni NAVROZIOU	Advisor
51. Elpida IAKOVIDOU	Farmer
52. Panagiotis PAPA ZOGLU	Farmer
53. Christina FILIPPOU	Farmer
54. Apostolos SYMEONIDIS	Farmer
55. Nikoleta SAMARA	Farmer
56. Asimina LEKIDOU	Farmer
57. Maria MICHAIOVITS	Wastewater treatment operator
58. Eleni KOUTRI	Farmer
59. Artemis ANT SOU	Farmer
60. Vasiliki TSINTILA	Farmer
61. Gabriel VASILAKIS	Farmer
62. Eleni MAKRIDOU	Farmer
63. Ioannis TENTAS	Farmer
64. Athanasios PETMEZAS	Farmer
65. Andreas PARLATZAS	Farmer
66. Aikaterini MANTADAKI	Farmer
67. Vasilios MPERTSIAS	Water engineer
68. Maria KRITSINIOTI	Water engineer
69. Arianna SUOMALAINIEN	Water engineer
70. Aristidis KAPSIMALIS	Water engineer
71. Evgenia KOVOUSO GLOU	Water engineer
72. Krystalia LAZOU	Water engineer
73. Konstadinos FYTILIS	Advisor

10.4 Workshop dissemination

The dissemination of the workshop was made by email and social media. The mailing list prepared by the Workshop Steering Committee Includes more than 600 relevant contacts while 75 of them were finally registered by e-mail. Several announcements and invitations have been also posted to the social media of the members of Steering Committee (mainly in Facebook).

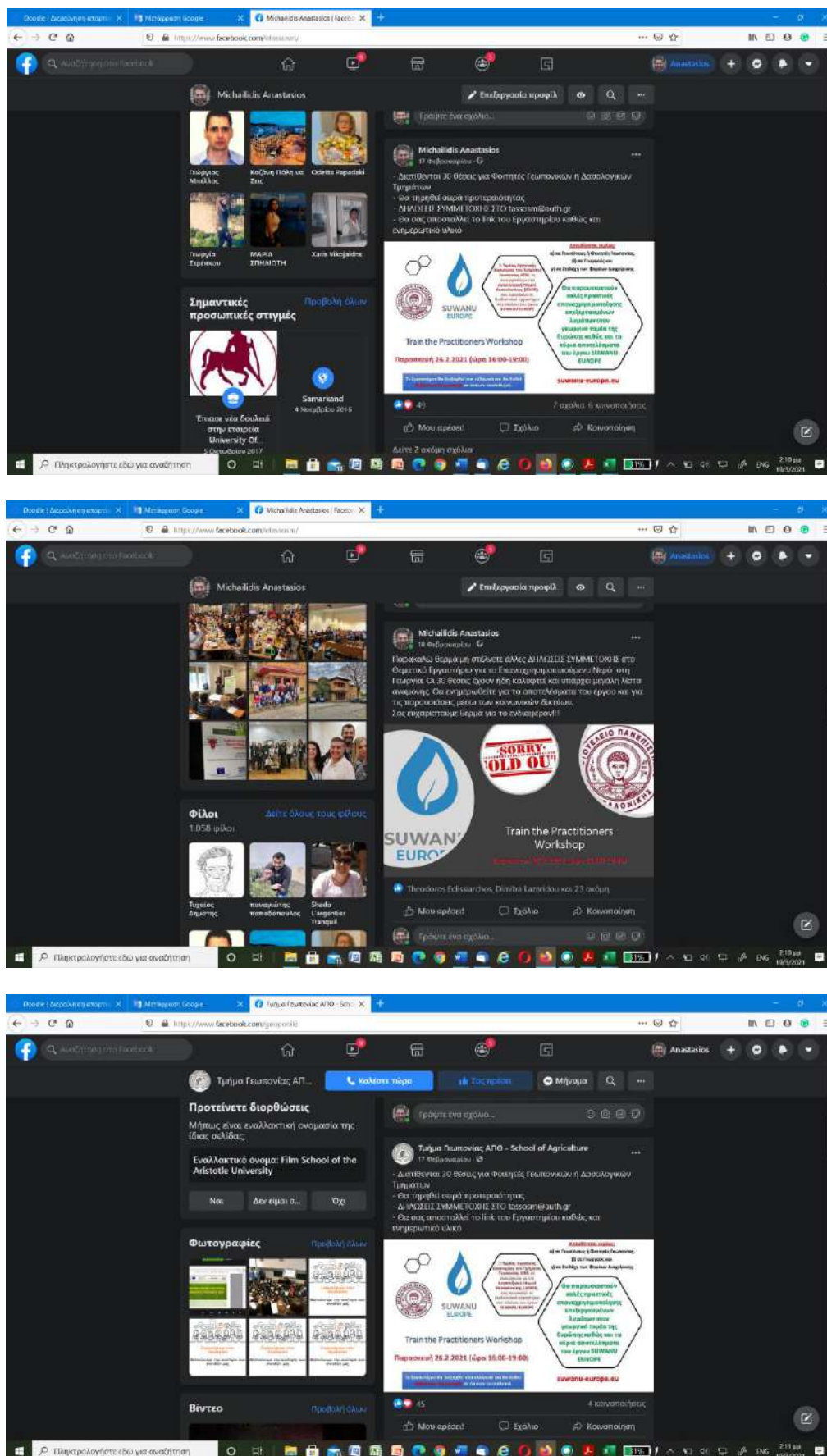


Figure 59 - Dissemination of the workshop

After the completion of the workshop, more than 250 informative email were also sent, and several announcements have been posted in Facebook with the workshop material, photos and presentations.

10.5 Workshop pre-work, preparation, and distributed material

All SUWANU-EUROPE factsheets (in English and Greek) and projects brochures have been printed in colour on thick cardboard. Envelopes, pens, and promotional materials were purchased as part of the project and distributed by post or in person, at the university, to all participants. All material has been also distributed via e-mail (see below).

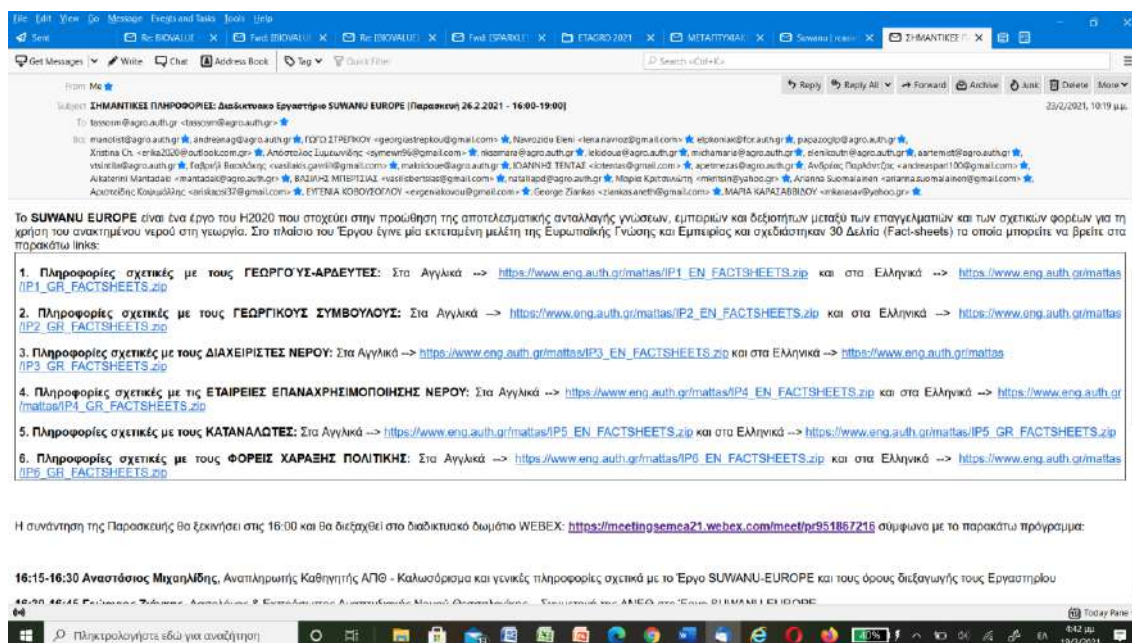


Figure 60 - Email sent by the participants

10.6 Programme-Agenda



Network for effective knowledge transfer on safe and economic
wastewater reuse in agriculture in Europe
HORIZON 2020 - GA number: 818088

SUWANU EUROPE

WORKSHOP “Train the practitioners”

PROGRAM

February, 26 – ONLINE (WEBEX: <https://meetingsemea21.webex.com/meet/pr951867216>)

- 16h00** General presentation of the SUWANU-EUROPE (aims and main results) | Anastasios Michaildis (AUTH)
- 16h30** Impact of recycled water on crop quality and quantity: facts and figures | Aikaterini Paltaki (AUTH)
- 16h50** Cost-benefit analysis and feasibility of using recycled water | Dimitra Lazaridou (AUTH)
- 17h10** Phosphorus recovery in water reuse | Konstadina Mpyrou (AUTH)
- 17h30** AKIS & Stakeholder Analysis: Improving Knowledge Transfer Channels to Promote Innovation | Epistimi Amerani (AUTH)
- 17h50** Addressing obstacles to agricultural irrigation with recovered water and promoting synergies in geographical clusters | Elena Tzanou (ANETH)
- 18h10** Presentation of the Role of Development Agency of Thessaloniki | Georgios Ziankas (ANTH)
- 18h30** Regional Action Plan | Anastasios Michaildis (AUTH)
- 18h45** Questions | Audience
- 19h00** Conclusions and evaluation | Anastasios Michaildis (AUTH)
-

10.7 Summary of the presentations and activities carried out during the workshop

According to national GDPR rules the full video could not be recorded. However, all the presentation has been included in a zip file and have been uploaded to the web in the following link: https://www.eng.auth.gr/mattas/GR_WORKSHOP.zip. Besides, some of the participants (only a small number - mainly the presenters) authorized in writing that they allow the publication of their photos and thus some indicative greenscreens of the workshop have been listed in the appendix.

According to the first scientific presentation [Paltaki]:

- plants are provided with different elements and nutrients needed to produce optimal yields.
- This type of water represents a productive improvement in crops by reducing fertilizer use.
- We need to know the composition of the recycled water that will be used for irrigation, so that the fertilization requirements of the various crops are met exclusively with the necessary amounts of macro- and micro-elements.
- Soil salinity should be checked when recycled water is high in salt, and pH adjustments should be made according to crop stage, seasons and irrigations.

According to the second scientific presentation [Lazaridou]:

- It is very important for policy makers to have information about farmers' attitudes and willingness to pay for the use of recycled water.
- The estimated value can be an incoming parameter in a cost-benefit analysis.

According to the third scientific presentation [Mpyrou]:

- Intensive livestock farming produces massive livestock effluents with high phosphorus concentrations.
- The discharge of these compounds into surface waters causes not only the eutrophication of water but also the waste of phosphorus resources for plant growth.
- For this reason, it is necessary to combine the removal of phosphorus from wastewater with its recovery and reuse as a fertilizer.

According to the fourth scientific presentation [Amerani]:

- The comparison of regional SW2-AKIS highlights that multi-actor networks can deliver specific advisory services with innovative formats and to transfer knowledge and information among actors.
- They enable multi-topical advice, enhance the role of advisors in knowledge flow, and bring researchers, experts, local authorities, private companies, chambers, governmental organizations, associations, farmers, and other key-actors together.

- Differentiation and peculiarities in the selection of key-actors among countries are a special feature of the SW2-AKIS analysis which incorporates the local constraints and potentials of each region in an ideal system of knowledge transfer.
- The results of the analysis must, therefore, be interpreted with caution avoiding generalization efforts. Additionally, validation meetings and workshops increase the reliability of the analysis while the utilization of the SW2-AKIS for further activities enhances the transfer of knowledge and information by establishing reliable networks.

According to the last scientific presentation [Tzanou]:

- Water reclamation and reuse in agriculture faces numerous barriers, ranging from public perception to pricing and technological, safety and regulatory challenges
- Geographical and sector-wide strategic plans are emerging
- The potential to transform the main barriers is critical and should be further enhanced
- Circular economy offers a new way of looking at the relationships between markets, customers, and natural resources, promoting sustainable and resource-efficient policies and practices
- In Europe, the practice of using reclaimed water for irrigating crops is growing, mainly established in Mediterranean countries such as Spain, Italy, Cyprus, and Greece

10.8 Results

Table 31 - Main results of the workshop

Input, feedback, or lesson learnt obtained during the workshop	Activity where this input was generated (e.g., speech from expert, roundtable with stakeholders, comments from the audience during Q&A session or participatory activity, etc.)	How this input/feedback might be implemented in the SUWANU EUROPE project and/or might be a driver for change in society.
Reuse of reclaimed water represents a significant improvement in crop production by reducing fertilizer use.	Question from farmers	Agricultural sector must undertake an effort to adapt cultivation practices and cropping systems incorporating reuse of reclaimed water
Soil salinity should be checked when reclaimed water includes high quantities of salt, and pH adjustments should be made according to crop stage, seasons and irrigations	Speech from expert	Local authorities must check the reclaimed water for salt or pH adjustments before use.

Policy makers should have information about farmers' attitudes and willingness to pay for the use of reclaimed water	Comments from the audience	Important policy implications & proposal for farmers surveys in local level
Intensive livestock farming produces massive livestock effluents with high phosphorus concentration that will be carried in reclaimed water	Question from advisors	More research needed to clarify this issue
Multi-actor networks can deliver specific advisory services with innovative formats and to transfer knowledge and information among actors	Speech from expert	The use of regional multi-actor networks should be strengthened for the effective reuse of reclaimed water in agriculture
Circular economy offers a new way of looking at the relationships between markets, customers, and natural resources, promoting sustainable and resource-efficient policies and practice	Comments from the audience	Bring together scientists, managers, and farmers for improving sustainability of reclaimed water use in agriculture

10.9 Conclusions

Concluding, five scientific presentation have been introduced in the workshop and the most important SUWANU-EUROPE results were described and clarified. The audience was very active asking several questions to clarify some obscure points and to ask practical information and advice. The large participation in the workshop proves the value of the project and emphasizes the need for further information. Before closing the workshop, participants have been asked to participate in an anonymous online evaluation poll particularly designed for the workshop in Thessaloniki (<https://www.easypolls.net/poll.html?p=60391607e4b084a99583f97c>). They have been asked to evaluate the workshop (including quality of the presentations, presenters, selected themes, duration and feedback) using a 5-point scale (not satisfactory, satisfactory, more than satisfactory, very good ad excellent). In the following figure it's clear that the participants were absolutely satisfied from the workshop results.

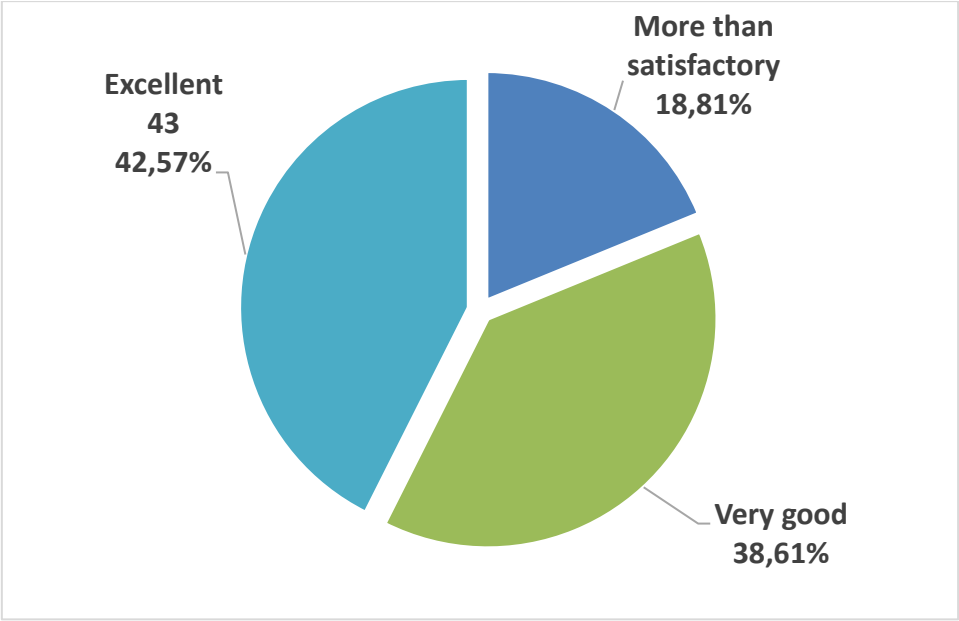


Figure 61 - Workshop evaluation

Because of the pandemic the meeting was hold virtually on the WEBEX. To collect signatures from the participants was therefore impossible. However, the participants have been registered by e-mail (in Greek) and thus there is an archive of 75 registrations available for any request.

11 CONCLUSIONS

The general objective of SuWaNu Europe is to promote the effective exchange of knowledge, experience and skills between practitioners and relevant actors of water reuse in agriculture, so that direct applicable technological and organizational solutions are widely and balanced disseminated all around Europe resulting in a more resilient agricultural sector to cope with water scarcity and climate change effects.

SuWaNu Europe is acting as a catalyst to stimulate and boost the knowledge exchange between relevant actors in the field, with a special focus on practitioners. With this purpose, SuWaNu Europe involved a network of experts, farmers, water operators and engineers, consumers, authorities, researchers, agricultural advisory groups, and other actors, and facilitated the exchange of information and practical knowledge related to water reuse in agriculture.

To increase the capacities of practitioners and other stakeholders in water reuse for irrigation, eight workshops (one per region) were developed in the frame of the project. The target was that at least 50 practitioners (e.g., farmers, agricultural advisors, wastewater treatment operators, water engineers, etc.) were trained in the SuWaNu Europe tools and results (e.g., info-packages, success stories, Action Plans, etc.).

Because of the COVID-19 pandemic, some of the workshops were conducted in virtual format, using platforms such as zoom, webex.

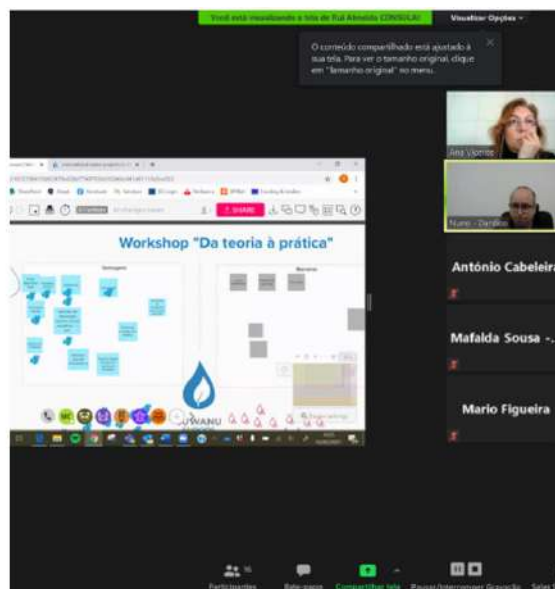
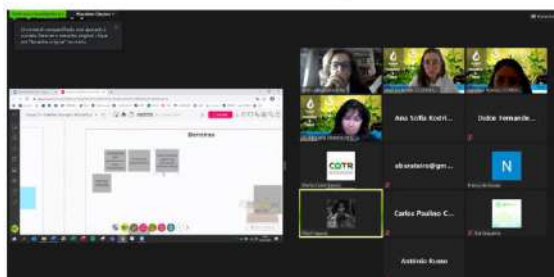
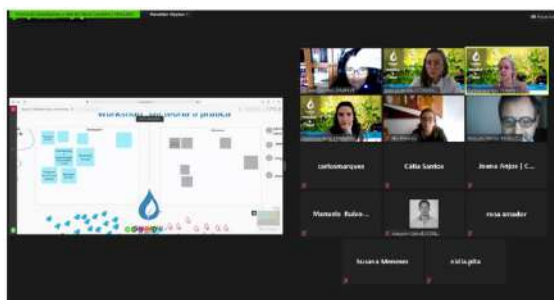
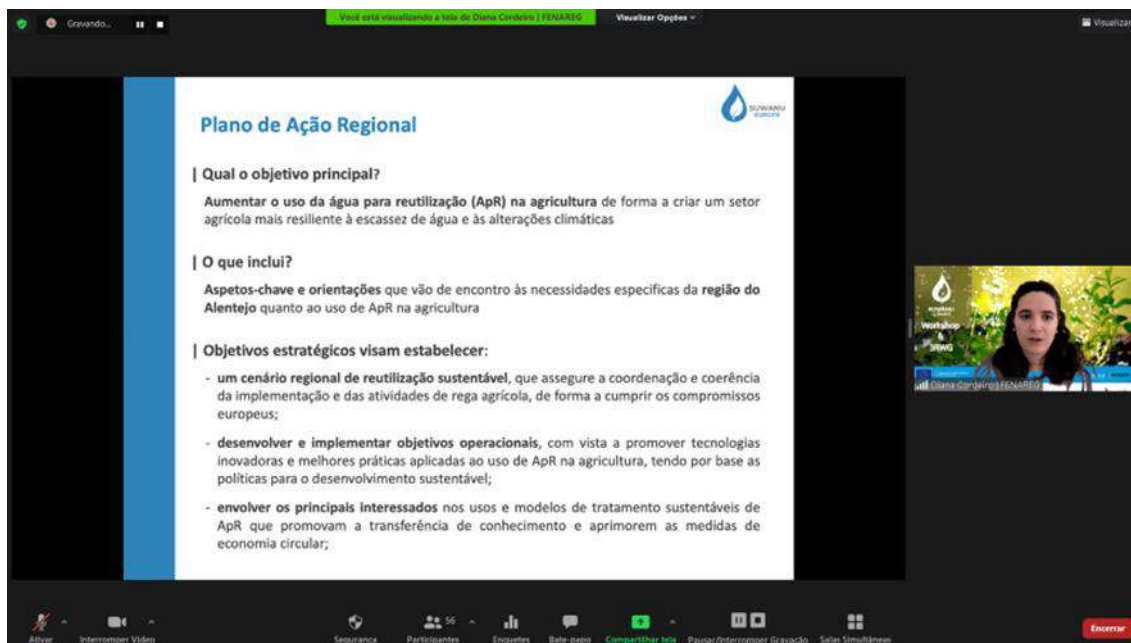
The content of the workshops was adapted to the needs of each region. Lighthouse projects representatives participated in the workshops in order to inform about water treatment technology, effects on yield, quality (organoleptic studies) on crops irrigated with treated wastewater, environmental impacts and health effects of reuse solutions, irrigation patterns and fertiliser and water reductions when using treated water, innovative irrigation solutions, decision support systems, costs benefits analysis if available, water availability forecasts, risk assessment, innovate wastewater treatment solutions.

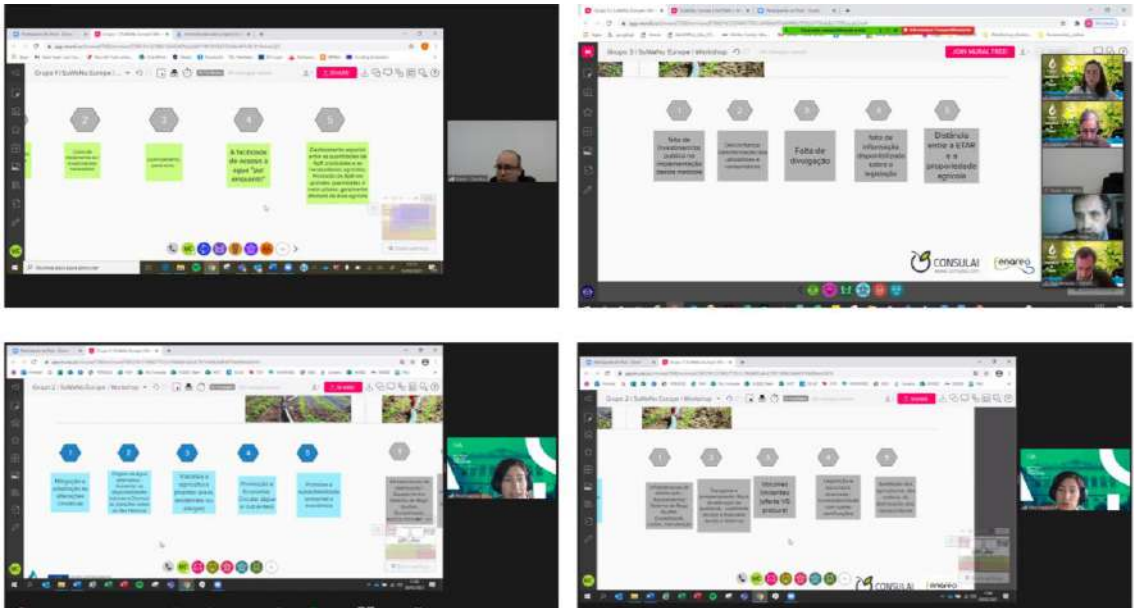
Workshops were an opportunity to share and have open discussions in all relevant aspects associated to the water reuse in agriculture and promote the use of the info packages as a source of practical knowledge adapted to their needs. Was also a way to improve stakeholders engagement on project activities and outcomes, demonstrating that multiactor events of debate and reflection are a key element for the transfer of knowledge and the application of methodologies and processes already tested and validated in different regions across Europe.

ANNEXES

ALENTEJO | PORTUGAL

Pictures of the event





ANDALUSIA | SPAIN

Pictures of the event







ANTWERP – LIMBURG | BELGIUM

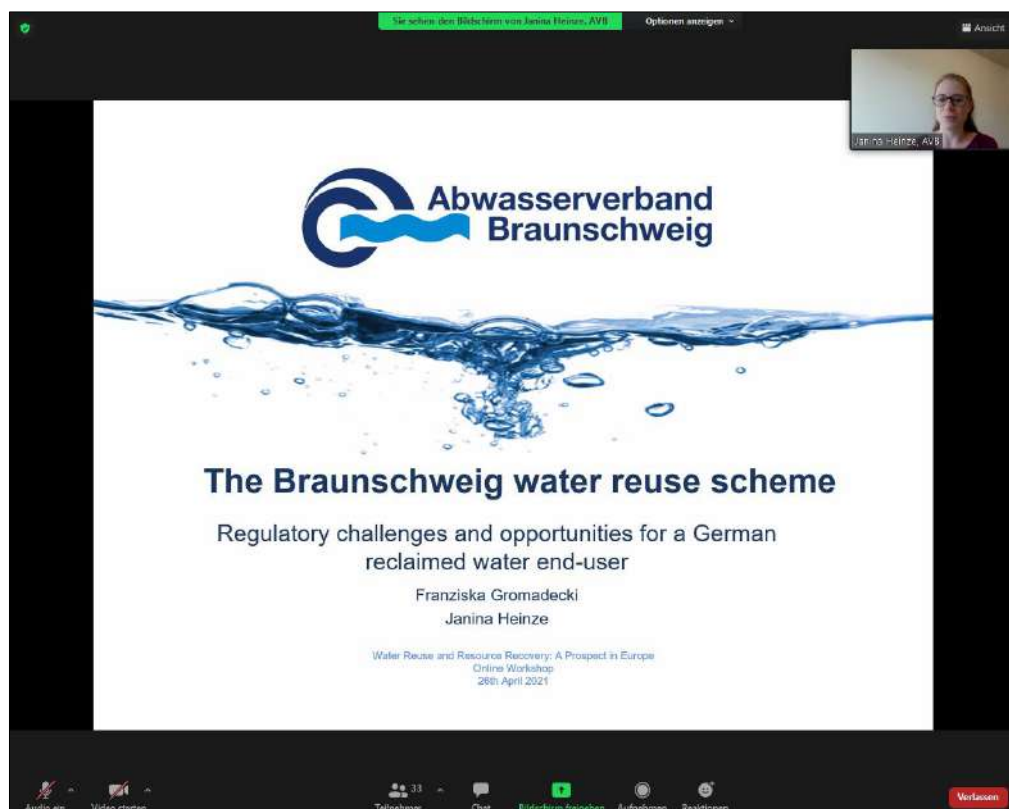
Pictures of the event



http://suwanueuropeconference2021.com'. The Zoom interface shows a grid of participants at the bottom and a list of participants on the right."/>

BRAUNSCHWEIG | GERMANY

Pictures of the event





NextGen – Towards a Next Generation of Water Systems and Services for the Circular Economy

Water, material/nutrients and energy in the circular economy:

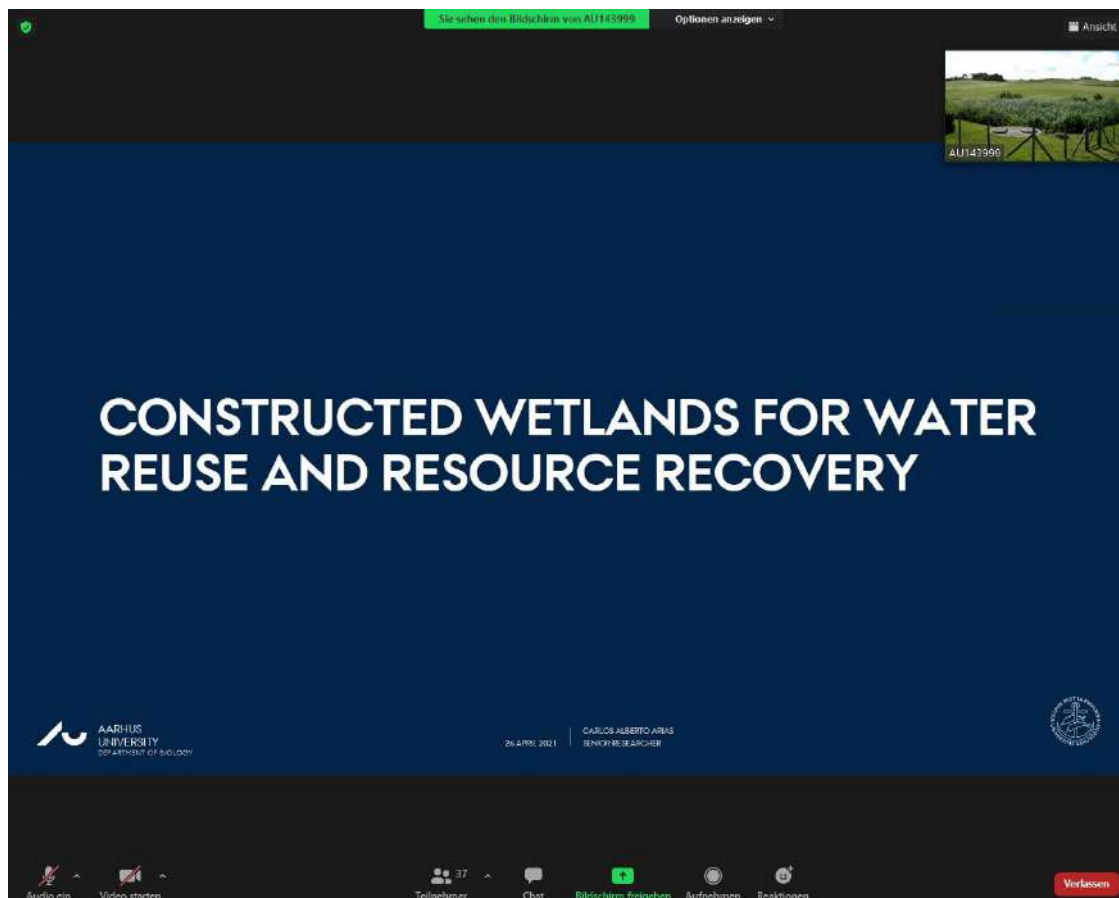
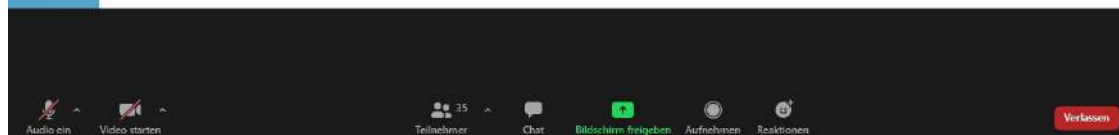
- demonstration of innovative technologies (10 case studies) & evaluation
- development of new business models towards marketability
- networking & public acceptance

Project period: July 1st, 2018 - June 30th, 2022

Coordinator:

KWR
Watercycle Research Institute

Partners:



Sie sehen den Bildschirm von Andrés Acosta [Aarhus - TTZ] Optionen anzeigen

End Show Flip Swap Displays Use Slide Show

0:45 10:37

HYDROTHERMAL REACTIONS BIOMASS CONVERSION & WATER REUSE NETWORK

AARHUS UNIVERSITY

Andrés Acosta
[Ing.- M.Sc.]
Ph.D. Student

Department of Chemical Engineering
Department of Biology

26th April 2021

2/20

Next slide

HMF

Click to add notes

A- A+

Audio ein Video starten Teilnehmer 36 Chat Bildschirm freigeben Aufnehmen Reaktionen Verlassen

Sie sehen den Bildschirm von Andrés Acosta [Aarhus - TTZ] Optionen anzeigen

Ansicht

CONFERENCE

SUWANU EUROPE

ABOUT US REGIONS OUTCOMES INITIATIVES NEWS INTERNAL AREA

SUWANU EUROPE International Conference

18-19 May 2021

"Pathways to extend sustainable water reuse practices in Europe"

CONFERENCE REGISTER

<https://suwanu-europe.eu>

17

Audio ein Video starten Teilnehmer 33 Chat Bildschirm freigeben Aufnehmen Reaktionen Verlassen

OCCITANIE | FRANCE

Pictures of the Workshop n°1



Les Webinars Ecofilae

#1 - Comment réussir un projet de réutilisation des eaux sur un territoire ?

Secteur Collectivités

Animé par Nicolas CONDOM

ecofilae



Boucle de réutilisation	
Année	2020
Source d'eau	Eaux de chai (EU1) Eaux de lavage (EU2)
Usages	EU1 : Méthanisation EU 2 : Irrigation agricole (maïs)
Traitement	EU1: stockées puis envoyée en méthanisation EU2: stockées dans une lagune aérée
Volume d'EU	EU 1 : 2 000 m³/an EU 2 : 300 m³/mois
Investissement	Inconnu
Objectifs	Atteindre le zéro rejet Réduire les coûts de traitement



Référence : Cave des vignerons de Tursan, Landes





Pictures of the Workshop n°2



Réutilisation des eaux : le point sur le règlement UE et sur les retours d'expériences européens ! REINACT

Démarré il y a 27 min.

Nicolas Condom

Comment bénéficier des productions de SUWANU EUROPE?

- **Un focus comparatif sur 8 régions européennes** (Occitanie in France) avec un plan d'action spécifique régional *(en cours de finalisation – Février 2020)*
- Possibilité de participer/suivre en ligne ou en présentiel à une **conférence internationale** – Bruxelles, Mai 2021
- **Ateliers de formation** (2 demi-journées en ligne et en Français – par Ecofilae – dates à venir en Fév-Mars 2021)
- Curriculums spécifiques pour les écoles et universités
- **E-learning plateforme** – Vidéos sur des thématiques couvrantes de nombreux enjeux/problématiques spécifiques à la réutilisation des eaux en agriculture
- Tous les livrables sont disponibles (ou le seront à terme) sur le site www.suwanu-europe.eu

**SUWANU
EUROPE**

2020 © Ecofilae

< 35 >

Nicolas Condom

[illegible]

Pictures of the Workshop n°3



Réutilisation des eaux → Les territoires déjà lancés viennent en parler

#1 – Agri & Viti

PRESENTATEUR
Nicolas Condom
Expert REUT et fondateur d'Ecofilae

INTERVENANTE
Laetitia Carbonell
Directrice des vignobles Sable de Camargue

21 Janvier 2021

WEBINAIRE ECOFILAE

ecofilae
Région Auvergne

SUWANU EUROPE

ecofilae
Région Auvergne



SUWANU EUROPE : Transférer la connaissance sur la réutilisation des eaux

H2020 – Thematic networks compiling knowledge ready for practice

La réutilisation des eaux : une solution face au déficit hydrique en agriculture

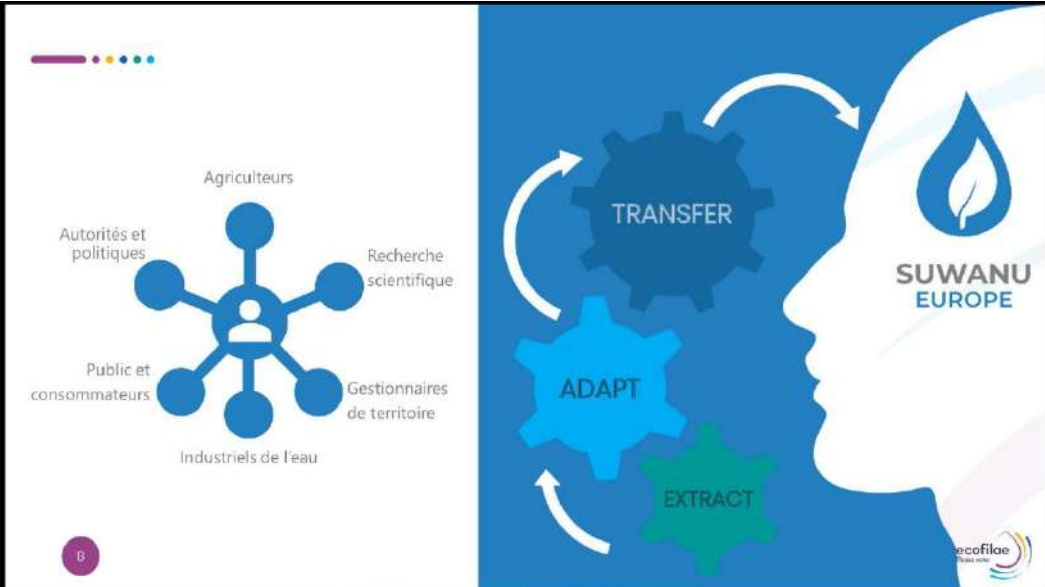
OBJECTIFS PRINCIPAUX :

- Rassembler des connaissances et des REX : depuis le monde scientifique international vers les opérateurs terrain en local (réutilisation en agriculture)
- Construire des supports et des contenus associés pour diffusion des connaissances
- Se concentrer sur les enjeux/problématiques opérationnelles en agriculture

SUWANU EUROPE

ecofilae
Région Auvergne

7



8

Comment bénéficier des productions de SUWANU EUROPE?

- Un focus comparatif sur 8 régions européennes (Occitanie en France) avec un plan d'action spécifique régional (en cours de finalisation – Février 2020)
- Possibilité de participer/suivre en ligne ou en présentiel à une conférence internationale – Bruxelles, Mai 2021
- Ateliers de formation (Webinaire et ateliers en ligne et en Français – par Ecofilae – en Juin, Dec 20 – Jan 21)
- Curriculums spécifiques pour les écoles et universités
- E-learning plateforme – Vidéos sur des thématiques spécifiques à la réutilisation des eaux en agriculture
- Tous les livrables sont disponibles (ou le seront à terme) sur le site www.suwanu-europe.eu


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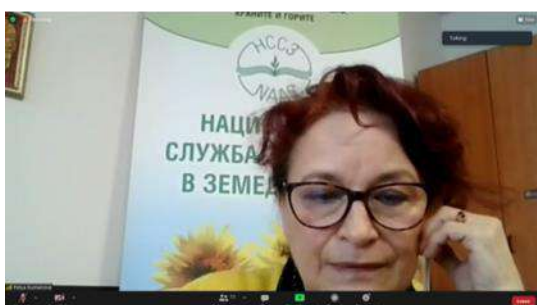
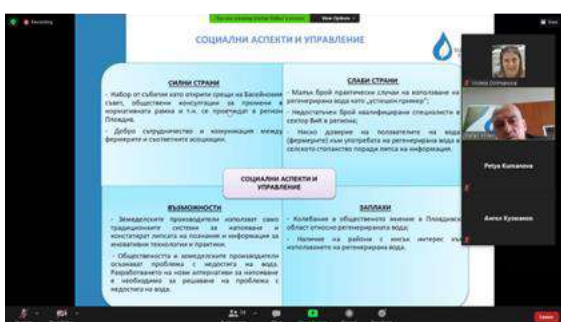
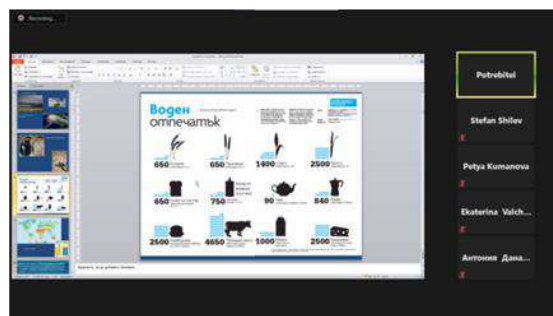
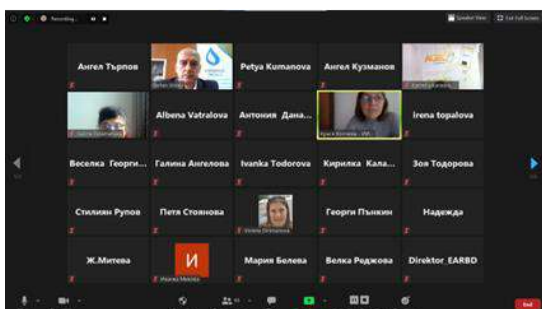
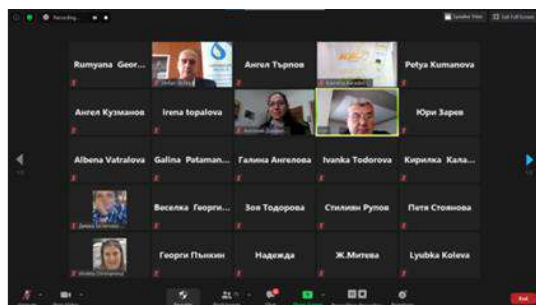


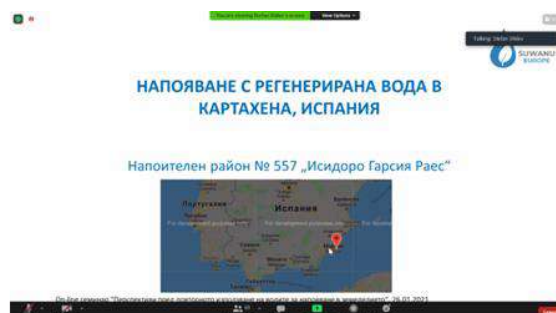
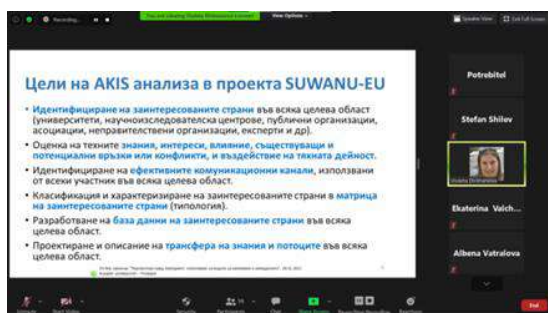
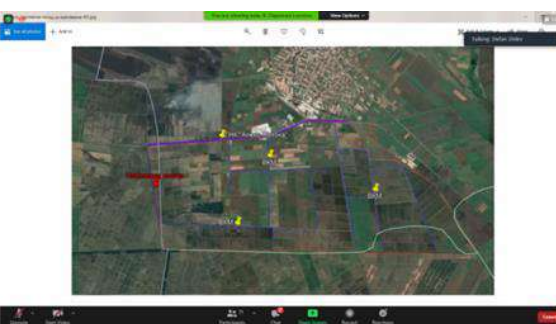
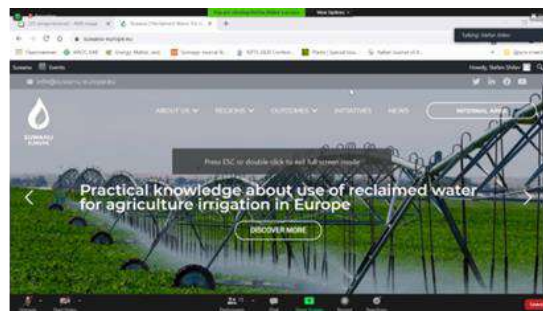
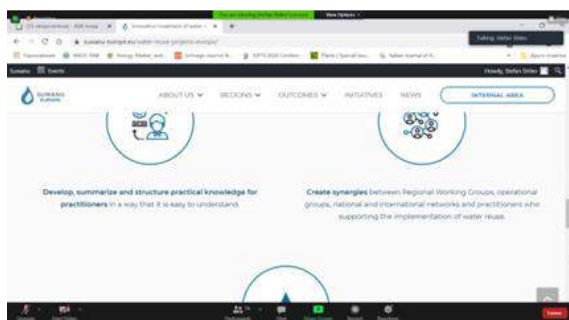


9

PLOVDIV | BULGARIA

Pictures of the event

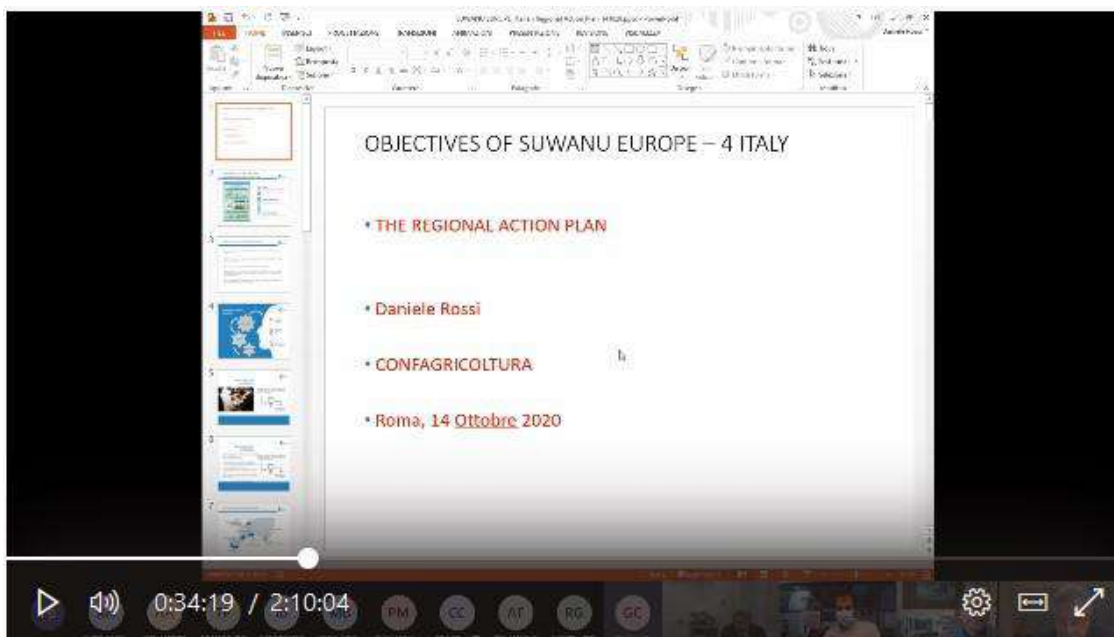




PO VALLEY | ITALY

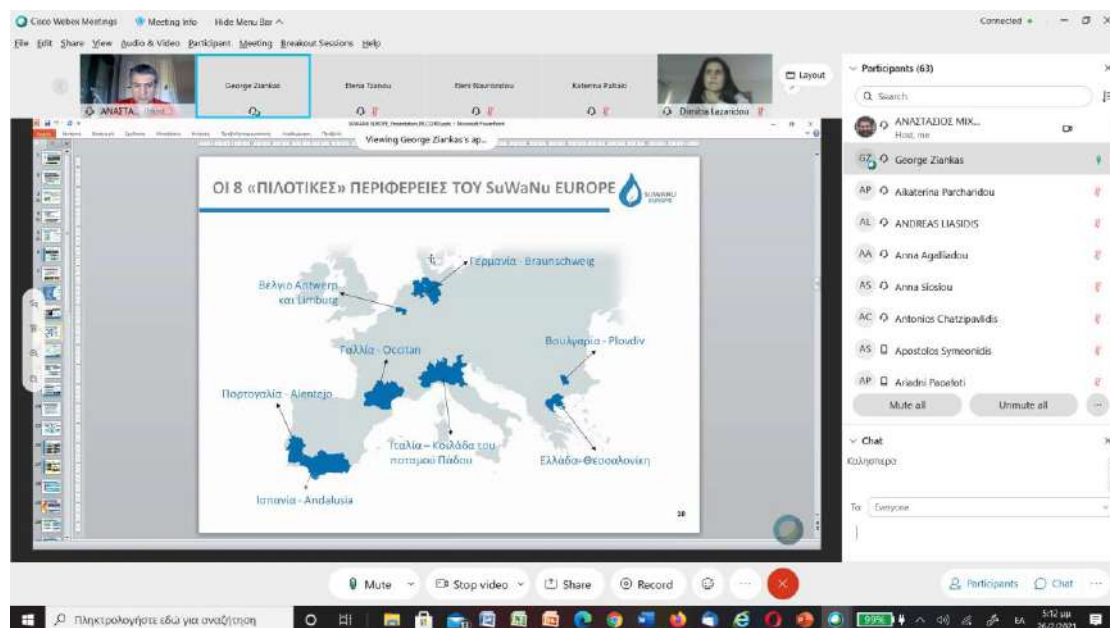
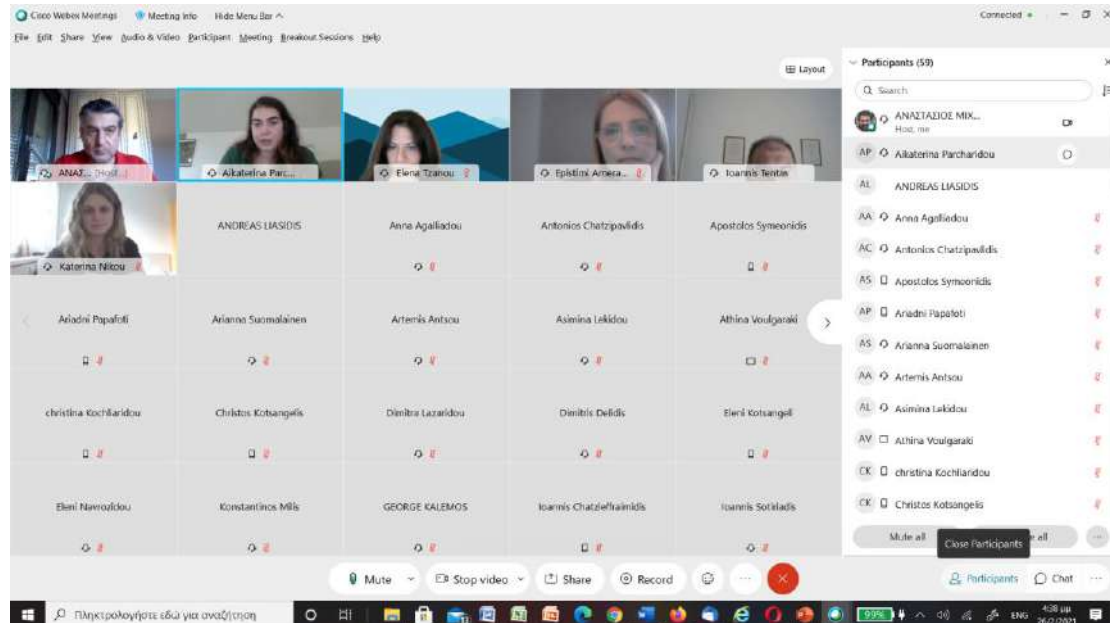
Pictures of the event

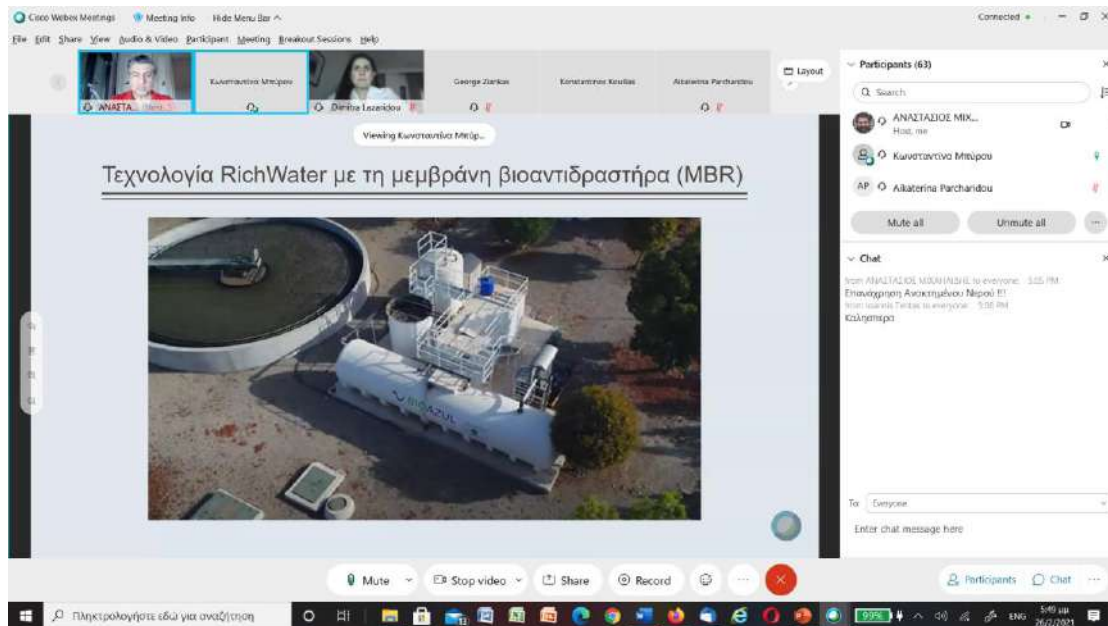




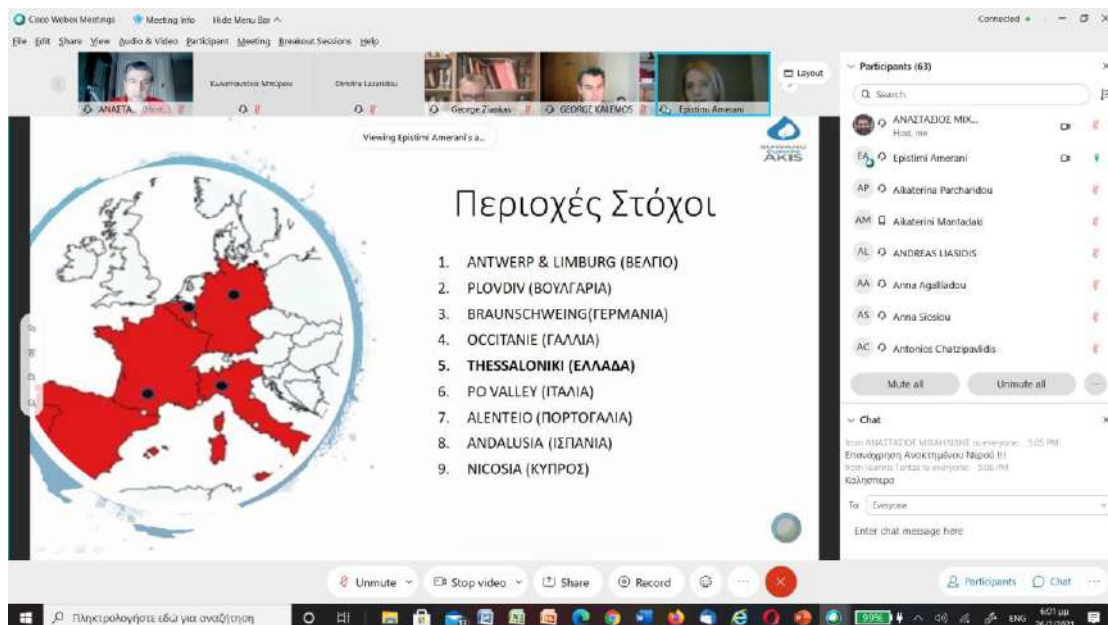
THESSALONIKI | GREECE

Pictures of the event





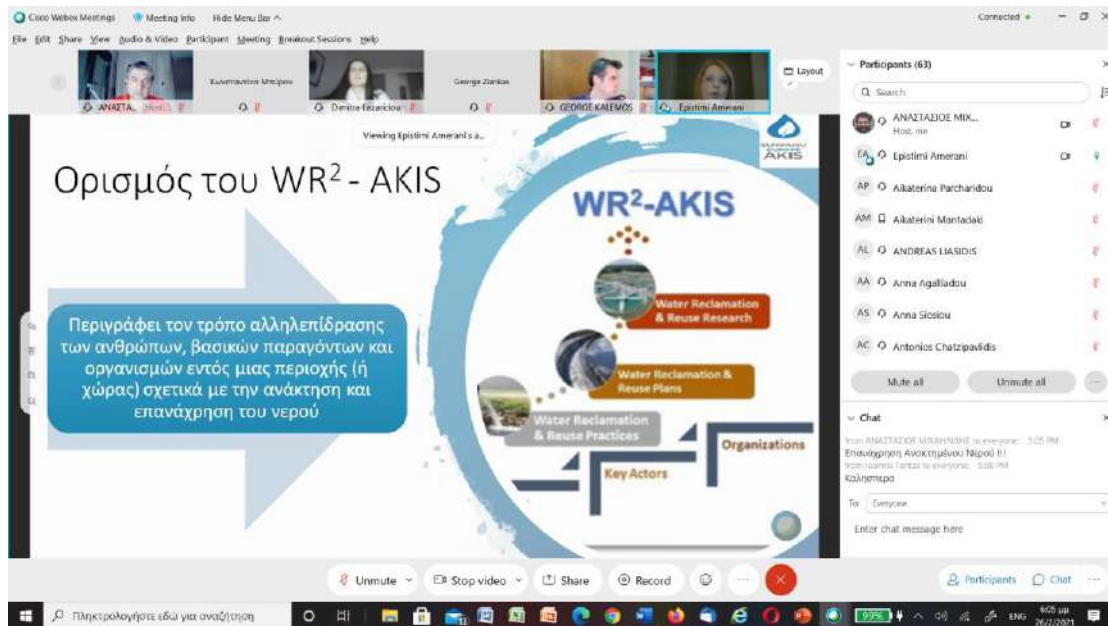
The screenshot shows a Cisco Webex Meeting interface. The main presentation slide is titled "Τεχνολογία RichWater με τη μεμβράνη βιοαντιδραστήρα (MBR)". It features an aerial view of a wastewater treatment plant with large circular tanks and industrial buildings. The interface includes a top bar with meeting controls, a participant list on the right showing 63 participants, and a chat window at the bottom right. The bottom of the screen shows a Windows taskbar with various application icons and system status.



The screenshot shows a Cisco Webex Meeting interface. The main presentation slide is titled "Περιοχές Στόχοι" (Target Areas). It features a map of Europe with several regions highlighted in red. To the right of the map is a numbered list of target areas:

1. ANTWERP & LIMBURG (ΒΕΛΓΙΟ)
2. PLOVDIV (ΒΟΥΛΓΑΡΙΑ)
3. BRAUNSCHWEIG (ΓΕΡΜΑΝΙΑ)
4. OCCITANIE (ΓΑΛΛΙΑ)
5. THESSALONIKI (ΕΛΛΑΔΑ)
6. PO VALLEY (ΙΤΑΛΙΑ)
7. ALENTEIO (ΠΟΡΤΟΓΑΛΙΑ)
8. ANDALUSIA (ΙΣΠΑΝΙΑ)
9. NICOSIA (ΚΥΠΡΟΣ)

The interface includes a top bar with meeting controls, a participant list on the right showing 63 participants, and a chat window at the bottom right. The bottom of the screen shows a Windows taskbar with various application icons and system status.



Ορισμός του WR² - AKIS

Περιγράφει τον τρόπο αλληλεπίδρασης των ανθρώπων, βασικών παραγόντων και οργανισμών εντός μιας περιοχής (ή χώρας) σχετικά με την ανάκτηση και επανάχρηση του νερού

WR²-AKIS

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