



SUWANU EUROPE

Deliverable 2.5

Regional Working Groups Report

Funding scheme:	Horizon 2020 – Coordination and Support Action (CSA)		
Project Coordinator:	BIOAZUL		
Start date of the project:	01.01.19	Duration of the project:	30 months
Contractual delivery date:	30.12.2019		
Actual delivery date:	08.06.2020		
Contributing WP:	WP2: Development of general and regional action plans		
Dissemination level:	Public		
Responsible partner:	CONFAGRI		
Version:	2.0		

The SuWaNu Europe project (Grant Agreement No.: 818088) has received funding from the European union' Horizon 2020 Research and Innovation Programme. The views and opinions expressed in this report does not represent the official position of the European Commission and is entirely the responsibility of the authors.

Contents

Executive summary.....	2
1 Introduction	3
2 Strategy for the engagement of the RWG	5
2.1 Functioning of the RWGs	5
2.2 Role and responsibilities of the project partner facilitator	5
2.3 Stakeholders engagement support tools.....	6
2.4 Engagement of stakeholders during RWGs	7
2.5 Communication with stakeholders after RWGs.....	7
2.6 Main themes raised in RWG activities	7
3 Discussion and participants in the RWG meetings/events.....	9
3.1 Regional Working Groups meetings	9
3.1.1 FRANCE.....	9
3.1.2 ITALY	12
3.1.3 PORTUGAL.....	15
3.1.4 GREECE	19
3.1.5 GERMANY	24
3.1.6 BULGARIA	29
3.1.7 SPAIN	34
3.1.8 BELGIUM - FLANDERS.....	38
4 Conclusions	44
4.1 Occitanie, France	44
4.2 PO river, Italy	44
4.3 Alentejo, Portugal	44
4.4 Thessaloniki, Greece	45
4.5 Braunschweig, Germany	45
4.6 Antwerp and Limburg, Belgium and Plovdiv, Bulgaria.....	45
4.7 Andalucia, Spain.....	46

Executive summary

In recent years, water scarcity has become a serious problem in Southern Europe and in some other EU Countries. In several EU Regions and territories are suffering from water shortage; even in some of them there is still a regime of drinking water use in the respective mayor cities.

In the light of these circumstances, finding alternatives is crucial for agriculture, agrifood industrial sites, daily life and the economy as a whole. In our SUWANU EUROPE view, the creation of a Regional Working Group is crucial to overcome the problems and to generate a Regional Action Plan to promote the use of reclaimed water in agriculture and in other uses.

The results and the experiences gained by the Regions here involved from the 8 Countries - France, Italy, Spain, Portugal, Germany, Greece, Bulgaria, Flanders. Belgium – have been proven to be useful to spread in other sites of their countries.

But still there are also local peculiarities in the functioning of the administration, economy and interconnections with stakeholders, in particular farmers, authorities, NGOs and citizens, in different regions/countries.

The specifics of the organization of the relationships, the flow of information in the field of water reuse, as well as the main players, were clarified in WP 2 . Tasks 2.2, 2.3, 2.4 and AKIS analysis.

In this regard, the establishment of a RWG for the different regions as in our task 2.5. was consistent with the involvement of a wide range of actors who play a key role in the design and coordination of the regional action plan.

Stakeholders from the administration, local authorities, universities and research institutes, farmers, NGOs and others were involved. Each group of these actors has an important contribution to play in drawing up the regional action plan, in task 2.6.

On the other hand, all of the selected representatives in the RWG are settled and located in the territories, which will ensure a very good coordination, too. The engaging of relevant stakeholders started since the beginning of the project.

This aim resulted in 18 meetings in various regional organizations and relevant institutions with the idea of involving competent organizations to participate in SuWaNu Europe project and goals, explaining the approach and objectives of the EU project and the role of each internal partnership and external organization into.

The 2.5. Report elaborated by Confagricoltura tries to identify the main activities and conclusions that RWGs offered to our partnership and our European stakeholders, with the strategy to contribute for the common interest of water reclamation and sustainable water use.

1 Introduction

The Regional Working Groups (RWGs) are the result of an intense contact with actors of the water and agriculture sectors in order to engage them in the SUWANU EUROPE project activities. These contacts started from the very beginning of the project in each region/country.

In the first stage the engagement consisted in sharing the information of the project objectives and foreseen activities. The organization of the participatory workshops in different regions pushed the consortium for a more intense contact. Several activities were organized to engage the stakeholders, such as sending the invitation letters, telephone calls, in some countries drafting a newsletter to disseminate the workshops, to extend the audience and to multiply the dissemination of the information.

The purpose of the work was to ensure a participatory process in the development of action plans and to guarantee an effective transfer of knowledge in the next project steps by the active participation of stakeholders.

Therefore, relevant actors have been involved in the process and engaged as RWG members in each region: farmers using or interested in reused water, regional and national authorities, wastewater treatment operators, rural development groups, researchers, agri-food industries, consumers associations, NGOs and private companies, engineers, advisory groups.

In terms of definition, Regional Working Groups are precisely groups of actors *out of the consortium* that have been engaged to participate and to provide feedbacks to the SUWANU EUROPE project and that have been involved in some relevant project activities such as the development of the Regional Action Plans of the task 2.6. The role of the Regional Working Group (RWG) in different regions is fundamental *to build the participatory actions and the Regional Action Plans*.

In different Regions, the Partners have defined a strategy and an implementation plan to involve the main actors, including the following activities:

- Initial contact with stakeholders
- Regional revision of key documents by key stakeholders
- Invitation of stakeholders through news/letter/phone call
- Regional meetings with RWG members
- Materials dissemination, documents, leaflets, summaries, power points
- Draft versions of the regional action plan to get feedback from RWG members
- Final version of the regional action plan for validation
- Presentation in a regional/national event/fair/conference, workshop etc.

In particular every Regional Working Group, following the Agreement and the WP 2 task 2.5, *in the first beginning*, had to:

- Involve actively all the partners of the Consortium
- Ensure a stakeholders engagement through a deep analysis of the key actors and the accession to other relevant organizations to be involved
- Disseminate intensively at local and regional level using appropriate channels to reach the identified stakeholders
- Ensure a multi actor and a participatory approach that make regional actors feel part of the Suwanu Europe project, and the Suwanu Europe project activities.

The RWG *second step* had to:

- Contact the regional, national and european relevant associations such as Copa Cogeca, the farmers and agrocooperatives Umbrella confederation in Bruxelles and in each region/country, EURAU and ANECOOP with their wide regional/national networks:
 - ✓ to better align the Suwanu Europe project with their national and european objectives and cooperation actions and
 - ✓ to better identify national / regional memberships and reference organizations;
- Identify at least five members out of the Consortium
- Organize frequent meetings during the running of the Suwanu Europe project, at least five

The RWG *third last step* will:

- Elaborate together with the Consortium Partners the preparation and implementation of the Regional Action Plans, under task 2.6
- Facilitate the Implementation of water reuse solutions
- Seek new opportunities to perform collaborative/cooperative projects
- Seek also new opportunities to build operational groups in the framework of EIP Agri
- Consolidate the Regional Working Groups after the project ends
- Create therefore a permanent cluster in each region to adopt and disseminate water reuse solutions.

2 Strategy for the engagement of the RWG

The aim of this strategy at this stage of the project is to present a strategy for the engagement of the Regional Working Groups (RWGs) which will be applied throughout the second period of the project. Experiences and lessons learned emerging from first period RWGs has been taking into consideration keeping this a dynamic process that can be updated during the project.

This collection of information will be used to engage identified stakeholders in the RWGs and will be used to stimulate discussions within the RWGs. It will serve to promote the joint development of strategic thinking, the two-way exchange of ideas between the different stakeholders and will also feed with practical recommendations for the formulation of the Regional Action Plans (task 2.6).

2.1 Functioning of the RWGs

The facilitator from each RWG will enroll the stakeholders in the active participation in the meetings, preparing a set of topics to be discussed and the activities to be implemented following a multi-actor approach and a participatory approach. This can be done with the prior discussion with the members, so that there is a consensus on the topics to discuss during the meeting so to actively engage the stakeholders from the beginning.

It is vital that the objectives and the expected outcomes of the RWGs are perfectly clear to all members that take part in the meetings and that the roles of engagement are also clear. The members of the Regional Working Groups, following the Agreement and the WP 2 task 2.5, must among others to:

- Propose practical recommendations for the formulation of the Regional Action Plans (task 2.6)
- Disseminate intensively at local and regional level the SuWaNu Europe project results and outcomes, through their own communication channels;
- Be engaged in the implementation of reclaimed water use solutions;
- Seek new opportunities to perform cooperative projects and to build operational groups in the framework of EIP Agri.
- Create permanent clusters in each target region of the project, to adopt and disseminate reclaimed water use solutions.

2.2 Role and responsibilities of the project partner facilitator

The facilitator will be a project partner of each region and their main responsibilities are collected in the following table:

Table 1: Role of the project partner facilitator

Responsibility	Expected Contributions	Outputs
Setting-up of the RWG	- Invite and enroll active members (multi-actor approach) - Prepare topics for discussion - Plan activities (participatory approach)	- Invitation letter/email to potential members - Prepare program of the meeting
Running the RWG	- Explain the objectives and expected outcomes of the RWGs and members expected responsibilities - Oversee the meeting runs as planned - Ensure that all members actively participate in the discussion	Report with practical recommendations for the formulation of the Regional Action Plans (task 2.6)
Communication and outreach	Organize and contribute to communication and dissemination activities	- Send inputs for the SuWaNu Europe website (brief description of the RWGs, members, calendar of events, scientific articles, news, etc.) - Publish at least 1 social media post per RWG meeting (before, during or immediately after) - Register RWGs members as followers of the SuWaNu Europe social media accounts and relay social media posts published by the central communication team to increase outreach

2.3 Stakeholders engagement support tools

In order to actively engage stakeholders during the meetings, there are several tools that follow a participatory methodology, and that facilitate effective engagement of target stakeholders. The activities aim at promoting the engagement of stakeholders, collaboration and in a participatory approach.

Such an example is the World Café method, that can be found in the <http://actioncatalogue.eu/method/7402>, which is a method for engaging groups, both within organizations and in the public sphere. This method is founded on the assumption that people have the capacity to work together, no matter who they are.

A World Café follows seven core design principles: (1) Set the Context; (2) Create Hospitable Space; (3) Explore Questions That Matter; (4) Encourage Everyone's Contribution; (5) Cross-Pollinate and Connect Diverse Perspectives; (6) Listen Together for Patterns, Insights, and Deeper Questions; and (7) Harvest and Share Collective Discoveries.

World Cafés can create results to generate new ideas, to enable joint decision-making on key strategic issues, to discover new ways for collaboration, to reflect on the implications of a complex issue and in identifying specific step(s) for further exploration and implementation.

The recent events related with COVID-19, called for the need to use of online tools in the organization of initially predicted physical events. There are several online platforms that can be use, and that still allow the planning of dynamics as described before.

Tools such Zoom, Microsoft Teams, Cisco Webex meetings are just some examples.

2.4 Engagement of stakeholders during RWGs

Besides the different tools that can be used during the RWGs to promote participatory process and engagement of stakeholders, there are several methodologies that creates more interactive and collaborative formats.

- Initiate the meeting with an icebreaker to get things started in a good way. This is particularly important if the participants don't know each other or come from a different background. This can be achieved by asking participants to bring an object or to pick a word that can in some ways define them and, in this way, they can make a brief presentation of themselves.
- Promote participatory discussions, where tools like pinup.com can be a powerful tool promoting debate and discussion.
- Questionnaires using tools like *Mentimeter* or *Sli.do*, which are live interactive applications to get feedback from the participants, that allow to create polls and Q&As, among others experiences with the participants.
- Networking is a powerful tool for having during breaks for participants to get to know each other and to exchange ideas and experiences.

2.5 Communication with stakeholders after RWGs

After each RWGs it is important to make a follow up communication with the participants to keep them involved with the project and to get them to participate in the next RWGs.

This can be accomplished simply by:

- Send an email right after the meeting thanking the participants for attending the event;
- Send an email to participants who did not show or attended and share some of the outcomes of the meeting. This might compel them to participate next time;
- Once the major outcomes of the meeting are prepared, send an email with the major conclusions and results and if possible, an indication for the next RWG agenda.

2.6 Main themes raised in RWG activities

During RWGs meetings, the critical discussion points and the axes towards which the RWG activities that the RWG Groups should be focused on were the following:

a) In terms of regional informations/data policies:

- Incomplete or updated soil map
- Irrigation water quality data monitoring systems and swap crops for irrigation water
- Reference to indicators of consumption & quality. Quantities lost/quantities consumed
- Measurable water saving elements.
- Regional problems in water supply, water transport issues - open ducts
- Basin Management Plans, how they were developed and how reliable they are
- Reference to different water supply and irrigation networks

b) In terms of harmonized methodologies/EU critical issues:

- Reflections on difficulties in water volume management and services
- Integration with main issues and subjects of the Regional Policy
- Reference to the AKIS method, (and networking) what it is and how it works
- EU guidelines/directive approved on reuse of treated water, costs and fines for non-compliance.

- The new Agricultural Policy has strict restrictions and measurable terms, with constant and strict scrutiny of residues.
- c) In terms of the farming systems/stakeholders/users:
- Information, behavior and irrigation systems
 - Farming systems/ habits of farmers.
 - Policing and controlling in agriculture.
 - Use of treated water in non-edible crops-concerns- difficulties
 - Industrial food processors water use/reuse
 - Environment-friendly policy.
 - Some proposals to facilitate farming/industrial reuse waters
- d) In terms of local/regional rules:
- Licenses and re-use licenses
 - Secondary treatment, effluent quality, and reuse of treated waste.
- e) In terms of the economy:
- Design and problems in water transportation and unit costs
 - Reliability of the processes of reuse.
 - Water recycling from drainage canals-advantages and disadvantages.
 - Water treatments costs/efficiency/piloting plants
- f) In terms of management/new skills/gaps:
- Competencies, development planning
 - key management issues, best practices to share
 - Reference to remote management and its importance
 - Cross-compliance of operators and consumers with irrigation processes.
 - Consumer/citizenship analysis/acceptance/willingness to buy

3 Discussion and participants in the RWG meetings/events

3.1 Regional Working Groups meetings

Several experiences have been seen through the 8 different regions / countries as below:

3.1.1 FRANCE

In France, the Occitanie SUWANU Regional Working Group (RWG) aimed to gather a wide scope of stakeholders involved in water reuse in order to identify obstacles and to offer viable alternatives to overcome barriers. This group was composed by stakeholders involved in each step of a water reuse project from policy makers (Région Occitanie) to final users (farmers), including public financers (water agencies), local authorities (municipalities, departments), agricultural advisors (agricultural chambers) as well as experts for both organizational aspects (AD'OCC) and scientific aspects (INRAE-IRSTEA).

Each stakeholder member of the RWG have been chosen regarding the expertise he can provide for the elaboration of the SuWaNu Regional Action Plan. The following list describes the composition, each type of actor and the role in the RWG: Region/ Departments , Water agencies, WWTP Operators, Research institutes, Agricultural chambers , Farmers & farmers associations, Municipalities/Provinces , Consulting firms (15 representatives).

Table 2 : 15 members of the Regional Working Group for Occitanie

Name	Organization	Category	Role
Jean-Michel Clerc	AD'OCC Agency	Region/ Departments	Expert water reuse implemption at regional level
Régis Ingouf	Région Occitanie	Region/ Departments	Responsible regional policy regarding water reuse
Katy Pojer	Rhône Méditerranée Water Agency (AERMC)	Water agencies	Fund water reuse projects
Ariette Sourzac	Adour Garonne Water Agency (AEAG)	Water agencies	Fund water reuse projects
Brigitte Goral	Veolia	WWTP Operators	Water reuse projects
Bruno Molle	INRAE (former IRSTEA)	Research institute	Field reuse projects
Jonathan Perot	Agricultural chamber of Pyrénées Orientales (CA66)	Agricultural chambers	Water reuse projects
Alexandre Mullens	Agricultural chamber of Tarn (CA81)	Agricultural chambers	Water reuse initiatives
Christophe Lafon	Regional agricultural chamber	Agricultural chambers	Expertise on overall water
François Flisiak	FRSEA	Farmers & farmers associations	Represents farmers
Laetitia Carbonell	Grand Domaine du Littoral	Farmers & farmers associations	Wine-grow holding /reuse
Jean Charles Laclau	Toulouse Metropole	Municipalities/ Provinces	Water reuse projects

Claudine Vibert	Federation of municipalities of Grand Narbonne (GN)	Municipalities/ Provinces	Pioneer on water reuse
Thierry Alignan	Federation of municipalities of Grand Pic Saint Loup	Municipalities/ Provinces	Host 4 water reuse projects
Emmanuel Alonso	Municipality of Aureilhan	Municipalities/ Provinces	Involved SmartFertiReuse

Occitanie's RWG has been established during spring and summer 2019, the first meeting took place on October 1st, 2019. All participants have been introduced to each other. The overall strategy of the RWG construction was to gather both water reuse experts and water reuse practitioners (on field including farmers) in order to facilitate knowledge and feedbacks exchanges. Gathering those people enables to have a big picture from policy makers to final users.

Beyond this meeting, RWG members have contributed to several SuWaNu tasks: SWOT analysis: only experts have been involved for the SWOT analysis. AKIS analysis: all RWG members have been involved for the AKIS analysis. Participative workshop: most of the RWG members made a short presentation during the workshop. Moreover, some of them helped by giving contact lists or using their professional networks to ensure event's success and broadcast.

RWG members will participate to the Region Action Plan elaboration in early 2020. They will give their recommendations for the implementation of solutions regarding the use of reclaimed water in Occitanie, starting from the SWOT analysis and the participatory workshop results.

RWG also disseminates information concerning SuWaNu project (deliverables, online courses, etc). All workshop participants have been requested to answer to a quick survey. Feedbacks from the RWG members and from all 6th December 2019 workshop participants are good.

Several topics have been discussed with RWG members during these meetings:

- SuWaNu project presentation and tasks already achieved (State of Play);
- SWOT analysis and AKIS analysis on-going work discussions and feedbacks;
- As RWG meetings, members duties and benefits have been described (expected attendance to event, survey responses, dissemination);
- Then, participatory workshop organization and content have been elaborated.
- RWG members discussed the topic discussed during the roundtables.

The second Occitanie SUWANU participatory workshop took place in Narbonne on December 6th, 2019. Roughly all RWG members have been attending the event. Unfortunately, the event has been programmed on the second day of an important national transport strike event. Then, some RWG members couldn't travel to Narbonne and have been excused, but most of them managed to come. Many RWG members have been involved during the event by giving their expertise or their feedbacks.

Last but not least, the RWG constituted a core members group (see the list below) of stakeholders directly involved in project's policy and strategy at the regional scale.

With water reuse experts, agricultural experts, policy makers and grant agencies, the core group gathered stakeholders that can directly act in order to promote the use of reclaimed water at regional level (see below attendance and role of the Memberships)

Table 3: RWG members participation to each task (Occitanie)

Name	Organization	RWG core group	AKIS	SWOT	Attendance RWG WSs Role in the RWG Core Group	Attendance to SUWANU participatory workshop	Presentation at SUWANU participatory workshop
Jean-Michel Clerc	AD'OCC Agency	X	X	X	The Authorities point of view and feedback - RAP coordinator X	X	X
Régis Ingouf	Région Occitanie	X			The Authorities feedbacks and Co Coordinator	X	X
Katy Pojer	Rhône Méditerranée Water Agency (AERMC)	X	X		The Authorities point of view and feedbacks	X	X
Ariette Sourzac	Adour Garonne Water Agency (AEAG)	X	X	X	The Authorities point of view and feedbacks X	X	X
Brigitte Goral	Veolia		X	X	The Industrial partnership X	X	
Bruno Molle	INRAE (former IRSTEA)	X	X	X	The Research point of view X	X	X
Jonathan Perot	Agricultural chamber of Pyrénées Orientales (CA66)		X		The Entrepreneurial/Education point of view and RAP facilitator X	X	
Alexandre Mullens	Agricultural chamber of Tarn (CA81)		X		The Entrepreneurial/Education point of view X	X	
Christophe Lafon	Regional agricultural chamber Garonne	X			The Economical/Entrepreneurial point of view	X	X
François Flisiak	FRSEA				The Farmers point of view and feedbacks X	X	
Laetitia Carbonell	Grand Domaine du Littoral				The Authorities point of view-Revision RAP X	X	X
Jean Charles Laclau	Toulouse Metropole		X		The Local Authorities point of view		
Claudine Vibert	Federation of municipalities of Grand Narbonne (GN)		X		The Metropolitan Area Authorities Coordination	X	X
Thierry Alignan	Federation of municipalities of Grand Pic Saint Loup		X		The Metropolitan Area Authorities Coordination X	X	X
Emmanuel Alonso	Municipality of Aureilhan				The Local Authorities point of view		

3.1.2 ITALY

In Italy, RWG Members had three meetings, the first one in Bologna the 24th of June 2019, during the General Assembly of the Agrifood Cluster c/o ART – Emilia Romagna (Via Gobetti 101 – Bologna), the second one in Rimini, Ecomondo Fair, the 7th of November 2019 c/o Confagricoltura Stand (Hall 030 Pavillon D3 Bioeconomy Area) and the third one the 12th of December 2019 in Palazzo della Valle, Rome, during the AgroNetwork 5th Seminar on Water management c/o Confagricoltura (Corso Vittorio Emanuele II, 101 00186 Rome – Italy).

Looking to the different actors participating in the meetings, events and activities of the regional working group in Italy, RWG was very attentive to the stakeholders profiles and the motivations to attend meetings and to be an active actor to define the regional plans.

Regarding water management and Water Reuse, RWG saw protagonists (30 people) of different sectors, from the water Authorities to the farmers and the agricultural advisors, from the industry to the research Agencies, from the public sectors to the Universities, actors that are very relevant for SUWANU EUROPE goals.

To the multi actors Suwanu Europe leaflet, slides and contents were presented during the 3 meetings in Bologna, Rimini and Rome. The Agenda was set, and the attendees were registered. The topics of water management and water reuse were deeply analyzed and discussed. Highlight the specific regional aspects that were presented and discussed: in particular the regulation barriers on reuse water and the acceptance of Agrifood products manufactured or treated by reuse water by the consumers.

The results of these discussions are still very promising and the continuous pressure on reuse water issues is consisting in a raising awareness of the regional working Group in Italy. The planned future collaboration between RWG and SUWANU EUROPE consortium is well established also because the defined organization of the next SUWANU EUROPE general meeting of the European project in Rome the 23rd and 24th of January 2020.

The RWG meetings were open events, and many stakeholders attended these events with open questions arena and platea microphone speeches and interventions (120 people).

Table 4: RIMINI - list of steering committee members & moderators.

Workshops steering Committee's members		
Name	Organization that represents	Position to the organization
Mr Adriano Battilani	CER Regional Water Consortium	Director
Mrs Patrizia Busato	University of Turin	Logistics Professor
Mr Daniel Rossi	Confederation of farmers	Director R&I
Mr. Gioele Chiari	CER Regional Water Consortium	Responsible R&I
Workshops working teams and moderators		
THEMATISES	Name	Member of the partners working team
Team thematic 1 Farmers	Daniel Rossi	Rotundo
Team thematic 2 Authorities	Gioele Chiari	Rotundo
Team thematic 3 Industries	Remigio Berruto	Busato
Team thematic 4 Research.	Patrizia Busato	Berruto

See below the list of participants attending the Roma workshop and the list of the Core Group's Membership:

Table 5: Participants of the RWG meetings/event/activity

Name	Organization that represents	Position to the organization	Description of the Organisation
Mr Carlo Carli	Farmers of Rimini-Cesena	Director	Producers
Mr Ezio Veggia	Azienda Agricola Veggia	Owner/CEO	Renewable Energies
Mr Alberto Mazzoni	Società Agricola Agri Alma SS	Owner/CEO	Cereals
Mr. Guido Zama	Azienda Agricola Zama	Owner/CEO	HortiCultures
Mr Eugenio Zedda	Farmers of Parma	Director	Producers
Mr Raffaele Cirone	Bees Farmers	Chairman	Bees and Honey
Ms Letizia Gori	Agri Advisor	Owner/CEO	Crops
Ms Aurora Audino	Politecnico di Torino	technologist	Water Management
Ms Sophie Meilo	University of Bologna	Professor	Water Engineering
Mr Daniel Jonas	Bee Farmers	Owner/CEO	Bees and Honey/ Climate changes
Mr Alessandro Brandon	Consultant	Owner/CEO	Water Engineering
Mr Alessandro Paterno	School Teacher	Professor	Education on water Cycles
Ms Cristina Cesellati	Advisor	Owner /CEO	Water Management
Mr Marco Marcatili	Nomisma	Water Director	Water Mangement – Researches and Studies
Mr Giorgio Martini	Agenzia per la Coesione Territoriale	Director on Infrastructures	Presidence of the Council of Ministers – Italian Government
Ms Giovanna Parmigiani	Azienda Agricola Parmigiani Srl	Owner/ CEO	Feeds and Livestocks water management
Ms Cristina Broch	Coca Cola Italy	Public Affairs Director	Soft Drink Industry
Mr Giangiacomo Pierini	HBC Italia	Communication and PA Director	Bottling Industry
Mr Alfredo Pratolongo	Heineken Italy	Public Affairs & Communication Corporate Director	Beer Industry
Mr Denis Pantini	NOMISMA	Director General Agrifood	Agri Food Industry Rersearch and Innovation Studies
Ms Luisa Todini	AgroNetwork	President	Agrifood industrial Projects
Ms Federica Argentati	Distretto Produttivo Agrumi Sicilia	President	Citrus Fruits Production
Mr Gianpaolo Cassese	Chamber of Deputies	Hon. Deputy	Agri Food Laws

Mr Francesco Mollame	Senatus Hall	Hon. Senator	Infrastructure Laws
Mr Pasquale Maglione	Chamber of Deputies	Hon. Deputy	Agriculture Commission
Mr Luigi Scordamaglia	Cluster Agrifood	Chairman	Research & Innovation Food Technology Platform
Ms Cristina Di Domizio	Cluster Agrifood	Secretary General	Research & Innovation Food Technology Platform
Mr Annibale Pancrazio	Federalimentare	V. President/ Board Member	Food and Drink Industry Federation
Mr Guido Folonari	Azienda Vitivinicola Folonari Srl	Owner/CEO	Wine Sector
Mr Maurizio Notarfonso	Federalimentare Srl	R&I Director	Food R&Innovation

Table 6: Core group of SUWANU EUROPE Regional Working Group for Italy

Name of main contact person	Organization that represents	Position to the organization	Role of RWG member during SUWANU EUROPE
Mr Adriano Battilani	CER	Director general	Coordinator RAP
Ms Cristina Di Domizio	Cluster Agrifood	Secretary General	Water Management in the food industry Research & Innovation – The The Food industry R&D point of view. And RAP Revision/feedbacks
Mrs Maurizio Notarfonso	Federalimentare Srl	R&I and Envi Director	Environment in the Agrifood Industry The Food Industry point of view. And RAP Revision /feedbacks
Mr Ezio Veggia	Veggia Azienda Agricola	Owner/CEO	Renewavbles Energies and Natural resources – The Technical point of view – RAP Revision and feedbacks
Mr. Guido Folonari	Folonari Srl	Owner/ CEO	Wine sector – End users point of view/Feedbacks
Mr Marco Marcatili	Nomisma	Water Director	Water reuse and Water management – Fields analysis and collaborative action plan
Ms Federica Argentati	Distretto Produttivo Agrumi Sicilia	President	Citrus fruits Production and water management in Sicily/ Water scarcity area – Territory importance and concrete needs and feedbacks

The Italian RWG selected a core group of 6 organizations (see table above) within the participants of the RWG meetings/events and from the participatory workshops, under the CER Coordination (Ing. Adriano Battilani): Cluster Agrifood , giving R&D of the AgriFood chains positions

- Federalimentare , representing the Food Industry point of view
- Veggia Azienda Agricola , the Technical support to the Core Group
- Folonari , the End User very important point of view/Clients/consumers
- Nomisma, the database and field analysis to help dss
- Distretto Produttivo Agrumi Sicilia. The Territory needs to be concrete.

3.1.3 PORTUGAL

FENAREG and CONSULAI prepare the regional working group meeting with the main regional and national entities on the reuse of water. This meeting was crucial for the development of SUWANU EUROPE for several reasons. SUWANU EUROPE appeared at a critical juncture for water management in Portugal, due to the confluence of a number of national and European strategies, all of which focus on the relevance and need to take advantage of urban reclaimed water.

Composition of the RWG and people Invited to attend the RWG meeting: CONSULAI, FENAREG, AdP - Waters of Portugal APA, Agência Portuguesa do Ambiente AP, Alentejo - Alentejo Public Waters, DGADR – Directorate- General for Agriculture and Rural Development, GPP – Gabinete de Planeamento, Políticas e Administração Geral , UN Water Convention Committee COTR - Irrigation Technology and Operational Center ,EDIA - Alqueva Development and Infrastructure Company, ISA - Higher Institute of Agronomy, LNEC - National Civil Engineering Laboratory, to better Identify barriers that prevent further implementation of reuse, which is also one of SUWANU EUROPE's objectives, and to establish exchange of information on the situation of Portugal.

Also exchange of knowledge; share information on wastewater use measures; exchange of documents to establish action plans, implementation and entry into force of the European regulation; awareness of limitations (or not) that products may have when irrigated with recovered water for export, both within the EU and abroad (quality labels).

The Regional Working Group (RWG) for the Alentejo region (Portugal) is the result of intense contact with actors in the water, agriculture and business sectors to involve them in the SUWANU EUROPE activities.

These contacts were initiated from the beginning of the project and, in a first stage, consisted of informing the objectives of the project and planned activities.

The participatory workshop allowed direct and intense contact with the main entities in the sector. Since then, several activities have been organized such as sending invitation letters, phone calls, e-mails and leaflets that allow information sharing. However, although great efforts were made to organize the meeting during 2019, it wasn't possible due to the busy schedules of our guests. So it was only possible to hold it on the 17th of February 2020.

At this working meeting, the Portuguese cluster (FENAREG and CONSULAI) aimed to ensure the active participation of stakeholders in the development of action plans and to ensure the effective transfer of knowledge in the next stages of the project. In this phase of the project, the Portuguese cluster invited regional and national authorities, wastewater treatment operators, rural development groups, researchers and private companies (for example, engineers and advisory groups).

The Portuguese cluster has defined a strategy with different stages for the participation of these actors, including the following activities: Contact with stakeholders; Presentation of the project and the objective of the RWG; Presentation and characterization of the target region; Presentation of the legal framework in Portugal; Presentation of a Portuguese project about the use of water for reuse in agriculture; Distribution of dissemination material (for example, PPTX, working documents); Aggregation of a group dynamic to identify barriers to the use of treated wastewater and suggest action lines. A large and varied composition of stakeholders were present at the RWG meeting (Table 6):

Table 7: Participants at the RWG meeting

Name	Organization that represents	Position to the organization	Description of the Organisation
Rita Rijo	CONSULAI	Technique	SUWANU EU participant/ Consultant
Rui Almeida		Partner & Executive Director	
Ricardo Zanatti		Technique	
João Pedro Caldeira		Technique	
Carina Almeida	FENAREG	General Secretary	SUWANU EU participant/ Water Management Disposals and Catches Federation
Diana Cordeiro		Technique	
Sara Antunes	AdP - Waters of Portugal	Coordinator - Engineering Directorate	The core Grupo AdP - Águas de Portugal activity involves the integrated management of the urban water cycle and spanning all of its respective phases, ranging from the catchment, treatment and distribution of water for public consumption to the collection, transport, treatment and disposal of urban and industrial wastewaters and including their recycling and reuse.
Marta Carvalho		Engineering Direction	
Anabela Rebelo	APA – Agência Portuguesa do Ambiente	Water Resources Department	The Portuguese Environment Agency (APA) is a new public institute, within the scope of the Portuguese Ministry of the Environment. APA's mission is to propose, develop and monitor, on an integrated and participated manner, the public policies for the environment and sustainable development, in close cooperation with other sectoral policies and public and private entities. APA is responsible for the Report on the State of the Environment of Portugal.
André Matoso	AP Alentejo - Alentejo Public Waters	Regional Director of the Alentejo Hydrographic Region Administration	AgdA - Águas Públicas do Alentejo, SA carries out the exploration and management of water services related to the Public Integrated Water Partnership of Alentejo, under a public partnership, aiming at the provision of a quality service, with respect for essential social and environmental aspects, as well as the provision of their capacities to serve the national interest.
Rui Sequeira		Technique	
Cláudia Brandão	DGADR – Directorate-General for Agriculture and Rural Development	Head of Hydraulic Infrastructure Division	DGADR represents the Ministry of Agriculture, Forestry and Rural Development in matters related to the use of water in agriculture, participating in the elaboration of the national water policy and elaborating, coordinating, monitoring and evaluating the implementation of the National Irrigation Plan.
Luís Boteta	COTR - Irrigation Technology and Operational Center	Technique	To promote agricultural development, in particular through the coordination and promotion of scientific research, experimentation, demonstration and dissemination of results and training and professional qualification; promote and carry out projects necessary for the creation and diffusion of knowledge and for the Technical-Scientific
Marta Varela		Technique	

Name	Organization that represents	Position to the organization	Description of the Organisation
			exchange
José Costa Gomes	EDIA - Alqueva Development and Infrastructure Company	Director Planning and Water Savings Department	Its mission is to design, execute, build and operate the Alqueva Multi-purpose Undertaking (EFMA), thereby contributing to the economic and social development of its area of intervention. EDIA's tasks include infrastructure management, environmental assessment, farmer support, irrigation promotion and monitoring.
Manuela Ruivo		Environmental Engineer	
Elizabeth Duarte	ISA - Higher Institute of Agronomy	Researcher at the Center for Research in Agronomy, Food, Environment and Landscape	The Instituto Superior de Agronomia (ISA), School of Agriculture, is the largest and most qualified school of graduate and post-graduate degrees in the Agricultural Sciences, in Portugal, and its know-how is recognized nationally and internationally.
Maria João Rosa	LNEC - National Civil Engineering Laboratory	Researcher, Head of the Sanitary Center, Department of Hydraulics and Environment	As an independent and impartial R&D institute, LNEC's priority is to make science, as to contribute to the creation, development and dissemination of applied research in areas related to civil engineering,
Alexandra Brito	CAP - Portuguese Farmers Confederation	Technical Department	Championing the interests of Portuguese agriculture at home and abroad and always safeguarding the economic aspect of the activity are the objectives of the Confederation of Farmers of Portugal, in the defense of a dignified quality living for all farmers who wish to continue their way of life
Bernardo Albino	ANPOC – National Association of Protein, Oilseed and Cereal Producers	President and Farmer	It promotes research and dissemination of all technical and economic actions aimed at improving the conditions of production, processing and marketing of cereals, oilseeds and protein crops.
Lopo Carvalho	AQUAGRI	Technical & Sales Consultant	Are specialized in Services and Equipment for Irrigation Water Management, activity in which they integrate internet-based remote monitoring technologies and data analysis software for irrigation management. Aquagri consulting services are supported by a complete set of specific irrigation management equipment, such as soil moisture and salinity probes and automatic weather stations that provide, simultaneously, information on weather conditions and on the risk of crop diseases occurrence.
Marta Delgado	HIDROSOPH	Technical Consultant- Production Department	They have backgrounds in engineering, agriculture, hydraulics, statistics, information technology and solid international experience. They all share the same environmental concerns and believe that together we can contribute to making a difference in the world. They are using intelligent irrigation principles and technologies available to the greatest number of irrigators.

A core group of 14 organizations has been selected within the participants of the RWG meetings/events and/or from the participatory workshops.

Table 8: Core group of SUWANU EUROPE Regional Working Group for Alentejo (Portugal)

Name of main contact person	Organization that represents	Position to the organization	Role of RWG member during SUWANU EUROPE
Cláudia Brandão	DGADR	Head of Hydraulic Infrastructure Division	Bring expertise in governance and regulatory measures.
Anabela Rebelo	APA	Water Resources Department	Bring expertise in governance and regulatory measures.
André Matoso	APA/ARH Alentejo - Alentejo Public Waters	Regional Director of the Alentejo Hydrographic Region Administration	Bring expertise in governance and regulatory measures/Regional context
Elizabeth Duarte	ISA	Researcher at the Center for Research in Agronomy, Food, Environment and Landscape	Bring expertise in appropriate water reuse technologies and monitoring
Maria João Rosa	LNEC	Researcher, Head of the Sanitary Center, Department of Hydraulics and Environment	Bring expertise in appropriate water reuse technologies and monitoring
Marta Carvalho	AdP	Engineering Direction	Bring expertise in governance and administrative measures.
Alexandra Brito	CAP	Technical Department	Bring expertise in irrigation and farmers concerns.
Bernardo Albino	ANPOC	President and Farmer	Bring expertise in irrigation and farmers concerns.
Luís Boteta	COTR	Technique	Bring expertise in irrigation technologies.
José Costa Gomes	EDIA	Director Planning and Water Savings Department	Bring expertise in governance and administrative procedures.
Marta Delgado	HIDROSOPH	Technical Consultant-Production Department	Bring expertise in irrigation technologies.
Lopo Carvalho	AQUAGRI	Technical & Sales Consultant	Bring expertise in irrigation technologies.
Rita Rijo	CONSULAI	Technique	Bring expertise in irrigation and farmers concerns.
Rui Almeida	CONSULAI	Partner & Executive Director	Bring expertise in irrigation and farmers concerns.
Ricardo Zanatti	CONSULAI	Technique	Bring expertise in irrigation and farmers concerns.
João Pedro Oliveira	CONSULAI	Technique	Bring expertise in irrigation and farmers concerns.
Carina Arranja	FENAREG	General Secretary	Coordinator - Bring expertise in irrigation and farmers concerns.
Diana Cordeiro	FENAREG	Technique	Coordinator - Bring expertise in irrigation and farmers concerns.

3.1.4 GREECE

The province of Thessaloniki displayed a number of initiatives that were taken for re-use of treated effluent of wastewater treatment plants for irrigation purposes. Practical efforts to re-use the treated water were undertaken as early as the beginning of the 90's, by joint collaboration of the Thessaloniki Water Supply and Sewerage Company S.A. (EYAO A.E.) , the Local Land Reclamation Agency of "Chalastra –Kaloheri" and the technical/scientific supervision of the currently named: Soil & Water Resources Institute (SWRI) which is a branch of the Hellenic Agricultural Organization "DEMETER" located at "Sindos" settlement.

Those hasty efforts were a response to acute drought problems that presented a serious threat to the vast irrigated crops at the Western plains of Thessaloniki (mainly rice, corn, cotton & sugar beets). The result of this early actions were the provision of infrastructure for utilizing the effluent of the Thessaloniki Waste Water Treatment Plant (approximately 150.000 m³ / day) after a mixture with water from river "Axios" at an analogy of 1 to 5 (1 portion of effluent mixed to 5 portions of river water). The quantities were sufficient to cover the irrigation needs of approximately 2500 ha of crops mainly rice, cotton & corn for a period of 5 years.

Previous consultation works and discussions at Thessaloniki area, on issues of better exploitation of the water resources, were done during the elaboration of the Management Plan of the River Basins of Central Macedonia River Basin District 10, which took place at 2014.

The actors that were targeted and called to participate to the Regional Working Group of Thessaloniki were:

1. Decentralized Region of Central Macedonia / Directorate-General for Development & Environment.
2. Decentralized Region of Central Macedonia / Directorate General for Environment & Water Resources.
3. Elected Region of Central Macedonia / Directorate of Water Resources.
4. Elected Region of Central Macedonia / Directorate of Planning & Environment
5. General Land Reclamation Agency of Thessaloniki & Langada plains (ΓΟΕΒ)
6. Thessaloniki Water Supply and Sewerage Company SA
7. Association of Agricultural Cooperatives of Thessaloniki - Langada
8. Municipal Water Supply and Sewerage Services.
9. Center for the Protection of Consumers in Thessaloniki
10. ANETH S.A

The above actors were selected and engaged to the Regional Working Group because of:

- ✓ they were actively involved in the design and implementation of water resources management and they have experience in open consultations and debate on the relative issues,
- ✓ the requested participants form a typical & well-balanced representative group of all the key players that influence/ shape the water resources management at the province,
- ✓ they represent local government schemes and associations that are familiar with the goals and actions that the host Local consortium partner (ANETH S.A.) is involved, starting from the bottom up approach consultations undertaken at the LEADER/CLLD initiative.

Table 9: Key actors

Key Actors	
1. Union of Agricultural Co-operatives (Thessaloniki-Langada)	RTD
2. General Organization of Land Improvements in Thessaloniki - Lagada (GOEV)	ORGANIZATION
3. Local Organization of Land Improvements in Thessaloniki (TOEV)	ORGANIZATION
4. Municipality of Thessaloniki (Directorate of Planning and Technical Works)	AUTHORITY
5. Aristotle University of Thessaloniki (Department of Geology)	UNIV
6. Aristotle University of Thessaloniki (Laboratory of Agricultural Hydraulics)	UNIV
7. Public Water Supply-Sewerage Plant of Thessaloniki (Sewage Treatment Plant - DEYATH S.A.)	RTD
8. Consumers Association of Thessaloniki	ASSOCIATION
9. Regional Directorate of Water (Central Macedonia)	AUTHORITY
10. Institute of Land Improvements of Thessaloniki (ELGO)	RES
11. Inter-Balkan Environmental Centre	RES
12. National Center for Research and Technological Development (EKETA)	RES
13. Geotechnical Chamber of Greece	CHAMBER
14. Technical Chamber of Greece	CHAMBER
15. Development Agency of Eastern Thessaloniki's Local Authorities (Anatoliki S.A.)	RTD

The contribution of the RWG members to the projects task and in particular to the task 2.6: elaboration of a Regional Action Plan for Thessaloniki province aiming to overcome the barriers for advocating the re-use of treated water to crops irrigation, is expected to be of critical importance. The members of the RWG represent a well harmonized group, offering equilibrium among key players on water resources management both from the administrators & implementer's perspectives.

Table 10: Participants of the 1st RWG meeting, 01/10/2019. (Thessaloniki)

Name	Organization that represents	Position to the organization	Description of the Organisation
Mr Drosos Achilleas	EASTH S.A.	Head of Study Dept.	Association of Agricultural Cooperatives of Thessaloniki
Dr Tsostolis Nicholas	General Directorate of Development and Environment/ RCM	Director	Environmental Protection and Development
Mr Mpeksoudis Eustratios	Dept. of Environment and Hydroeconomy/ RCM	Manager	Water resources Management
Mr Papatolios Konstantios	General Land Reclamation Agency of Thessaloniki & Langada plains	Employee	Water and Land Reclamation

Mr Papatolios Konstantinos	Region of Central Macedonia / Directorate of Water Resources	Employee	Water resources protection and Management
Dr Michailidis Anastasios	AUTH	Associate Professor	Agronomics
Mrs Patrikaki Olga	Region of Central Macedonia / Directorate of Water Resources	Employee	Water resources protection and Management
Mr Koparanis Theologos	General Land Reclamation Agency of Thessaloniki & Langada plains	Employee	Water and Land Reclamation
Mr Chatzipapas Vasilis	General Land Reclamation Agency of Thessaloniki & Langada plains	Employee	Water and Land Reclamation
Mr Kotoulas Konstantinos	EYATH S.A.	Director	Thessaloniki Water Supply and Sewerage Company SA
Mrs Pritsa Therodora	Elected Region of Central Macedonia / Directorate of Planning & Environment	Employee	Environmental Planning
Mr Seitaridis Thomas	Municipal Water Supply and Sewerage Services of Pylaia Chortiatis	Employee	Municipal Water Supply and Sewerage Services
Mr Papavasileiou Vasileios	ANETH S.A.	General Director	Development Company of Thessaloniki
Dr Tzanou Elena	ANETH S.A,	Company executive	Development Company of Thessaloniki
Mr Ziankas Georgios	ANETH S.A,	Company executive	Development Company of Thessaloniki
Mr Petridis Georgios	ANETH S.A,	Company executive	Development Company of Thessaloniki

The RWG members as a group epitomize the accumulated knowledge in all the critical issues concerning:

- Laws and administrative management of water resources
- Design and implementation of regional management plans
- Water treatment facilities, construction & maintenance & functional costs
- Irrigation networks construction & maintenance & functional costs
- Significance of the irrigation costs to the local agriculture production process
- Friction and social conflicts within the local community that revolve around water use rights
- Consumers' concerns and questions about the re-use of treated water in irrigation of crops

The RWG meetings provide an excellent opportunity for the members of the group to exchange opinions and make remarks on all the issues that the Local Regional Action Plan has to confront

and thus contribute in its formulation. The suitable members that would constitute a RWG that can meet the projects goals to have the optimal contribute to tasks 2.4, 2.5, 2.6 & 2.7 were detected during the work of the Task 1.2. A list of “candidates” was drawn containing their communication data.

The strategy for engaging the targeted members was based on the following frame:

- Communicating effectively the SuWaNu-Europe guiding principles for the positive avocation of treated water re-use
- Emphasizing on the need to create a long-term vision for the area, based on the “common destiny” concept
- Recognition of the diversity of the selected key players and adapting common and differentiated communication approaches
- Building up of trust and collaborative trend during the group’s discussions.
- Offering a full access to the project’s outputs and documentation

The second meeting took place at ANETH SA headquarters. The discussion continued at the same trajectory as in the first meeting of the SuWaNu Europe Project since the aspects and concerns are numerous and overly critical. In the second meeting the RWG focused mainly on more targeted issues on water reuse such as legislation, conflicts between stakeholders and managing authorities. Also, the General Action Plan was presented as formed by now.

The RWG members discussed the areas in which Greece and particularly the area of Thessaloniki should focus on to prepare a reliable and applicable Regional Action Plan and how the key players would communicate and disseminate the plan in order to be successful. The type of each questionnaire was discussed in order to come up with the most reliable and easily answered ones. The ANETH team was offered to prepare them and to present them to the next RWG. All members of the RWG will participate in the process of sharing the questionnaires to targeted groups and to the public. The results will then be evaluated by the ANETH and AUTH team and will be used as guidelines on the Regional Action Plan. The questionnaires have been presented in the third RWG meeting.

The third meeting took place at PORTO PALACE HOTEL, on the 5th of December, Thessaloniki, Greece. This meeting came as a post- process of the Regional Workshop (task 2.4) held the same day. After the end of works of the Regional workshop, the RWG discussed on the results of the workshop and evaluated the formed Questionnaires surveyed during the 2nd RWG.

At first the participants of the RWG discussed on the Workshop and evaluated its impact on the regional stakeholders. The second part of the RWG meeting focused on the evaluation of the results of the Questionnaires. All members answered all four questionnaires. Some corrections and adjustments were decided - all answers shall be given as a check box with a scale agreement to the statement of the question or by a yes/no answer. The type and final form of the questionnaires are uploaded to the SUWANU EUROPE project internal area - Greek Language. Results and their evaluation have been presented in the RWG meeting.

The participants in the 3st Regional Working Group are listed (19 participants) from the same organizations above, apart the Ministry of Agricultural Development and the Geotechnical Chamber of Greece.

The core group of organizations within the participants of the RWG meetings/events and/or from the participatory workshops is as follows, roles and references:

- EASTH S.A. Dept. of Environment and Hydroeconomy/RCM, Farmers and Cooperatives point of view

- SWRI , Water resources analysis and proposals
- ANETH S.A, Territory needs and development experiences
- KEPKA, Local and Regional role in coordinating actions and initiatives
- AUTH, Researchers' positions/collaboration an updating stakeholders
- EYATH S.A, General Directorate of Development and Environment/RCM. Environmental Agency Water Supply point of view.

A core group of 7 organizations has been selected within the participants of the RWG meetings/events and/or from the participatory workshops.

Table 11: Core group of SUWANU EUROPE Regional Working Group for Thessaloniki (Greece))

Name of main contact person	Organization that represents	Position to the organization	Role of RWG member during SUWANU EUROPE
Dr Tsostolis Nicholas	General Directorate of Development and Environment/ RCM	Director	He is engaged to the use of water and wastewater in terms of regulation compliance in agriculture, participating in the elaboration of the national water policy
Mr Kotoulas Konstantinos	EYATH S.A.	Director	He is the coordinator in terms of treated wastewater effluent control, operated by the municipal wastewater treatment plan of the greater metropolitan area of Thessaloniki
Mrs Pritsa Therodora	Elected Region of Central Macedonia / Directorate of Planning & Environment	Employee	She is coordinating legal issues and compliance with the regulation in terms of reclaimed water reused in agriculture in the regional unit of Thessaloniki
Mr Koparanis Theologos	General Land Reclamation Agency of Thessaloniki & Langada plains	Employee	He represents the general land irrigation organisation of the region of Thessaloniki and is dealing with quality, quantity, demand and safety issues, getting feedback
Mr Drosos Achilleas	EASTH S.A.	Head of Study Dept.	He represents the farmers organisation and is responsible of contributing to the farmers change of opinions with other key actors, circulating and information from and to the RWG, getting feedback etc
Panoras Athanasios	SWRI	Former director, Sn Researcher	He coordinates the issues related to water resources in agriculture, pollution control and advisory methods to the agricultural sector and farmers,
Dr Tzanou Elena	ANETH S.A.	Company executive	She is the coordinator for the general function of the RWGs, responsible for the organisation of the meetings, thematics, distribution of minutes, information exchange etc.

3.1.5 GERMANY

The Braunschweig water reuse scheme has a long history. By founding the 'Abwasserverband Braunschweig (AV-BS)' as responsible wastewater association in 1954 an official organisation structure regarding water reuse was for the first time established in the region.

Within the Braunschweig water reuse scheme AV-BS as owner of the wastewater treatment plant is nowadays responsible for the irrigation of the reclaimed water during vegetation period on an agricultural area of 3000 ha.

The legal structure of AV-BS as water and ground association provides the right to irrigate wastewater within the association territory of 3000 ha. The wastewater treatment plant itself is operated by a company from the private sector.

For almost 70 years a close network between all relevant stakeholders have been developed within the Braunschweig water reuse scheme with AV-BS as head organisation. The figure 1 represents the organisational structure of the Braunschweig water reuse scheme.

The list below shows the actors of the Braunschweig water reuse scheme are from different sectors like agricultural sector, water authority, municipalities, water and wastewater associations. All these actors are relevant for a successful water reuse scheme:

1 *Agricultural sectors/ farmers:*

- As purchaser of the reclaimed water the farmers use the reclaimed water to grow crops.
- Due to a negative climate balance in the Braunschweig region during vegetation period using reclaimed water ensures a constant harvest for the farmers.

2 *Water authority:*

- Using reclaimed water for agricultural purposes needs permission of the federal and the local water authority regarding the protection of groundwater and surface waters from pollutants and pathogens.
- The water authorities are responsible for monitoring and surveillance of the threshold values of the effluent of the wastewater treatment plant.

3 *Municipalities*

- The Braunschweig water reuse scheme is financed by wastewater fees paid by the wastewater producer like citizens and industries. The wastewater fees are managed and governed by the local municipalities.
- The Braunschweig water reuse is seen as additional cleaning stage by the local municipalities due to filtration during soil passage after irrigating.

4 *Operator wastewater treatment plant*

- The operator is responsible that the threshold values of the effluent of the wastewater treatment plant are not exceeded. The effluent represents the reclaimed water which is used for irrigation.
- Operating and maintenance of the wastewater treatment plant is done by the operator who supports AV-BS regarding the evaluation of new investments and up-grading of the plant

5 *Water/Wastewater association*

- AS head organisation AV-BS is responsible for the technical operation of the Braunschweig water reuse scheme.
- Maintenance and new investments of the irrigation systems and the wastewater treatment plant are organised and contracted out by AV-BS.

- As head organisation AV-BS is the communication center of the Braunschweig water reuse scheme where all actors come constantly together.

Within the Braunschweig water reuse scheme there are several events and activities organised by AV-BS where all relevant actors come together and discuss about recent trends and future tasks.

Besides the listed events there are currently several research projects within the Braunschweig water reuse scheme ongoing. The research projects focus on various aspects regarding water reuse and support by their results the board of directors and policymakers regarding solutions for future challenges and necessary adaptations. The Braunschweig water reuse scheme is part of following research projects:

- H2020 projects:
 - Suwanu-Europe: European network for water reuse
 - NextGeneration: European network for circular economy in wastewater sector
- National funds projects:
 - Keramesch: Elimination micro-pollutants wastewater
 - HypoWave: Hydroponic use wastewater
 - Replawa: Elimination micro-plastic wastewater
- MultiResistance. Analysis multiresistant pathogens reclaimed water
- National funds project application:
 - P-Net: Regional network for secondary phosphorus fertilisers from wastewater
 - FlexTreat: Upgrading chemical and microbiological quality reclaimed water
 - HypoWave+: Hydroponic use wastewater

Due to its organisational structure and about 70 full-time employees, the Braunschweig water reuse scheme already has a long-time working group with focus on the regional water reuse.

Regarding the Suwanu-Europe Regional Working Group (RWG) AV-BS will use the already existing organisational infrastructure to present and implement results and proposal elaborated within Suwanu-Europe and to develop the Regional Action Plans.

Most of the RWG members will be from the organisations listed above. Additionally the RWG will be complemented by representatives of the regional agricultural authority and of the regional farmers' association in order to underline the needs and expectations of the agricultural sector.

Table 12: Participants of the RWG meeting #1

Name	Organization that represents	Position to the organization	Description of the Organisation
Mr Wolfgang Sehrt	Board of directors AV-BS, representative public sector	Chairman	Grant management, Assignment management
Mr Günter Olfe	Board of directors AV-BS, representative agriculture	Co-chairman	Grant management, Assignment management
Mrs Franziska Gromadecki	AV-BS	Director	Head organisation. Braunschweig water reuse scheme
Mr Heinrich Ripke	AV-BS	Co-director	Head organisation. Braunschweig water reuse scheme

Mr Jonas Schneider	AV-BS	Coordination research	Head organisation Braunschweig water reuse scheme
Mr Thomas Berendonk	Hydrobiological institute TU Dresden	Director	Microbiological analysis multi-resistant bacteria

As said before, the Braunschweig water reuse scheme has already a long-term existing regional working group which makes on the one hand the implementation of the Suwanu-Europe RWG easier. On the other hand this organisational structure ensures that the regional working group keeps on coming together frequently after ending of the Suwanu-Europe project.

Results and strategies developed within Suwanu-Europe will thereby not get lost and can be implemented in the Braunschweig water reuse scheme with long-term effect. The meeting focused on the prearrangement of the analysis of microbiological quality of the reclaimed water of the Braunschweig water reuse scheme regarding multi-resistant bacteria. The results regarding quantity, gene transfer and bacteria reduction during soil passage shall identify and specify the microbiological risk coming from the reclaimed water. Conclusions from the monitoring program will be used for public communication.

Participants of the meeting were two members from the board of the directors (agricultural and public sector), three members of AV-BS (director, co-director, coordination research) and one member of the institute responsible for the microbiological analysis of the samples.

The actors from the agricultural sector contributed by bringing in their knowledge regarding the right sampling method and moment with respect to cultivation management and percolation water generation. AV-BS was responsible for identifying the right sampling places within the water reuse value chain. The microbiological institute contributed by giving advice regarding the sampling moment and places and presented a potential monitoring program.

The RWG meeting had the following discussion topics:

- Presentation of the pre-analysis of the status quo about microbiological quality/quantity of reclaimed water regarding multi-resistant bacteria by Mr Berendonk (Sewage sludge which is mixed reclaimed water during irrigation will be in the future treated by thermal pressure hydrolysis reducing the microbiological activity)
- Sampling method, sampling places, sampling moments of monitoring program
- Volume of monitoring program (Number of field experiments)
- Further necessary prearrangements of the monitoring program for beginning the first field experiment in February/May 2020

The next meeting within the prearrangement of the monitoring program took place at the end of January 2020 with focus on the design of the monitoring program with respect to the irrigation interval, the soil cultivation and the crop rotation of the monitoring field.

AV-BS will therefore prepare and adapt sampling methods of former monitoring programs regarding micro-pollutants and will present the adapted sampling method at the meeting.

The agricultural representatives of the board of directors will also work on the right sampling method regarding evaporation, percolation water rate and soil cultivation and will bring in their ideas at the January meeting.

The meeting of the board of directors and AV-BS director with the environmental task force of governing party of the federal parliament was used to present the Braunschweig water reuse scheme to the federal policy makers.

In order to ensure the institutional and political support for the Braunschweig water reuse scheme for long term, the politicians had the possibility to get to know features and benefits of the reuse scheme regarding environment and agriculture.

After the presentation of facts and data the delegation was invited to visit the agricultural fields, the irrigation infrastructure and distribution system on-site.

The environmental task force supports the implementation of an additional third treatment step within the wastewater treatment in order to remove micro-pollutants and pathogens. The task force works on a legal obligation for the implementation of such a treatment step and supports the idea of the Braunschweig water reuse scheme.

In this context AV-BS could present plans for a study developing a future concept for the WWTP in 2030. Furthermore, the task forces want to establish the irrigation of greywater and rain water to an increasing degree. These issues belong mainly to the Core Group of the RWG (see below).

Table 13: Core group of SUWANU EUROPE Regional Working Group for Braunschweig (Germany)

Name of main contact person	Organization that represents	Position to the organization	Role of RWG member during SUWANU EUROPE
Mr Wolfgang Sehrt	Board of directors AV-BS, public sector	Chairman	Coordinator - Provide feedbacks to Regional Action Plan
Mr Günter Olfe	Board of directors AV-BS, agricultural sector	Co-chairman	Co Coordinator - Revise regional action plan
Mr Theodor Eggers	Board of directors AV-BS, agricultural sector	Member	Provide feedbacks to Regional Action Plan
Mr Dirk Asche Baumgarten	Board of directors AV-BS, agricultural sector	Member	Provide feedbacks to Regional Action Plan
Mr Christian Müller	Board of directors AV-BS, agricultural sector	Member	Provide feedbacks to Regional Action Plan
Mrs Franziska Gromadecki	AV-BS	Director	Secretariat - Revise regional action plan
Mr Heinrich Ripke	AV-BS	Co-director	Secretariat - Revise regional action plan
Mr Martin Schorling	AV-BS	Technical department	Secretariat - Revise regional action plan
Mr Jonas Schneider	AV-BS	Coordination Research	Secretariat - Revise regional action plan
Mr Christoph Siemers	SEBS, WWTP	Director	Facilitator - Revise regional action plan
Mrs Pia Kleeberg	LWK, authority	Management	Provide feedbacks to Regional Action Plan
Mr Thomas Tretzka	LWK, authority	Management	Provide feedbacks to Regional Action Plan
Mrs Cornelia Kaniora	NLWKN, authority	Management	Provide feedbacks to Regional Action Plan
Thorsten Hartung	NLWKN, authority	Management	Provide feedbacks to Regional Action Plan

Mr Andreas Romney	Braunschweig Municipality	Management	Provide feedbacks to Regional Action Plan
Mr Horst Schevel	Landvolk Gifhorn, farmers' association	Director	Provide feedbacks to Regional Action Plan
Mrs Urte Rötze	Landvolk Gifhorn, farmers' association	Management	Provide feedbacks to Regional Action Plan

3.1.6 BULGARIA

In recent years, scarcity and lack of fresh water have become a serious problem. In the area of Plovdiv Regional there are several municipalities that suffer from water shortage, even in some regions of Bulgaria there is a regime of drinking water use in the respective mayor cities (Pernik, Lovech, Pleven).

In the light of these circumstances, finding alternatives is crucial for agriculture, daily life and the economy as a whole. In our view, the creation of a Regional Working Group on the Plovdiv Region is especially important in order to overcome the problems and to create a Regional Action Plan to promote the use of reclaimed water in agriculture.

For sure the results and the experience gained will be useful to dispreads in other sites of the country. There are peculiarities in the functioning of the administration, economy and interconnections with stakeholders, in particular farmers, NGOs and citizens, in different countries.

The specifics of the organization of the relationships, the flow of information in the field of water reuse, as well as the main players, were clarified in Task 2.2 Stakeholder and AKIS analysis.

In this regard, the establishment of an RWG for the Plovdiv region is consistent with the involvement of a wide range of actors who play a key role in the design and coordination of the regional action plan. Stakeholders from the administration, local authorities, universities and research institutes, farmers, NGOs and others were involved. Each group of these actors has an important contribution to play in drawing up the regional plan.

On the other hand, all of the selected representatives in the RWG are settled and located in Plovdiv, which will ensure very good coordination. The engaging of relevant stakeholders starts since the beginning of the project.

This resulted in meetings in various regional organizations and relevant ministries with the idea of involving competent organizations to participate in SuWaNu Europe, explaining the approach and objectives of the project and the role of each external organization in it.

The second RWG meeting coincided with a regional workshop held in Plovdiv on 30 October 2019. Invitations were sent to interested parties to organize the meeting.

Plovdiv District is an industrial and agricultural area with well-developed diverse sectors of the economy.

Soil resources in the area are suitable for the development of agriculture. Plovdiv is settlement center of the institutions and companies, related to water management. This makes the connection with the group representors easy and fast.

Generally the RWG is expected to contribute for:

- a. Assessment of the measure in the Regional action Plan during the process of creating them for their relevance and prioritization;
- b. Expertize and support in the formulation and defining the responsible bodies for their implantation;
- c. Defining the period for their accomplishment;
- d. Make available various information about the project between their surroundings;
- e. Use the data base to build up the theme in other regional projects, that could be related to the measures in SuWaNu EU Action plan.

- f. Become a pilot site for specific measure implementation;
- g. Facilitate the process of creation and realization of the Plan, regarding the requirement, provision of information, contacts and services.

Most of the members in the Regional Working Group are representatives of institutions and organizations that have interest in the water resources reuse and saving.

The strategy will be contribution for the common interest of water reclamation and sustainable water use. The strategy for Plovdiv regional group will be to keep constant contact with the focal points and exchange of information.

The Regional working group meeting took place in Plovdiv together with the Regional workshop.

We used the opportunity of the workshop to invite a wider range of stakeholders to take part in discussion panel and working sessions. The methodology used in the regional workshop in Plovdiv with working session was traditional, using presentations related to the topic of SUWANU EUROPE project.

Table 14: Attendees to the regional working group meeting.

ORGANIZATION	NAME
Municipalities	
Maritsa Municipality	Grozdan Stavrev
Plovdiv Municipality	Antoniya Danailova
Farmers and farmers' associations	
BULPLOD Ltd.	Desislava Angelova
Agriculture cooperative EDINSTVO	Anton Dzhoglev
	Borislav Stefanov
Zlatna Roza Ltd.	Mihail Mihaylov
	Petya Petkova
Greentech ST	Milena Dobranova
Private agronomic practice	Hristo Lulchev
Research institutes and universities	
Agricultural University – Plovdiv	Stefan Shilev
	Violeta Dirimanova
	Ekaterina Valcheva
	Histina Yancheva
	Teodor Radev
	Dafinka Ivanova
Bulgarian Academy of Sciences – Institute of climate change, atmosphere and waters	Albena Vatlarova
	Nadezhda Shopova
	Krasya Kolcheva
“Maritsa” vegetable crops research institute- Plovdiv	Dima Markova
	Hriska Boteva
	Vinelina Yankova
	Boyan Arnaudov

Agricultural Academy	Sonya Chehlarova
University of Plovdiv "Paisiy Hilendarski"	Slaveya Petrova
Regional governmental organizations	
District administration – Plovdiv	Evelina Apostolova
East Aegean Basin Directorate - Plovdiv	Mitka Dureva
	Tsvetelina Kaneva
	Kremena Popova
	Asya Angelova
Regional Directorate for Food Safety – Plovdiv	Melopomena Nikolova
Department of agriculture–regional office PI	Ivo Andonov
Regional inspectorate of environment and waters – Plovdiv	Miloslava Mihaylova
	Mihaela Tsvetanova
Service of agriculture – municipal office Plovdiv	Kostadinka Kirilova
Service of agriculture/municipal office Maritsa	Georgi Karagogov
WWTP operator	
National water association	Nikolay Mihalkov
RTD and engineering/consultancy	
Eco Resolve Ltd.	Pavel Pandarski
	Ivan Zayakov
Aqua systems Ltd.	Marin Kalnev
Eco tech Ltd.	Nikolina Gerginska
	Velichka Filipova
	Stanimir Beev
EkoExpert – Independent experts society	Mariana Raymer
	Yezhy Raymer
Bioconsulting Ltd.	Angel Doychinov
Irrigation Service/operator	
Irrigation systems Ltd. "Maritsa branch" Plovdiv	Katya Paralska
NGOs, citizens, others	
Foundation "Land is source of income"	Ivan Penov
Newspaper and regional media "Maritsa"	Mariya Petrova
Bulgarian biomass association	Anna Aladjadjian
Citizens	Nedka Kirilova/Eleonora
	Yorukova-Veselin Kondov

Presentations done during the workshop supported the audience in better understanding of the problems and the opportunities of water reuse for irrigation. The findings obtained in SWOT and PEST analyses were discussed in three thematic groups with the purpose to get possible solutions, ideas, strategies for action, to support the creation of Regional and national action plans.

The following tasks were established with the purpose to realize the objectives of SuWaNu Europe:

- Present the project and results done till the moment to the regional actors, receive their feedback and engage the Regional Working Groups created in task 2.5 and other stakeholders, which will facilitate the future knowledge transfer in the region and in the country.
- Present examples of reclaimed water use in the region and get opinions enclosed the state of play in the sector.
- Get-together all the professionals involved in water reuse in the region and obtain their feedback concerning the SWOT and PEST analysis.
- Organize open discussions and receive inputs from the attendees about effective steps and possible strategies to overcome the identified barriers.
- Disseminate the project through publications in web sites, social media, press releases, etc.

During the regional workshop in Plovdiv three working groups were created, divided by strategic lines:

- Legal framework and administrative procedures – red color,
- EU public policies and cooperation – blue color and
- Innovations, development and marketing channels in yellow.

The groups discussed the results and lessons learned from the SWOT analysis and the possibilities of overcoming the shortcomings and improving the positive aspects.

Each group was guided and supported by facilitator with the aim to ensure active participation of the attendees and create enabling discussions. The session resulted in a very interesting and useful discussion. The results were recorded in the form of a questionnaire completed by each attendee, related to the main findings of the SWOT and PEST analysis.

Several informal meetings with the Directors of Basin Directorate, Irrigation system EAD – Maritsa branch, Water supply and Sewage – Plovdiv SJSCo and Department of agriculture Plovdiv regional office and Farmers, were held to invite them and to discuss the importance of the cooperation between the institutions for the water reuse enhancing in the region.

A Core group was established to better facilitate and stimulate the discussions (see below):

Table 15: Core group of SUWANU EUROPE Regional Working Group in Plovdiv (Bulgaria)

Name of main contact person	Organization that represents	Position to the organization	Role of RWG member during SUWANU EUROPE
Asya Angelova	Basin Directorate- EABRB -Plovdiv	Chief expert	Coordinator - To elaborate the regional action plan and provide feedbacks
Ivo Andonov	Department of agriculture – regional office Plovdiv	Chief expert	Co – Coordinator - To revise regional action plan and provide feedbacks

Katya Paralska	Irrigation systems Ltd. "Maritsa branch" - Plovdiv	Chief expert	Co-Coordinator - To revise regional action plan and provide feedbacks
Grozdan Stavrev	Municipality Maritsa	Chief expert	To provide feedbacks to Regional Action Plan
Angel Tarpov	Bulgarian national agricultural advisory service-Plovdiv	Chief expert	To help coordinators to revise regional action plan and provide feedbacks
Milena Dobranova	Greentech ST	Manager	To provide feedbacks to Regional Action Plan
Velichka Filipova	Eco tech Ltd.	Manager	To provide feedbacks to Regional Action Plan
Крася Колчева	Bulgarian Academy of Sciences – Institute of climate change, atmosphere and waters	Manager of section "Waters"	To provide feedbacks to Regional Action Plan
Pavel Pandarski	Eco Resolve Ltd.	Owner and manager	To provide feedbacks to Regional Action Plan
Nikolay Mihalkov	Regional water association	Manager of the WWTP Hisarya and Plovdiv	To help to revise regional action plan and provide feedbacks
Stefan Shilev	Agricultural University-Plovdiv	Associate Professor	To help to revise regional action plan and provide feedbacks
Violeta Dirimanova	Agricultural University-Plovdiv	Lecturer in Economics and Management	To help to revise regional action plan and provide feedbacks
Borislav Stefanov	Agricultural cooperative Edinstvo	Owner and Manager	To facilitate the regional action plan and provide feedbacks

During the event, specific regional aspects were presented and discussed:

- Furthermore, a representative of the Basin Directorate EAR presented in details the legislation concerning water reuse in the agriculture and in particular the Regulation on minimum requirements for water reuse and the challenges, related to its implementation.
- Ms. Katya Paralska from "Irrigation systems" EAD, Maritsa Branch presented information about "The water use in irrigated agriculture" and the "Irrigation Theory against the Reality" giving especially important background to the thematic lines, following in the agenda. It was alerted that there is urgent need of reconstruction of water distribution network.
- Case studies of the use of reclaimed water in the region.

3.1.7 SPAIN

The Regional Working Group (RWG) in Andalusia (Spain) was the result of an intense contact with actors of the water and agriculture sectors in order to engage them in the project activities. These contacts started from the very beginning of the project and in a first stage consisted in the information of the project objectives and foreseen activities. The organization of the participatory workshop in Cordoba pushed the consortium for a more intense contact. Several activities were organized such as sending of invitation letters, telephone calls and eventually the creation of a newsletter to disseminate the workshops, extend the audience and share information.

The purpose of this work is twofold:

- i) to ensure a participatory process in the development of action plans and
- ii) to guarantee an effective transfer of knowledge in the next project steps by the active participation of stakeholders during the development of the training material.

Therefore, relevant actors have been involved in the process and engaged as RWG members.

The consortium has involved a wide range of actors including farmers (already using reclaimed water or just interested in reuse), authorities (regional and national), wastewater treatment operators, rural development groups, researchers, agri-food industries (producers, distributors, etc.), consumers associations, NGOs and private companies (e.g. engineers, advisory groups).

This section details the different activities carried out between SUWANU Europe consortium in Spain and RWG members: University of Cordoba and BIOAZUL participated in a meeting at the Ministry of Environment. This meeting was crucial for the development of future SUWANU EUROPE for several reasons. SUWANU EUROPE appears at a critical moment for water management in Spain due to the confluence of a series of European strategies such as the Strategy on Circular Economy (EC, 2015) and Strategy on the efficient use of resources (EC, 2011), among others.

All of them agree on the relevance of taking advantage of urban reclaimed water. Likewise, the approval of the proposal for a Regulation of the European Parliament and of the European Council on the minimum requirements for water reuse (COM (2018) 337) constituted an opportunity to extend the use of reclaimed water, as it provides a legal basis that grants greater guarantees for reuse, but also a challenge in introducing new and more demanding requirements.

This new requirements imply changes at different levels (e.g. national and regional regulations, administrative procedures, technologies implemented, monitoring activities, etc.) that must be taken into account in the strategies and training materials that will be developed under SUWANU EUROPE project.

Another relevant issue is that the Ministry of Environment is coordinating the so-called Plan DSEAR which is a strategic plan intended to harmonize river basin management plans in Spain.

Water reuse can be only extended if it is truly included in this management plans, therefore there are necessary synergies between SUWANU EUROPE regional action plan in Andalusia (called Plan REGENERA) and Plan DSEAR.

In fact, there is a great synergy of collaboration between the SUWANU EUROPE REGENERA plan (task 2.4) and the DSEAR plan. Currently the DSEAR plan is still in process although there is also some uncertainty with the change of government. One of the objectives of the DSEAR plan is to put order in compliance with the European water directive.

We also want to identify barriers that prevent further implementation of reuse, which is also one of the objectives of SUWANU EUROPE. MITECO needs support in this task of identifying barriers and there arises a potential opportunity to collaborate with the SUWANU EUROPE project.

The characterization work of the region of Andalusia could be integrated in some way in the DSEAR plan. Within few months, there will be a new DSEAR working document and we can better explore the possibilities of collaboration. The two working teams (MITECO and SUWANU EUROPE) commit to the exchange of documents to strengthen each of the respective plans.

Currently, MITECO has a pilot trial in Valencia to assess the future implementation of the new European regulation on water reuse. Among other things, a risk management plan (called a security plan) will be developed.

The European Commission will make a guide for the Risk Management plan. Pedro Simón and Miquel Salgot are among the group of experts involved. This knowledge will be essential to adapt to the context of the new regulations and therefore must be taken into account in the future of SUWANU EUROPE activities e.g. contents for online courses and presentations for participatory workshop. These key actors can be invited for the training workshops of WP3 to make a presentation at the next workshop on risk management plans. This paper can be recorded and be part of the course material.

Another lack of knowledge identified in SUWANU EUROPE is what producers should know about the limitations (or not) that products may have been irrigated with reclaimed water for export both within the EU and abroad. For example, it would be relevant to know if quality seals such as Global Gap can be obtained when irrigated with reclaimed water.

Another opportunity for collaboration is to organize a dialogue table that can be framed in the activities planned in SUWANU EUROPE (Regional Working Group meetings) and serve both for the REGENERA plan and for the DSEAR plan. A proposal of a table of users could be:

MITECO, BIOAZUL, irrigators of the Axarquía, irrigators of the Ejido and Four Vegas including relevant regional actors belonging to CHG and the regional government (see below).

List of participants, including name, organization and position (see table 13).

Table 16: Participants of the RWG meeting/event/activity

Name	Organization that he or she represents	Position to the organization	Description of the Organisation
Mr. Rafael Casielles	BIOAZUL	Project Manager	SUWANU EU Coordinator
Ms. Antonia Lorenzo	BIOAZUL	CEO	SUWANU EU Coordinator
Mr. Enrique Mesa	University of Cordoba	Researcher	SUWANU EU participant (WP1 Leader)
Mrs. Concepcion Marcuello	Subdirector General of Planning and Sustainable Use of Water. Ministry for Ecological Transition/Environment (MITECO)		Water Directorate within the Ministry of Environment (National Authority) is responsible of water management at national level and will have to adapt existing national regulation on water reuse (Royal Decree 1620/2007) with the requirements brought by new EU regulation.

Mrs. Isabel León Martin	CEDEX	Project Manager	CEDEX provides multidisciplinary support in civil engineering, building and environmental technologies, and assists both public administrations and institutions and private companies. It consists of a series of specialized technical units called Centers and Laboratories, which provide high-level technical assistance, applied research and technological development within the framework of civil engineering:
Mrs. María Leal Meca	CEDEX	Director of Centre of Hydrologic Studies	Same as above

In addition to the participatory workshop planned for task 2.4 which was held in Cordoba, another event with stakeholders was organized in Malaga following a similar format. This event had a huge participation and has been reported as a second workshop in Deliverable 2.4.

In summary, the event counted with several presentations of keynote speakers presenting good practices in water reuse in agriculture as well as an open dialogue table with invited speakers that started a dialogue with the audience (approximately 100 participants).

A core group was established: Ministry of environment, MITECO, CENTA, ESAMUR, Junta de Andalucía, Regantes del Guaro (table 14):

Table 17: Core group of SUWANU EUROPE Regional Working Group for Spain

Name of main contact person	Organization that represents	Position to the organization	Role of RWG member during SUWANU EUROPE
Mrs. Concepción Marcuello	MITECO	Water directorate deputy director	Bring expertise in governance and regulatory measures. Exploit synergies of SUWANU EU action plans with plan DSEAR. Provide feedback to Regional Action Plan (RAP) (T2.6) and policy briefs (T3.6)
Mrs. Isabel Martin	CENTA	Researcher	Bring expertise in appropriate water reuse technologies and monitoring, for instance with the revision of info-packages (T3.1) and online courses (T3.5)
Mr. Pedro Simon	ESAMUR	Director	Bring expertise in governance, technologies and practical knowledge on water reuse. Feedback to RAP (T2.6) and policy briefs (T3.6), info-packages (T3.1) and online courses (T3.5)

Mr. Fernando Delgado	Junta de Andalucia	Director	Bring expertise in governance and administrative procedures. Feedback to RAP (T2.6) and policy briefs (T3.6)
Mr. José Campos	Regantes del Guaro	President	Bring expertise in irrigation and farmers concerns. Feedback to RAP (T2.6) and policy briefs (T3.6), info-packages (T3.1) and online courses (T3.5)

3.1.8 BELGIUM - FLANDERS

The Regional Working Group (RWG) in Belgium - more specifically for the provinces of Antwerp and Limburg (region of Flanders) – aimed to involve the most relevant stakeholders regarding water reuse for agricultural irrigation in the region with the SuWaNu Europe project.

The RWG is composed by policymakers, farmers’ representatives, water technology companies, wastewater treatment suppliers, government institutions and research institutions from the region of Antwerp and Limburg.

The list of the organisations which have confirmed their participation in the RWG: Flemish envi Agency, Department of Agriculture and Fisheries, Limburg Agri and Rural Service, Antwerpen Dep of agriculture, Pidpa, Watergroep, Waterfuture, Bosaq, Bio-chemical Green Engineering & Materials (BioGEM), Vlaams Kenniscentrum Water (Vlakwa) - Flanders Knowledge Center Water Proefstation voor de Groenteteelt (PSKW) – research Station for Vegetable production, Proefcentrum fruitteelt (pcfruit), Berta, Borreenbond, Acquafin, Bodemkundige Dienst van België (BDB) – Soil Service of Belgium, and Copa-Cogeca.

Table 18: Member organisations of the SuWaNu regional working group

Organisation	Role description
Administration (National or regional level)	
Vlaamse Milieu Maatschappij (VMM) - The Flemish Environment Agency	VMM is an institute of the Flemish government operating within the domains of water, air and the environment. (https://en.vmm.be/). VMM is responsible for the out translation of the European legislation regarding the use of reclaimed water in Flanders.
Departement Landbouw & Visserij (DeptLV)- The Department of Agriculture and Fisheries	DeptLV is part of the Flemish public authority. Since 2018, DeptLV is chairing the ‘Drought discussions’ for the agricultural sector. This has so far resulted in the ‘Drought and Flood action plan.’ One of the actions of this plan is to focus on the potential of reclaimed water for irrigation.
Municipalities/Provinces	
Provincie Limburg - Agricultural and rural Service	The Agricultural and rural service of the province of Limburg is developing a new drought adaptation plan.
Provincie Antwerpen – Dept. Agriculture	The Agricultural department of the Province of Antwerp is in charge to defend the needs of the province towards future proof agriculture. The Agricultural Department is involved in several projects related to sustainable water use.
Private sector	
Pidpa	Pidpa is a Flemish water company providing drinking water to 1.2 million inhabitants of the province of Antwerp. Pidpa is also in charge of the wastewater management of parts of the Province.
Aquafin nv	Aquafin is in charge of the urban wastewater management in Flanders. Aquafin is involved in several European projects to improve wastewater treatments and to investigate the potential of reclaimed water for different sectors.
De Watergroep	The Watergroup is Flanders largest water company. The Watergroup provides water to municipalities in Limburg, East- and West Flanders, Flemish-Brabant.

Water Future	Water Future is a young Dutch start-up focussing on the selective removal of sodium. This technology could be essential in case reclaimed water containing higher concentrations of sodium is used for soilless crops.
Bosaq	BOSAQ helps organisations save water and money through independent consultancy on integrated water management. Our experts perform detailed water audits, propose smart interventions that save water, study the feasibility of rain-, grey-, black- and wastewater treatment and reuse, provide solutions for complex water challenges and coordinate the implementation of the proposed technologies. (www.bosaq.com)
Research centres/universities	
Bio-chemical Green Engineering & Materials (BioGEM)	BioGEM is a department of the University of Antwerp focussing on sustainable solutions for industrial water management through a synergetic combination of biochemical technologies and green chemical processes.
Vlaams Kenniscentrum Water (Vlakwa) - Flanders Knowledge Center Water	The Flanders Knowledge Center Water (Vlakwa) wants to provide demand-driven solutions for the Flemish water problems and in this way, meet future needs. Vlakwa supports the acquisition and management of knowledge, promotes collaboration between all actors, and stimulates the exchange of experience and knowledge. Also, Vlakwa collects and channels the needs of problem owners, answers their questions, or brings them in contact with the solution and product providers. It aims to help realise higher efficiency in the target groups and/or to assist the international valorisation of the knowledge acquired and results obtained in Flanders. Currently, VLAKWA is involved in the Interreg Initiative F2AGRI, the first initiative focusing on the use of reclaimed water in Flanders.
Proefstation voor de Groenteteelt (PSKW) – research Station for Vegetable production	Through its applied research, PSKW creates a link between the fundamental scientific research carried out at universities and the growers. The experience in field and semi-field trials and dissemination activities, combined with the close contact with growers guarantees innovation: the implementation of (best) practices and new technologies at the farms. PSKW is coordinating and participating in several national and international initiatives related to sustainable water use. PSKW has coordinated the FERTINNOWA project and is now coordinating an operational group on the use of reclaimed water (AWAIR)
Proefcentrum fruitteelt (pcfruit)	In pcfruit new and existing technologies, techniques and varieties are permanently evaluated and judged on their added value to fruit growing. Finally, individual fruit growers are assisted in the introduction of new technologies and sustainable production methods. A close relationship with individual growers and grower associations exists, which benefits the transfer of research results or information. Due to the high level of specialisation, their advice goes beyond the fruit sector in areas as crop protection, biological control, IPM, plant nutrition, environment...
Bodemkundige Dienst van België (BDB) – Soil Service of Belgium	BDB is an independent research and advice institution for agriculture, horticulture, and the environment. BDB is mainly active in soil and water research, fertilization advice, irrigation management, and environmental impact reports, and also offers numerous services for government, companies and individuals. BDB has developed a wide expertise in the field of irrigation.
Associations	

BelOrta	BelOrta is the largest cooperative auction for fresh fruits and vegetables in Europe. The majority of Belorta's 1.180 growers is located in the provinces of Antwerp (469) and Limburg (358). The auction supports its growers evolving towards more sustainable water use. Assuring availability of qualitative irrigation water has become one of the focus points for BelOrta.
Boerenbond	Boerenbond is a Flemish growers' organisation focussing on i) defending the interests of the Flemish farmers, .ii) education and information, iii)...
Copa-Cogeca	COPA-COGECA is the union of the two big agricultural umbrella organisations COPA and COGECA and the most influential interest group for European farmers. Founded in 1962 and headquartered in Brussels, its activity focus is on the Common Agricultural Policy and other policy areas relevant to farmers and agri-cooperatives, such as food safety, animal health, and welfare, plant health, environment, research and innovation, trade, etc. Copa-Cogeca defends the interests of the European farmers and cooperatives with regards to reclaimed water.

This RWG group has been involved during the entire project duration, and had at least 5 meetings. The main task of the RWG is to collaborate with the consortium in the preparation and implementation of Regional Action plans.

Furthermore, it will be engaged with the project results of SuWaNu Europe. One or two contact persons from each organisation figure in the mailing list of the RWG.

This medium is used to divulgate the project results, communicate the RWG meetings or engage them in other activities (participation in surveys, feedback to reports...). New members might be joining the RWG by the time.

The aim is to consolidate them after the project ends and create a permanent cluster in the region. The RWG came twice together during 2019. The meetings took place on the 6th of May 2019 and 26th of September 2019 at the PSKW facilities in Sint-Katelijne-Waver.

PSKW is the only Belgian member of the SuWaNu Europe consortium, and thus responsible for the establishment, contact and activities of this RWG.

First, PSKW identified the relevant stakeholder organisation and contact persons within the region of Antwerp, Limburg and by extension Flanders. In the beginning of April, an email was sent out to invite the identified stakeholders to the first RWG meeting and confirm their participation in the RWG.

Table 19: Participants at first regional working group meeting

Name	Organization that he or she represents
Mrs. Noémie Hisette	Proefstation voor de Groenteteelt
Mrs. Els Berckmoes	
Mr. Joris De Nies	
Mrs. Jo Severyns	Aquafin
Mrs. Colette De Smet	Provincie Antwerpen – Dept. Agriculture
Mrs. Marlies Caeyers	
Mrs. Marlies De Muijnck	Provincie Limburg - Agricultural and rural Service
Mr. Luc Peeters	BelOrta
Mrs. Riet Cornelissen	Pantarein
Mr. Tom Vandekerckhove	Bosaq
Mr. Ortwin Deroo	De Watergroep

Mr. Koen Vanhentenrijk	Boerenbond
Mr. Jan Vaerten	Bodemkundige Dienst van België – Soil Service of Belgium
Mrs. Charlotte Boeckeaert	Vlaams Kenniscentrum Water (Vlakwa) - Flanders Knowledge Center Water
Mr. Erwin Van San	Pidpa
Mr. Willem Van Baak	WaterFuture

The second meeting aimed to present the first project results and organised the participatory workshop (D2.4).

This was meant to get feedback from the regional actors on how SuWaNu Europe can contribute to reclaimed water implementations in the provinces of Antwerp and Limburg - and by extension Flanders (Belgium). Although less stakeholders attended the meeting, the most relevant organisations (VMM and Aquafin) for this topic were present.

As proposed in the agenda, the second regional working group included following discussions and activities:

- Presentation of the first project results of the regional analysis and
- the SWOT and PESTL analysis for the region of Flanders. (D 1.1 and D2.1);
- Introduction of the RWG to the database of project initiatives on the project's website.

Three working group members elaborated on specific topics current use of treated wastewater in Flanders:

- Marie Verhassel gave a short explanation on the current policy regarding water reuse in Flanders.
- Adelheid Vanhille, a representative of the Flemish Environmental Agency (VMM) elaborated, the current and future legislative context in Flanders regarding water reuse. Miss Vanhille also presented in more detail some possible scenarios to distribute reclaimed wastewater to agricultural users.
- Birte Raes, representative of Aquafin (wastewater supplier) delivered figures about the volumes and frequencies of treated wastewater collection by farmers during the last three summers across Flanders. Active discussion on how SuWaNu Europe can contribute to the elaboration of regional action plan for Flanders together with the identification of knowledge gaps

The initial preparation work consisted in elaborating the concept and the thematic of the workshop. Afterwards, an invitation was sent to the members indicating the date and location for participation.

PSKW registered the confirmations and contacted some important stakeholders in order to discuss the agenda and their eventual contribution.

Based on the RWG members' feedback, the steering committee decided to lay the 2nd workshop' focus on "the identification of remaining knowledge gaps".

The confirmed agenda was sent to the participants (/see below) three week before the workshop and participants were already asked to think about their "main knowledge gaps" regarding reclaimed water for agriculture.

Table 20: Participants at second regional working group meeting

Name	Organization that he or she represents
Mrs. Noémie Hisette	Proefstation voor de Groenteteelt
Mrs. Els Berckmoes	Proefstation voor de Groenteteelt
Mr. Joris De Nies	Proefstation voor de Groenteteelt
Mrs. Birte Raes	Aquafin
Mrs. Adelheid Vanhille	Vlaamse Milieu Maatschappij (VMM) – The Flemish Environment Agency
Mr. Samuel Van de Walle	
Mrs. Marie Verhassel	Departement Landbouw & Visserij (DeptLV)- The Department of Agriculture and Fisheries
Mr. Pieter Derboven	Bosaq
Mr. Ortwin Deroo	De Watergroep
Mr. Stan Verdonck	POM Antwerpen

A core group of 5 organizations has been selected within the participants of the RWG meetings/events and/or from the participatory workshops.

Table 21: Core group of SUWANU EUROPE Regional Working Group for Flanders (Belgium)

Name of main contact person	Organization that represents	Position to the organization	Role of RWG member during SUWANU EUROPE
Mrs. Jo Severyns & Mrs. Birte Raes	Aquafin	Responsible R&D Aquafin	- Participate in the RWG - Revise reports and deliverables prepared by the Flemish partners. - Support transfer of project outcomes to the Flemish working group preparing the Flemish policy with regards to water reuse
Mrs. Ilse Geyskens	Boerenbond	Advisor water & environmental policy	- Participating in RWG - Assures exchange of project outcomes to the broader agricultural sector.
Mr. Erwin Van San	Pidpa	Manager integral Water management department	- Participating in RWG - Provide input for preparation of regional action plans from water producers point of view - Review of project documents and deliverables prepared by Flemish team
Mrs. Marie Verhassel	Departement Landbouw & Visserij (DeptLV)- The Department of Agriculture and Fisheries	Policy Advisor of the Flemish government	- Participate in the RWG - Revise reports and deliverables prepared by the Flemish partners. - Support uptake of water reuse practices in the agricultural policy of Flanders

Mrs. Adelheid Vanhille	Vlaamse Milieu Maatschappij (VMM) - The Flemish Environment Agency	Contributor VMM	- Participate in the RWG - Revise reports and deliverables prepared by the Flemish partners. - Support uptake of water reuse practices in the agricultural policy of Flanders
------------------------	--	-----------------	---

4 Conclusions

Here, lessons learned by the activities and the discussions held by the different Regional Working Groups in the eight Countries concerned by the Suwanu Europe Project:

4.1 Occitanie, France

In **the French** experiences, the SUWANU Regional Working Group in Occitanie is composed of a wide range of highly motivated stakeholders. All of them are involved in water reuse or pushed forward a wider implementation of the thematic throughout the region:

- During SuWaNu first year, they have been involved in several tasks thus sharing their knowledge, their vision for the future, their enthusiasm but also their skepticism on certain issues related to the use of reclaimed water in agriculture.
- From all the discussions, it has been noticed a strong will to facilitate water reuse implementation at regional scale. Local and regional authorities seemed determined and voluntary in order to achieve that goal.
- However, brakes remained in place or could arise such as the difficulty to reach the economic profitability or the current and upcoming regulations.
- Many RWG members also argue for local stakeholder's skill improvement by expert support and specific trainings focused on water reuse project management, good practices, brakes encountered and solutions to overcome barriers.

4.2 PO river, Italy

In **the Italian** experiences, the RWG meetings/event/activities' conclusions included:

- the support to disseminate intensively at local and regional level using appropriate channels to reach stakeholders;
- to ensure a concrete stakeholder's engagement through a deep analysis of the key actors and the accession to other relevant organizations to be involved;
- to ensure a real multi actor and a participatory approach that make regional actors feel part of the Suwanu Europe project;
- to Involve actively all the partners of the Regional Working Group, not only the more interested ones;
- to facilitate the Implementation of water reuse solutions, facilitating acceptancy by the producers and by the consumers.

4.3 Alentejo, Portugal

The Portuguese experiences told us that the expected an intense engagement of key actors has been pursued during this first stage of Suwanu Europe project:

- The first contacts have been made through the organization of workshops, meetings, surveys, etc. creating a core group that will be actively involved in the project activities.
- The creation of this group will be very relevant for the future of water reuse in Alentejo and in Portugal and it provides a framework for a necessary dialogue considering the coming changes of the current situation.
- The main change foreseen is the new EU regulation on minimum requirements for water reuse in agriculture which has been recently approved at the EU Parliament. This regulation is in force after the approval of the EU Council and the Commission. However, it is absolutely crucial to advance which will be the changes that will arrive in the near future. In this sense, this is an opportunity for SUWANU EUROPE to have a real impact.

- The consortium can act as intermediary between different experts contacted and the stakeholders and become an effective instrument of knowledge exchange which considers the most recent events and solutions.
- Active engagement of actors is therefore crucial.

4.4 Thessaloniki, Greece

In Greece, the RWG established and covered all aspects of key players and stakeholders that deal with water and agriculture. The general opinion is that during the SUWANU EUROPE project it is the first serious attempt for the regional area of Thessaloniki to share knowledge and opinions on water reuse for agriculture:

- The area of Thessaloniki has little to show on water reuse, thus this is an opportunity to pass knowledge and experience to farmers and farming companies.
- Agriculture is the main water consumer in Thessaloniki and in Greece.
- Different organizations and authorities show different interests on water reuse.
- Consumers are reluctant to accept products irrigated by reclaimed water because of the lack of information.
- The cost of water reuse is not applicable in many cases in Greece.
- Participatory workshops, printed cross-thematic material, online information, production of digital information material such as e- learning project platform, audiovisual-video material, questionnaires etc, are some ways to inform on reclaimed water and its use and to enhance water reuse in agriculture.
- The RWG is willing to continue the effort and to form a Regional Action Plan that will be accepted and adopted by the authorities and key players of the water sector.

4.5 Braunschweig, Germany

About Germany, we may say that there is a need of:

- analysis of multi-resistant bacteria in reclaimed water of the Braunschweig water reuse scheme with respect to the public discussion about antibiotic-resistant microorganism;
- new sludge treatment (Thermal pressure hydrolysis) is supposed to decrease bacteria quantity of reclaimed water when reclaimed water is mixed with sludge during vegetation period -> pre-analysis of reclaimed water reference before commissioning of new sludge treatment;
- governing federal political party as well as the opposition support the concept of the Braunschweig water reuse scheme; both political parties had the possibility to get to know the features and benefits of the Braunschweig water reuse scheme regarding environment and agriculture; both political parties want to support the Braunschweig water reuse scheme regarding future challenges like multi-resistant bacteria and implementation of further treatment steps.
- regarding the Suwanu-Europe Regional Working Group (RWG) AV-BS used the already existing organisational infrastructure to present and implement results and proposal elaborated within Suwanu-Europe and to develop the Regional Action Plans.

4.6 Antwerp and Limburg, Belgium and Plovdiv, Bulgaria

In Belgium, Flanders, and in Bulgaria, after summarizing the working group's session's debates the following important topics were set:

- The issue with the Climate change necessitates wider communication with the farmers and agriculture sector as a whole, because it is assumed that the information channels are not very clear and reliable to their understanding for water reuse for irrigation.
- Creating Guidelines or Recommendations books for national and international practices and standards for the reuse of urban and industrial wastewater, proposing technical and administrative criteria to establish a legal framework for the reuse of specific wastewater, particularly in Bulgaria.
- Development of a project aiming an investigation on the suitability of the WWTP for wastewater reuse targets. In this way, information will be generated to clarify the possibilities for efficient and sustainable reuse of the waters.
- Water consumption for drinking, industrial and irrigational needs is expected to increase significantly in the next years. As a result of increasing demand, drought and pollution, the available fresh water will be very valuable resource.
- The main problems encountered in the management of water resources are the inadequacy of planning, monitoring, evaluation and control and poor coordination between organizations.
- Wastewater treatment plants should be treated as a source of raw materials, energy and water recovery.

4.7 Andalucia, Spain

In Spain, an intense engagement of key actors has been pursued during the first stages of SUWANU EUROPE project:

- The first contacts have been made through the organization of workshops, meetings, surveys, etc. creating a core group that will be actively involved in the project activities. More than 100 members have been contacted and provided feedback. The creation of this community will be very relevant for the future of water reuse in Andalusia and it provides a framework for a necessary dialogue considering the coming changes of the current situation.
- This is an opportunity for SUWANU EUROPE to have a real impact. The consortium can act as intermediary between different experts contacted and the stakeholders and become an effective instrument of knowledge exchange which takes into account the most recent events and solutions.
- With that purpose, Spanish RWG needs to extend the community and ensure that relevant actors are engaged. So far, the RWG has identified knowledge needs that will be included in the knowledge transfer activities of WP3 (workshops, on-line courses, etc.) such as the Risk Management Plan stated by the text of the EU regulation draft.
- Active engagement of actors is therefore crucial. Hence, at least one member of the core group will participate in one project meeting to get to know the results from other regions and promote the exchange of knowledge and experiences among the European regions.
- According to the consultancy agencies, attendees, there is an increase in the number of business investors that are applying for the development of “closed water cycle” projects with the purpose for irrigation and “waste to product” management.
- Practical lessons book is developed by the union of the municipalities summarizing the Water management important themes.