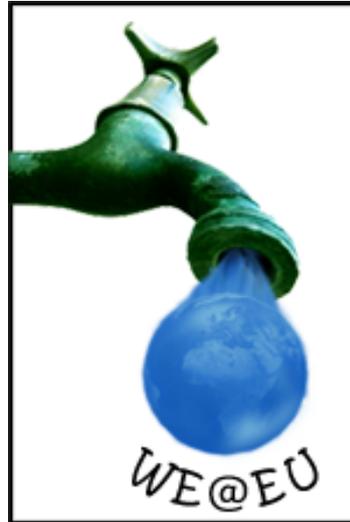


# WE@EU: WATER EFFICIENCY IN EUROPEAN URBAN AREAS

FP7 N° [320007]



## REPORT ON THE ACTIVITIES DEVELOPED FOR DYNAMIZATION OF THE ACTION PLAN

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Author: Dan Levanon, Uri Marchaim

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### Partners



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## List of partners

Participant n°	Name	Country
1 UNIZAR (Coordinator)	University of Zaragoza	Spain
2 EGMA	Campus for medicine and research in Galilee Association	Israel
3 MIGAL	MIGAL - Galilee Research Institute, LTD	Israel
4 PARAGON	Paragon Limited	Malta
5 PELEG-HAGALIL	Peleg - Hagalil	Israel
6 EA- ECOENTREPRISES	Ea eco-entreprises	France
7 OP	Opportunity Peterborough	UK
8 ZINNAE	Asoc. cluster urbano para el uso eficiente del agua	Spain
9 ARU	Anglia Ruskin University	UK



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## Executive Summary

This Work Package had the aims of developing and implementing the ideas and methodologies that were presented in the JAP and during the WE@EU project workshops and discussions. In order to implement the JAP (WP3) several activities were performed during the project, with further taking place at after closing to ensure project continuation. These activities can be found in appendix1. The WP4 has 3 main tasks that are presented in this deliverable:

### **Task 4.1 – Trans-regional Plan to facilitate staff exchanges and trainings**

### **Task 4.2 – Trans-regional Workshops**

### **Task 4.3 – Dynamisation of the Action Plan**

The work package summarises the activities already undertaken during the project to exchange knowledge and ideas, plans that were developed for the future during the workshops and meetings that took place in the WE@EU project, its legacy in the regions involved and in Europe.

The international contacts that were developed during the WE@EU project and planning a proposal for Marie Skłodowska-Curie action of exchanging researchers from universities and SMEs, is an essential output of the contacts developed between the members of the clusters. The connection of implementing the JAP are also the output of this deliverable, leading to some commercial contacts, as well as developing proposals that were submitted and the international network that was created. Those activities are the basis for the sustainability of the project and the water-clusters in the future.

The SMEs of the water-clusters in the different regions who participated in this project were an essential contributor to the success of its activity, and the involvement of the universities and the research institutes contributed to the creation of new ideas and new directions for development.

The contribution of the Scientific Advisory Board along the project succeeding to bring the clusters in contact with European Networks such as Wetsus, WssTP; EIP-Water; NETWERC H2O and more. It enables many of the partners to better understand the European approaches and needs, and direct their development in the direction of the Water Directive.



# 1. Preference

The **WE@EU** consortium was conceived with the objective of promoting multilevel and inter-regional cooperation in the field of urban-applied water efficiency. **Five European regions, Aragón (Spain), Provence Alps Côte d'Azur (France), Eastern Galilee (Israel), Malta and the East of England (UK) are** strongly involved in and committed to **water efficiency and** working together upon the discovery that they face similar problems in their cities that affect water availability, particularly in the context of climate change. The regions are confident that they can improve their performance in key aspects relating to **urban water management** by learning from experiences of others and pooling the related RD&I efforts, knowledge, expertise, experience and technology. A Joint Action Plan (JAP) is presented in WP3 which aims at achieving these desired objectives by **prioritising research and development activities in selected strategic lines and promoting collaboration amongst members of the consortium and other partners**. The actions included in the JAP are aimed at **improving and increasing strengths, reducing and eliminating weaknesses, mitigating and adapting to future threats and exploiting future opportunities** detected in the SWOT done for the benefit of all of the participating regions. The JAP includes guidelines to ensure the proposed activities/actions conducted address the real challenges of the stakeholders and the results are easily transferable between and beyond the regions. The WE@EU project aims to incorporate the JAP within the research strategies of the regions involved in WE@EU and eventually others. The structure of the JAP was designed not only to take into account the capacities and interests of the participants, but is intended to provide a comprehensive document that will be of interest to all relevant stakeholders in the field. Therefore, WP4 is designed to support the mutual learning process of the regional clusters and lay the groundwork for the successful realisation of the Joint Action Plan. Thus, the activities foreseen are mostly concentrated on the experiences of each of the involved regional water-clusters as well as the possibilities to learn and exchange these experiences amongst each other and take up lessons from good practices identified in Europe.

To achieve the objectives of the JAP, the consortium has established a series of strategic lines and WP4 developed the tasks according to these three main Strategic lines.

The strategic lines of the JAP are:

- 1. National initiatives to support capacity building**
- 2. Collaborative projects and RD&I projects**
- 3. Internationalisation**

This document presents how the JAP will be implemented and dynamised in the regions involved through the internationalisation of the WE@EU activities. It proposes the activities and the results that can be achieved through the implementation of the goals, by exchanging information, knowledge, technology and staff that will work together in order to improve the water efficiency in European urban areas. It summarises some of the activities already undertaken to achieve these goals.



## 2. Updated objectives of WP4

- To create a proposed plan for the implementation of the JAP strategic lines
- To create a framework for collaboration opportunities and new ideas
- To generate activity related to the dynamisation of the JAP



It is structured in an interconnected system that includes the following components:

### **3.1.1 Objectives according to the JAP strategic line - National initiatives to support capacity building**

- 3.1.1.1 Strengthening the regional water clusters and helping them to acquire knowledge and establish better connections within the Quadruple helix structure.
- 3.1.1.2 Setup and maintain a friendly ecosystem to promote the sustainable management and use of water resources at the regional and national level.
- 3.1.1.3 Strengthen the skills and competencies of entities for developing a sustainable environment, developing an ecosystem of innovation approach.
- 3.1.1.4 Boost cluster development activities to enhance knowledge and connections

### **3.1.2 Objectives according to the JAP strategic line - Collaborative projects and RD&I activities**

- 3.1.2.1 Foster high-level trans-national cooperation engaging “the quadruple helix”
- 3.1.2.2 Develop synergies in favouring innovative and cross-disciplinary approaches
- 3.1.2.3 Improving the innovation performance and competitiveness of the regions in water efficiency
- 3.1.2.4 Develop collaborative projects and research activities

### **3.1.3 Objectives according to the JAP strategic line - Internationalisation**

- 3.1.3.1 Support the international contacts and activities between the EU regions and the water clusters
- 3.1.3.2 Create new business opportunities and boost competitiveness (market penetration) through international networking
- 3.1.3.3 Attract foreign investments to support new funding
- 3.1.3.4 Improves profitability of innovation activities



## 3. Trans-regional Plan to facilitate staff exchanges and trainings

### 3.1. Tasks in connecting to the strategic line 1

We propose these methodologies and tools to support the development of a regional/national cluster that is combined of industries, research and academic institutes, regulators, region municipalities and supporting bodies. It is mainly aimed at Water-Technologies, to achieve the following goals:

- Develop a network based on ongoing exchange of data among the participants and other sources
- combine resources to meet the specifications for large projects required by the EU, national or regional bids
- Incorporate a discipline of innovation into the cluster

### 3.2. Introduction

The European Union is seeking to promote clusters of large companies, SMEs, researchers, and other economic actors to help foster innovation, bringing together a critical mass of commercial and R&D expertise and get maximum value from an investment.

It became clear to most regional authorities that there is a need to act effectively at the regional level in improving the prosperity of the region, with the ambition of raising the performance of the region to that of the centre of the country, or Europe. An important element of the strategy in developing the region is to promote technology transfer from its source of knowledge to the business sector by promoting links with business and by developing business skills among the region's most able young scientists and engineers. This can be any of the institutes organisations referenced in 4.1 There is a need to develop a network which will run a scheme to encourage interactions between the science base and business.

From numerous surveys<sup>1</sup> it was found that innovative companies grow faster than non-innovators, they are much more profitable and they sustain their high performance, demonstrating the importance of innovation as a driver of productivity at the regional level. The clusters network will also play its role in creating a climate of innovation. Based on the experience in Europe it was found that there is a need to strengthen the regional science and technology bases and to focus primarily on where the region can create the greatest difference in these sectors. This idea is leading to the creation of a cluster based on expertise in the water-tech sector to encourage greater business innovation and help to establish links that will help the region's economic development.

Clusters are geographic concentrations of interconnected companies, specialised suppliers, service providers, and associated institutions in a particular field that are present in the region. Clusters arise because they increase the productivity for the organisations present within the cluster. Cluster development initiatives are an important new direction in economic policy, building on earlier efforts in macroeconomic

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<sup>1</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/289234/bis-14-643-uk-innovation-survey-highly-innovative-firms-and-growth.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/289234/bis-14-643-uk-innovation-survey-highly-innovative-firms-and-growth.pdf)



stabilization, privatisation, and market opportunities and reducing general business costs. The development and upgrading of clusters is an important agenda for the EU and in the regions it aims to help develop inter-disciplinary clusters. Clusters foster high levels of productivity and innovation and lay out the foundation for competitive strategy and economic policy. Clusters affect competition in three broad ways:

- By increasing the productivity of companies based in the area;
- By driving the direction and speed of innovation;
- By stimulating the formation of new businesses within the cluster.

Geographic, cultural, and institutional proximity provides companies with special access, closer relationships, better information, powerful incentives and other advantages that are difficult to access externally. Competitive advantage lies increasingly in knowledge at the local level - knowledge, relationships, and motivation. - These are attributes that external rivals cannot replicate.

An important element of the strategy for developing water-technology clusters is to help businesses and organisations in this sector become more aware of international developments in technology and to help companies, particularly SMEs, to access those technologies and to establish technology partnerships with overseas firms. The aim is to establish a Cluster of research centres and several SMEs in the region that can act as leaders for establishing a more sophisticated and applied industry in water-technology for economic development that will share experience and knowledge with other partners. A cluster is a geographic concentration of companies and institutions with systemic relationships to one another based on joint interests and synergies. Clusters are a natural result of economic activity, and only occasionally a result of intervention. In remote regions because of the competition over limited resources, intervention may be a key to regional development and therefore the development of a cluster is not an easy task. It may be developed through a stage of developing a network in the region. A network can be defined as a collaborative structure among SME's.

Although the two terms - network and cluster - are sometimes used interchangeably, there are fundamental differences. Hard networks are closed organisations that generate external economies for members willing to share costs of resources, expertise, or information. Clusters derive external economies because the market delivers it to them as a result of the scale of demand. An open cluster-based organisation adds considerable value but is not essential.

Companies join hard networks only when particular circumstances prevail. These circumstances include common interests and even pre-existing interactions between the companies, trust, and the presence of a champion. In this part we are providing methodologies to build a sustainable cluster and innovation themed workshops for mutual training and knowledge exchange.

### 3.3. Impact of the clusters on regional level

The European Cluster Observatory estimates there are 2,000 "statistically significant" cluster groups of co-located industries and services, suggesting that 38% of the European workforce is employed by companies working in clusters. However, the definition of what precisely constitutes a 'cluster' can vary. Indeed, cluster policy approaches differ across the EU. In its 2008 Communication on clusters, the European Commission acknowledges that "one size does not fit all". Despite different approaches to supporting cluster development, clusters are fast becoming a popular means of



organising industries and can be a useful tool in revitalising flagging sectors, as well as offering a framework for policy developments in research and regional policy.

### 3.4. Quality of clusters

According to the European Commission, Europe does not lack clusters, but market fragmentation, weak industry-research linkages and insufficient cooperation within the EU mean that clusters do not always have the necessary critical mass and innovation capacity to be world class.

Striving for excellence has become the focus of cluster policy and may result in a more business-like approach to providing aid to existing clusters. Policymakers have come to accept that not all networks of businesses and researchers are equally worthy of support. The European Commission has indicated that it will allow market forces to kill off ineffective clusters, and that new, dynamic clusters will be best placed to survive, stating that "Clusters which are not working should not be kept artificially alive,". Such clusters should not become a channel for subsidies which would undermine competition and even the emergence of new competitive clusters.

Excellence should be at the Centre of policymaking when new cluster initiatives are being designed, and clusters must be based on knowledge hubs of international excellence and market foresight. "The challenge is to avoid a proliferation of cluster initiatives with little chance of long-term success," the Commission said in its 2008 communication on the matter.

### 3.5. The significance of the Quadruple Helix approach

The Quadruple Helix approach, developed further from the presentation by Henry Etzkowitz and Loet Leydesdorff, is based on the perspective of a University as a leader of the relationship between industry and government, to generate new knowledge, innovation and economic development. Innovation is understood as a result of a complex and dynamic process of experiences in the relationships between science and technology, research and development inside and through university, industry and government spheres, in a spiral of nonstop transitions.

The Triple Helix approach understands the interaction between the three helixes as a way to identify and deal with changes in the economic, institutional and academic world due a society organised in knowledge basis. These interactions occur on many levels and result in: 1) an internal transformation in each helix; 2) an influence from organisations of one sphere to the others; 3) the creation of new structures due to the overlap resulted by the interaction; and 4) a recursive effect among these three levels. Lately it is more and more emphasised to add the public (NGOs, consumers' organisations etc.) as an important component and therefore the Quadruple Helix is presented.

The networks create new dynamics of intentions, strategies and projects which add an important value in the organisation and harmonisation process in the existent infrastructure to reach targets. Each actor from a sphere keeps considerable autonomy, but simultaneously assumes new rules, new comprehension understanding and conformation of the economic dynamic.



### 3.6. How to best involve the regional partnerships? (Achieved in WP2)

- Create In-depth interviews of the active key-players on "One to One" basis to identify the common denominators that match the objectives
- Create a contact list of researchers, entrepreneurs and support bodies in the region.
- Sending communication stating the key information on the initiative of the trans-regional meetings. Establishing and invite the active key-players of the clusters for a work meeting.
- Conduct a series of group meetings to brainstorm new ideas and directions that align with the identified common denominators and the findings of the research
- Identify the active, innovative and well-known companies specialising in the water-tech sector in the region. In addition identify the young and new companies, start-ups, spin-off companies, incubators and technology parks.

### 3.7. Actions taken by the water-clusters of WE@EU to fulfil task 4.1

In addition to the international meetings and workshops that WE@EU organised during the project in which we succeeded in bringing together people from industries and researchers from the different regions, the partners decided to prepare a proposal for the purpose of international staff and researcher exchanges, by preparing a common proposal to be submitted to the Marie-Skłodowska Curie Call.

It will include: the trans-border exchange of staff researchers from universities, industrialists from SMEs, administrators and resource from the authorities that are involved in water regulation, and other partners regarding a common research issue to be developed, that will be decided by the partners, suggested by the SMEs involved.

#### Objectives

- Improve SME participation in public tenders, identification of funding opportunities (public and private funding) within different events organised by the partners
- 2 x International Cooperation Agreements
- Encourage (where applicable), joint meetings, visits and exchanges of researchers, engineers, technicians and other staff, including for training purposes;
- Encourage (where applicable), joint organisation of scientific seminars, conferences, symposia and workshops, as well as the participation of experts in those activities.

The different possibilities for developing the staff exchange are listed below:

We are examining the best Marie Skłodowska Curie calls in accordance with the requests of both SMEs that would like to participate and the researchers from academia. The following are options that were being explored:

#### WE@EU Secondment programme

The Marie Skłodowska-Curie Action (MSCA) has several types of calls, which could be relevant to the water-cluster. We do not refer to those that are directed towards Ph.D. and Post-Doc enrichment, mainly to ITN and RISE.



## RISE

The RISE scheme will promote international and inter-sector collaboration through research and innovation staff exchanges, and sharing of knowledge and ideas from research to market (and vice-versa) for the advancement of science and the development of innovation. It requests ONLY trans-sectoral visits (secondments) between academy and SMEs.

The scheme fosters a shared culture of research and innovation that welcomes and rewards creativity and entrepreneurship and helps to turn creative ideas into innovative products, services or processes.

RISE involves organisations from the academic and non-academic sectors (in particular SMEs), based in Europe (EU Member States and Associated Countries) and outside Europe (third countries).

Support is provided for the development of partnerships in the form of joint research and innovation activities between the participants. The organisations constituting the partnership contribute directly to the implementation of the joint research and innovation activities by seconding and/or hosting eligible staff members. Exchanges can be for both early-stage and experienced researchers' levels and can also include administrative, managerial and technical staff supporting the research and innovation activities of the proposal.

The project covers costs according to the month's that staff are on their secondment. This means that salaries are still paid by the employee and they get €4,500 per P-M (€2,000 for the secondment, €1,800 for experimental needs etc. and €700 as indirect costs to the institute). Trips must be at least for 1 week and at least 1 month per year per person!

It is very difficult to prepare the budget and organise the programme and therefore we expect a high success rate.

## European Training Networks (ITN-ETN)

The Innovative Training Networks (ITN) aims to train a new generation of creative, entrepreneurial and innovative early-stage researchers, able to face current and future challenges and to convert knowledge and ideas into products and services for economic and social benefit. ITN supports competitively selected joint research training and/or doctoral programmes, implemented by partnerships of universities, research institutions, research infrastructures, businesses, SMEs, and other socio-economic actors from different countries across Europe and beyond. Partnerships take the form of collaborative European Training Networks (ETN), European Industrial Doctorates (EID) or European Joint Doctorates (EJD).

ETNs are multi-partner research training networks and must be composed of a **minimum of three beneficiaries established in at least three different EU Member States or Associated Countries**. Above this minimum, the participation of other organisations, including international organisations and those from Third Countries, is possible under the conditions provided by the Horizon 2020 Rules for Participation. Although there is no pre-defined size for these multi-partner networks, **it is strongly recommended to keep the size of the consortium between 6 and 10 beneficiaries**. It is expected that beneficiaries will be drawn from both academic and non-academic sectors and that ETN proposals will offer inter-sectoral and interdisciplinary research training as well as high-quality supervision arrangements. This programme has an education focus - *Each beneficiary must recruit and host at least one ESR.*



The cost covers around €4210 per month for the secondee, €1,800 per month for the experiments and €1,200 as indirect costs. The idea is to do research. This programme is very competitive and the success rate of applications is low.

### **COFUND**

The COFUND scheme aims at stimulating regional, national or international programmes to foster excellence in researchers' training, mobility and career development, spreading the best practices of Marie Skłodowska-Curie actions. This will be achieved by co-funding new or existing regional, national, and international programmes to open up and provide for international, inter-sectoral and interdisciplinary research training, as well as transnational and cross-sectoral mobility of researchers at all stages of their career. The submission requires additional funding, mainly from national resources and according to the national priorities.

### **Horizon 2020**

This programme has several opportunities in which we are examining collaborative RIA as well as CSA projects on water issues, wastewater and innovation. Several projects were already submitted by the partners.

Some initial abstracts were already exchanged between the partners and some are discussed after the Final Conference in Brussels..



## 4. Trans-regional workshops

### 4.1. Task objectives in connecting to the strategic line 2 of the JAP

Workshops will be a basic tool for the collaboration amongst the teams involved in the project. Each region will host at least one trans-regional workshop where the local partners (and other regional agents not directly involved in the project) will present its region, with its strengths and its weaknesses, trying to generate synergies for collaborating with the other regions and project partners.

In this context, each region will be provided with budget for inviting representatives among important regional stakeholders to other region's trans-regional workshops whenever possible other workshops and project activities will take place at the same time.

The structure and agenda of each workshop will be developed by the local leader of the cluster and will be the collective, interest and objectives of its particular region. A plan with the workshops dates and agendas will be developed

The exchange of personnel and the execution of joint training amongst the involved regions will be promoted.

This task generated, and executed a plan that covered these offers and demands by:

- Connecting the companies and the teams involved in staff exchanges initiatives
- Providing support in the process for looking for funds for covering these exchanges
- Connecting and joining training necessities

### 4.2. Benefits of Trans-regional plan process

- Enhanced skills
- Improved self confidence
- Clearer understanding of capabilities
- Opportunity to talk about longer term issues leading to better communication and network opportunities
- Awareness of the company culture
- Satisfaction of helping others
- Better awareness about water management & technologies
- Enhance interpersonal skills which can be transferred post project
- Motivated employees
- Staff having increased ability to respond to change
- Pool of candidates for succession planning and resourcing
- Improved retention
- Attracts new employees
- Improved communications



#### 4.2.1. The particular goals of Trans regional Plan for Water-Technology Cluster

A trans-regional plan for developing a Water-Technology regional cluster is a means to break up rigid structures and to start to explore new opportunities, more flexible ways, to integrate all participants according to their qualifications and build a wide network. Clustering is not at all a new concept; it is just a different aspect in its application to regional-economic development promotion.

- To foster the personal development of the participating companies and researchers
- To exchange knowledge and experience
- To improve leadership capacities which will lead to higher involvement in the area
- To increase the percentage of innovative projects and products of the cluster
- Increase sales of the clusters' members
- To get to know another cluster's culture and other structures
- Penetrate new markets (export)
- To create benchmarking between the participating companies and in direct contacts with know-how from the RTD entities in the cluster and across-regions
- To extend networks
- New business as a spinoff of cluster activity
- Exchange of information among the participants
- Improving the awareness of importance of benefiting from research and development facilities, scientific infrastructures and human resources for further economic development, and promoting their joint use for collaborative RTD&I projects in the Water-Tech sector.

#### 4.2.2. Facilitated trans-regional groups to get involved

- The WE@EU consortium identified the demands and supplies of each cluster within each region.
- Trans-regional meetings will be one day events which will be organised by each partner in its region according to the time table of the projects' meetings.
- The partners from each region will act as the communication link between the cluster members and the WE@EU consortium.

#### 4.2.3. Content for trans-regional meeting

The aim of the proposed content at this section is also to support trans-regional meeting development. These actions need to target the three main objectives: Facilitating development of external economies, Promoting linkages between firms, and strengthening the local and international position within value chains by facilitating their interactions. Facilitated groups allow a number of people to participate in a learning group and to benefit simultaneously from the experience and expertise of the participants. The richness of the experience increases as each group participant brings personal experiences into the conversation.



The facilitator asks questions to keep the dialogue thought provoking and meaningful, shares their own personal experiences, provides feedback and serves as a sounding board.

The main question is how does the introduction of clusters into global value chains affect local upgrading strategies, especially regarding the fact the literature shows that passive external economies are more common than the various forms of joint action in all groups. It seems that joint actions require specific investments, and firms get involved in cooperation only if they have to face some external challenges like, for example, new competitors, an innovation to adopt or a new market to enter. The evidence above provides us a big challenge to achieve.

4.2.4. Promote specific programmes addressing the general public at a national level: Awareness programs, best practices organized in each region for dissemination



**Name of the awareness campaign:** "Catch the drop" by HSBC Program information

**Country:** Malta

**Implementation schedule:** In progress

Objective of the campaign: To raise awareness that saving water is a concern for us all and to show that one's behaviour may be adapted to achieve responsible and sustainable usage. Each one of us can be instrumental to help conserve such an indispensable resource.

**Name of the awareness campaign:** Plan Renove de productos ahorradores de agua (Plan for water devices renewal)

**Country:** Spain

**Implementation schedule:** 2016-2017

Objective of the campaign: Subsidise part of the installation of water saving toilets for households to incentivise investments of green sectors and boost water savings. See more information in annex 2.

**Name of the awareness campaign:** Love Every Drop  
<http://www.anglianwater.co.uk/about-us/love-every-drop.aspx>

**Country:** UK, Anglian Water

**Implementation schedule:** In progress

Objective of the campaign: Love Every Drop is Anglian Water's strategy to put water at the heart of a whole new way of living. Taken together, the 12 ambitious business goals they have set themselves as well as the commitments and measures that underpin them form their sustainability roadmap. To do this, they are working with everyone who influences water use in the East Anglia region – housing developers, retailers, manufacturers, government and customers. They want to learn as much as they can from the region and develop new ways to supply and use water sustainably. Results - - 20% of water consumption

International Conference on "Critical Issues in Water Policy and Technology in the 21<sup>st</sup> Century", during the WATEC Israel 2015

**Country:** Israel

**Implementation schedule:** 2015

One of the most significant challenges in the global water arena is the reduction of pressure on natural water resources, amongst other resources, caused by rapid population growth, climate change and increased industrial activity. It enable presenting and observing new technologies and smart water solutions which will contribute to the provision of almost two-thirds of the additional quantities of water required in future decades.

Bringing together Israeli & international business executives, water utility engineers, political decisions makers and leading researchers, WATEC 2015 was a premier showcase for the most advanced technologies and solutions from Israel and around the world.



#### 4.2.5. Creation of a Centre dedicated to innovation

##### **Eco-Innovation Centre UK (incubator)**

The Eco Innovation Centre is a bustling business hub located in the heart of Peterborough, providing serviced offices for virtual and physical business tenants, as well as offering high quality meeting and event space.

Managed by Opportunity Peterborough, the city's economic development company, the Eco Innovation Centre offers a professional, eco-friendly working environment for incubating and growing companies. Welcoming businesses of all sizes: from pre start-up and micro level through to SME or even large, established firms keen to expand their footprint into Peterborough.

Home to companies operating across all business sectors, not just within the environmental field, tenants at the Eco Innovation Centre include a mix of technology and design businesses, PR, communications, financial, recruitment and start-up companies.

<http://www.ecoinnovationcentre.com>

### 4.3. Activities undertaken in WE@EU regions to advance the implementation of the JAP in the future

#### 4.3.1. National and international initiatives to support capacity building and raise public awareness

- Bridging knowledge links and supporting growth between local actors
- Develop a community of actors in urban water management in each region, organisation of events (dissemination of best practices through communication (press releases, interviews, online platforms of best practices etc.).

#### **Zaragoza, Spain**

##### **Event**

*Regional Workshop Projects Showroom and Innovative water solutions offer and demand (03/2014)*

##### **Objectives**

- To present innovative initiatives of Aragon's business entities
- To facilitate a meeting point of innovative agents representing the triple helix
- To present the opportunities for innovation through public procurement

##### **Results/Lessons learned**

- 65 attendees from triple helix
- Public presentation of the preliminary results of innovation data of WE@EU-Region of Aragon.
- Public presentation of the Smart Specialisation strategy draft of Aragon.
- Public introduction of public procurement opportunities in H2020 and Water PPP project.
- Seven presentations of water innovation demands from public administrations.
- Seven presentations of water innovation offers from business entities.

##### **Event**



*Regional workshop for SWOT analysis (09/2014)*

**Objectives**

- To conduct a strategic analysis on the weaknesses, strengths, opportunities and threats following WE@EU project WP2

**Results/Lessons learned**

- Facilitate a networking environment for strategic analysis of the Regional Innovation Roadmap focused in the water sector.

**Event**

Regional conference (11/2014)

*“Towards a European Hub in innovative Water management”*

**Objectives**

- Involve more regional stakeholders in the cluster

**Results/Lessons learned**

- 52 participants
- Support engagement of local and regional authorities in the cluster international initiatives
- Key messages from WE@EU partners and of other regions at EU level to support WE@EU roadmap

**Event**

*Regional Dissemination Event (03/2015) on the World Water Day 2015*

**Objectives**

- Raise awareness of a specific topic of interest for the cluster on a key date for water sector. In 2015 we are focusing on water efficiency in the building industry.

**Results/Lessons learned**

- 40 stakeholders from business (both building and water industries). Participation of Zaragoza City Council and Regional water authority of Aragón

**Event**

*Regional matchmaking event business to academia (07/2015)*

**Objectives**

- Support the collaboration among R&D&I department from business entities with research groups from universities and institutions.

**Results/Lessons learned**

- 10 research groups participated in the event and presented the technological offer for the department of R&D&I of FCC Aqualia.

**Event**

*Regional seminar “Towards intelligent management of sewage discharges” (11/2015)*

**Objectives**

- Analyse the needs for the implementation of the current regulatory framework in relation to overflow sanitation systems in rainy weather.
- Present the results of the pilot in Zaragoza with effective management of municipal sanitation systems
- Apply of innovative solutions to urban water management.

**Results/Lessons learned**

- 90 stakeholders attended from business, research centres and public entities



**Event**

Regional workshop “*Collaborative innovation in the water sector: success stories and opportunities*” (03/2016) on Smagua 2016

**Objectives**

- Show the innovation actions carried out by companies in the framework of the project WE@EU (Water Efficiency in European Urban Areas)
- Expose the role protagonist of water clusters as a channel of communication and liaison between the different regions to share knowledge and improve the competitiveness of enterprises from innovation and sustainability.
- Search how to transfer the innovation ecosystem to the rural environment, exploring learning and achievements in the urban environment, with the support of the innovative public procurement.

**Results/Lessons learned**

- 32 stakeholders attended from business, research centres and public entities.

**Event**

Regional workshop “*Zinnae Innovation Committee: Opportunities in the agricultural sector*” (04/2016)

**Objectives**

- Identify priority initiatives and bank ideas linked to water and the environment
- Extend the project continuation to the water efficiency in rural areas

**Results/Lessons learned**

- 20 stakeholders attended from business, research centres and public entities.

**Event**

Regional workshop “*Water and Technology: Smart Basin, towards intelligent digital basin.*” (06/2016)

**Objectives**

- present the needs of digital transformation of water and opportunities for collaboration between ZINNAE and TECNARA (Aragon’s ICT cluster)
- consolidate an alliance that was signed in February 2016 by ZINNAE and TECNARA to identify collaborative projects between companies in the water sector and ICT companies
- provide ICT solutions for watershed management: Smart Basin

**Results/Lessons learned**

- 40 stakeholders attended from business, research centres and public entities.



**Aix en Provence, France****Event**

*“Innovative solutions for water efficiency in urban areas” (6/2014)*

**Objective**

- To present the water efficient R&D existing projects and look for future collaboration
- Gathering together the regional triple helix actors

**Results/ lessons learned**

- 17 innovative projects presented
- Number of attendees 32
- Representatives of triple helix: 50% business entities, 13% research entities, 37% public administrations
- Presentation of R&D projects, possible collaborations

**Event**

Conference *“Water resilience challenges in Mediterranean coast area” (12/2014)*

**Objectives**

- Reinforce links between Pôle Eau (Cluster), Polutec Sofia and research Laboratory LM2P2. The laboratory LM2P2 talked about their visit in Zaragoza (November 2014).
- To identify new existent projects: Modeling of Micro-Climatic comfort and urban area using raw water.

**Results/ Lessons learned**

- OEH Corsica (Hydraulic Equipment Office is interested in the results of WE@EU project.
- 42 Stakeholders from businesses, research centers, NGOs.

**Event**

*Regional conference « Water State of art in PACA region” (02/2015)*

**Objectives**

- To involve all actors in the water sector to exchange on specific topics such as: water efficiency management, possible regional cooperation

**Results/Lessons learned**

- 40 representatives of businesses, research and local authorities attended
- A list of actions to support the development of our regional water sector was prepared

**Event**

*Workshop “How should I position my innovation project within new European funding opportunities?” (09/2015)*

**Objective**

- Support SMEs to identify new innovation funding opportunities

**Results/ Lessons learned**

- Analysis of the potential funding opportunities adapted for SMEs innovative project ideas,
- Presentation of different innovation and environmental European project opportunities with some call examples (such as: HORIZON 2020, Life, EUROSTARS, SMEs Instrument),
- Analysis of different Horizon 2020 instruments: Research and Innovation Action (RIA), Innovation Action (IA), Coordination and Support action (CSA), Marie Skłodowska-Curie Curie Action (MSCA) Fast Track to Innovation (FTI).



- Presentation of National innovation funding opportunities (ANR projects- National Research Agency, FUI Projects – Collaborative & Research projects.
- 12 attendees had the opportunity to learn about the innovation funding opportunities.

#### Event

Side Event: “Water a new growth enabler” (10/2015)

#### Objective

- A joint network event specially dedicated to water enterprises for boosting future collaborative actions

#### Results:

- 66 attendees
- Presentations of water several innovative solutions and technologies
- Networking

#### Event

Mediterranean Conference “*Innovative Technologies at the Service of Urban Water Sustainable Management*”, Mediterranean Economic Week, Marseille France (11/2015).

#### Objectives

- Sharing experiences and promoting good practices of WE@EU project with the members of the Mediterranean Water Institute.

#### Results/Lessons learned

- Key messages from WE@EU were presented to the South Mediterranean Attendees.
- 40 representatives from different Mediterranean areas

#### Event

“Regional Meeting for Eco-Innovation and Public Procurement in PACA region” (01/2016)

#### Objective

- Matching public procurers with eco-enterprises (one of the five thematic showcases was water efficiency).

#### Results

- More than 120 participants,
- 27 éco-entreprises have presented their eco-innovative technologies,
- 70 public authorities were present.
- 4 Water SMEs showcased their solutions to attending potential public procurers.

#### Event

Regional Workshop “*The issues and the solutions of the water management in urban euro-Mediterranean areas*” & Hydrogaya (15 March & 25-26 May 2016)

#### Objectives

- To provide a basic overview of the Joint Action Plan in order to let them know its existence and strategic lines
- To plan a farther implementation of the JAP recommendations into the Regional Smart Specialisation Strategy (where water is actually missing)
- To communicate on WE@EU best practices with testimonials of the Ea eco-enterprises clusters members who participated to the project activities.

#### Results/ lessons learned

- 39 water stakeholders attended the event



**Valletta, Malta****Event***Malta water week (03/2015)***Objectives**

- Raise awareness and involve actors in the cluster development process

**Results/Lessons learned**

- The Conference included 29 Speakers (12 Local, 17 Foreign) and 91 persons attended. The attendees included Government Entities: Malta Resources Authority, Water Services Corporation, Sustainable Energy and Water Conservation Unit, Malta Enterprise-European Enterprise Network, Malta Life Sciences Park/Malta Council for Science and Technology, Eco-Gozo, Local Councils, Ministry for Sustainable Development, the Environment and Climate Change; entities from the Education/Research sector: Malta College of Arts Science and Technology, University of Malta, Anglia Ruskin University, MIGAL-Galilee Research Institute; University of Zaragoza; and other Local & European Entities & Networks : Malta Business Bureau, Malta Water Association, Malta Intelligent Energy Management Agency , European Parliament, European Commission, European Chemical Industry Council, Hungarian Development Bank, Ministry of Justice (Hungary), Zaragoza City Council, Regional Minister of Environment (Puglia); Executive Agency for Small and Medium-sized Enterprises (EASME); Climate-KIC; European Regional Research and Innovation Network; Anglian Water; Global Water Partnership-Mediterranean; European Investment Bank; as well as businesses from: Malta, Spain, Israel, France, Italy, Greece. The events which took place on the 26 March included an Investment Brokerage session (attendees 15); an EU Brokerage session (attendees 10); B2B (companies/entities 19) and Cluster Training, (attendees 31).

**Peterborough, UK****Event***Water Connect 2015 (07/2015)***Objectives**

- Identifying and exploring opportunities for collaboration to improve Research, Development and Innovation in the water sector

**Results/Lessons learned**

- Approximately 177 regional, national and international representatives from businesses, research, academia and local authorities attended
- Approximately 158 Private B2B meetings were scheduled, including delegates from France, India, Israel, Malta, The Netherlands and Spain
- Site Visits to some of the East of England's most pioneering and future-thinking locations, showcasing the regions commitment to water issues including the Future Business Centre, Cranfield Water Science Institute, Anglian Water and Bactest were also offered to attendees prior to the conference. As well as Discounted tickets to the [Institute of Water Annual Conference and Exhibition, 'Business in the New World; Innovation – Collaboration – Transformation'](#) 9<sup>th</sup> – 10<sup>th</sup> July 2015.



**Event**

*The Water Cluster – Future Collaborative Opportunities (11/2015)*

**Objectives**

- Designed for current members of The Water Cluster and organisations interested in current and future collaboration opportunities with WE@EU partners, with further involvement leading the direction of The Water Cluster's future strategy.
- Future evolution of The Water Cluster will be member led and during this workshop discussion took place on goals, strategies, awareness raising opportunities, regional water issues and potential collective efforts to improve the prominence of water on the global political agenda

**Results/Lessons learned**

- Approximately 30 representatives from businesses, SMEs and research organisations from the Cluster attended.
- A revised cluster and internationalisation strategy document was prepared and uploaded to The Water Cluster website.
- A draft version of the JAP was shared with attendees and WE@EU project deliverables discussed

**Galilee Israel,****Event**

*Water-cluster meeting (14/09/2014)*

**Objectives**

- To activate the companies, organisations and researchers of the Galilee Water Cluster and present the forthcoming activities at Zaragoza and Barcelona

**Results/Lessons learned**

- The meeting was attended by about 25 representatives from a variety of companies, academia and research centres.
- For this meeting we invited Mr. Pieter de Jong, from the Wetsus Centre of Excellence at Leeuwarden, the Netherlands, who is also a member of the advisory committee of the WE@EU project, to come to Israel ,present the Wetsus organisation and activities, and meet delegates from industries.
- Mrs. Adi Yefet from Israel's NewTech agency, of the Ministry of Economy attended to explain the Cleantech initiative, and the ministry's support to innovation projects that are developed in industries and research institutes.
- The audience asked Mr. de Jong and Mrs Yefet quite a few questions and some of them stayed after the meeting to speak with Mr de Jong.
- Companies and researchers were asked to announce quickly if they want to join the delegation to Zaragoza and Barcelona conference on November 3-6<sup>th</sup>.
- The next day Mr. de Jong visited the Amiad Filtration Systems industrial plant and several sites of the Peleg HaGalil Regional Company for Water supply and Sewage treatment. Some very interesting outcomes, as follow up of this visit are expected.

**Event**

*Study tour with delegates from Jordan and Palestine (13/06/2014)*

**Objectives**

- To disseminate the WE@EU activities to neighbouring countries

**Results/Lessons learned**

- We organised a workshop in which the Ambassador of the EU delegation to Israel participated with his staff. After the workshop we organised a tour of several locations.
- The tour regarding water issues included visiting MIGAL's laboratories and having discussions on possible collaboration in submitting a proposal to the EU Horizon 2020 Calls on "Climate action, environment, resource efficiency and raw materials" for the 2015 topics.
- This was followed by a travel to visit the MEKOROT Eshkol site and visit at Ofra-Aqua-Plants Ltd. at Zipori.
- Discussions were on desalination and possibilities to change the situation in the neighbouring countries – Palestine and Jordan.
- The delegates were very impressed with the strategy MEKOROT developed to raise public awareness on saving water, in particular how this topic was presented
- We travelled to Zipori to the Ofra Aqua Plant Ltd. and had extended dialogue with Mrs. Yael ben-Zvi, CEO of the company, mainly regarding possibilities to operate such solutions in the villages at Jordan and Palestine. As a result 2 proposals with those entities were developed.

### Event

*Workshop at Wageningen University, Netherlands (10-11/09/2015)*

#### Objectives

- To develop new and advanced proposals with colleagues from WE@EU and additional researchers in the water sector.

#### Result/Lessons learned

- The workshop included approximately 50 participants from universities, research institutes and SME's from the following countries: Israel, the Netherlands, Belgium, UK, Spain, Italy and Serbia.
- Wageningen University is a leading university in Europe in the field of the uses of water for agriculture, as well as in treating wastewater.
- The workshop succeeded in promoting scientific cooperation and innovative proposals (mainly Horizon 2020) and focused mainly on water and wastewater treatment.
- It was a very successful workshop and proposals are designed.

### Event

*Promoting contacts with JRC Water in Ispra, Italy (22/0/2015)*

#### Objectives

- To develop additional contacts at EU level with JRC
- Examine possible collaboration with the Precision Agriculture sector

#### Results/Lessons learned

- The mission of the **JRC's Institute for Environment and Sustainability (JRC-IES)** is to provide scientific and technical support to EU policies for the protection of the environment, and the more efficient and sustainable management of natural resources at global and continental scales.
- JRC-IES carries out research to understand, monitor and anticipate the complex interactions between human activity and the natural environment, in order to support the development and implementation of policies that protect the global environment and ensure that strategic resources (water, land, forests, food,



minerals) are managed in a more sustainable manner for the benefit of present and future generations, it was important to connect entities from the Galilee region and JRC.

- The visit of Prof Marchaim enabled further development of these contacts and a workshop of JRC will take place in the Galilee on December 16-18, with delegates from JRC, neighbouring countries and some western European countries to discuss water and environmental issues.

### **Event**

*WATEC Exhibitions and conferences, Israel (13-15 October 2015)*

### **Objectives**

- To enable the WE@EU delegations to meet companies and researchers from Israel, including the WE@EU water-cluster members.
- To develop collaborative research in-between the international cluster, as well as with other countries, especially with SMEs

### **Results/Lessons learned**

- WE@EU members were participating in the WATEC water fair that took place in Tel-Aviv, Israel, and had the chance for knowledge transfer.
- The WE@EU booth that was established as part of the exhibition was presenting the international cooperation of the project activity and its clusters. This demonstrates advanced dissemination of WE@EU project.
- The delegations of the member countries included several SME's from each cluster, who were able to examine new technologies and hear from a variety of differing delegates and expertise.
- The participants in the fair included a wide range of numerous experts, scientists and water companies from all over the world. It was excellent location and, and the logistics allowed for developing long term international contacts for future cooperation.
- The Galilee cluster delegation that attended the WE@EU water conference at Peterborough, UK on July 2015 made some important contacts with the British water sector that were further developed during WATEC. Due to these contacts, British companies were invited to participate in WATEC in Israel, and talks on cooperation are underway, as well as presenting a proposal to the British Council Institutional Links Call.



#### 4.3.2. Develop links with other clusters internationally focusing on similar or complementary topics

Partner	Cooperation with	Objectives
Éa éco-entreprises, FR	Pôle Eau, SWELIA, WSM cluster (Water Sensor Membranes)	Cooperation between 4 different entities to gather together 300 French water companies and research institutions under one initiative: France Water Team. It aims to create value from innovative collaborative projects in the water industry; To mutualise international activities. <a href="#">Link to web-site</a>
Éa éco-entreprises, FR	Capenergies	Ea éco-entreprises prepares a convention with CAPENERGIES cluster for assuring future cooperation on a water-energy NEXUS approach.
ZINNAE, ES	ICT, Logistics, Automotive & Food industry, Aeronautics, Healthcare	Seven clusters in Aragon share the same headquarters, based in the Chamber of Commerce. Synergies on cluster development and organisation, benchmarking and collaborative projects have emerged. Zinnae has signed a collaboration agreement with the ICT Aragon cluster (Tecnara) to enhance collaborative project on smart water management.
Zinnae and Anglia Ruskin University (Joint-venture on behalf of WE@EU consortium), ES & UK	Centro de Competencias del Agua	Foster partnership building and high-level trans-national cooperation between research-driven clusters and member SMEs as well as mutual learning between regional actors; Identify and share details of market trends, competing clusters and initiatives, as well as relative positioning of partnership clusters and regions and elements that could improve the coordination and cooperation of the partnership regions and SMEs; Improving coordination and cooperation in the domain of water efficiency and urban water management, identifying new opportunities for RDI projects and partnerships, as well as services that could support the delivery of these new innovation initiatives
Opportunity Peterborough and Anglia Ruskin University (Joint-venture), UK	The Water Cluster	<a href="#">The Water Cluster's</a> goals are to promote and encourage best practice amongst East of England and international partners in water innovation and efficiency; creating a network of parties from the commercial and academic communities. Water is not currently a priority on the UK political agenda and as the <a href="#">Water Connect 2015</a> conference revealed, the UK must change its attitude.
Opportunity Peterborough and Anglian Water (Joint-venture), UK	Water Innovation Network	The <a href="#">Water Innovation Network</a> (WIN) is a dynamic initiative designed to bring together the water supply chain and industry to find the solutions to transform today's water industry. It helps businesses and organisations from all



		sectors collaborate to drive innovation in the water industry.
The Water Cluster, Opportunity Peterborough and Anglia Ruskin University (Joint-venture), UK	European Strategic Cluster Partnership	Energy in Water (E'nW) is a <a href="#">European Strategic Cluster Partnership</a> (ESCP), comprising seven research driven clusters in five EU countries which aims to nurture and harness the growth and innovation potential of European SMEs operating across the 'Water-Energy Nexus'. The objective of the ESCP for Energy in Water is therefore to harness the growth and valorisation potential of new and existing businesses operating in the energy-water nexus and to create a common strategy between the partnership to drive the international competitiveness of the EU, developing solutions to global challenges.
Anglia Ruskin University and Opportunity Peterborough (on behalf of WE@EU consortium)	Centre of Excellence, Nevada/WaterStart	<a href="#">WaterStart</a> , previously The Nevada Centre of Excellence aims to make Nevada a global water innovation hub and portal for investment by leveraging the state's leadership and expertise in water. In addition to the geographical and economic benefits found in the State of Nevada, WaterStart offers public and provide partners with a platform for innovating the water industry with the core mission to create quality job growth and economic diversification in the region..
MIGAL	CTM/NETWORK H2O	Presentation of the cluster aims. This enabled the SMEs and researchers to further develop their contacts and involvement in the EU water agenda for better water utilisation. It also initiated additional activities such as MEKOROT's project by CTM.
MIGAL	Wetsus, Nederland	Peter de Jong presented Wetsus at the cluster meeting. This enabled the SMEs and researchers to further develop their contacts and involvement in the EU water agenda for better water utilisation.
MIGAL	JRC Ispra, Italy	JRC-IES carries out research to understand, monitor and anticipate the complex interactions between human activity and the natural environment it was important to connect entities from the Galilee and JRC. We developed a workshop of JRC in the Galilee on December 16-18 with delegates from JRC, neighbouring countries and western European countries to discuss water and environmental issues.
MIGAL	Wageningen University, Netherland	The workshop included approximately 50 participants from universities, research institutes and SME's from the following countries: Israel, the Netherlands, Belgium, UK, Spain, Italy and Serbia. The workshop succeeded in promoting scientific cooperation



		and innovative proposals focused mainly on the water and wastewater treatment.
CAMPUS	Jordanians and Palestinians	We organised a tour regarding water issues in Israel on June 2014 and had discussions on a possible collaboration in submitting a proposal to the EU Horizon 2020 Calls on “Climate action, environment, resource efficiency and raw materials” for the 2015 topics. This was followed by a travel to visit the MEKOROT Eshkol site and visit at Ofra-Aqua-Plants Ltd. at Zipori.

#### 4.3.3. Supporting water efficiency innovation with dedicated programmes & funding supports

This task describes the existing initiatives to support innovation technologies of water at SMEs as well as incentives or grants to support innovation. This was performed in order to enable the participants to initiate international contacts and go internationally.

##### **The Water Cluster: UK**

A network which provides a platform for bringing together a wide range of stakeholders, including academia, business, government, NGOs, and SMEs. The aim is to share ideas on the forum and encourage collaboration and the development of long-term partnerships, with the purpose of innovating and improving water efficiency and urban water management in the East of England.  
<http://www.thewatercluster.co.uk/>

##### **Water Innovation Network: UK**

Delivered in partnership between Opportunity Peterborough and Anglian Water, with aims to stimulate innovation in the supply chain through the creation of a water cluster; a national network of businesses, organisations and research institutions which operate in the water industry, providing a networking and collaboration platform to enable innovation and growth.  
<http://waterinnovation.net/>

**Country:** France

**Projects supported:** “Eon Motors Project”, “Innovsys”  
[website](#)

**Name of the initiative:** “une rivière, un territoire” Durance-Méditerranée by EDF

EDF is the main electric producer; he also supports the development of new innovation projects and promotes local know-hows.

##### **UK – other sources of funding and support**

[http://ww2.anglia.ac.uk/ruskin/en/home/microsites/low\\_carbon\\_keep/other\\_sources\\_of\\_funding.html](http://ww2.anglia.ac.uk/ruskin/en/home/microsites/low_carbon_keep/other_sources_of_funding.html)



### **Energy in Water ESCP (Anglia Ruskin University)**

Energy in Water (E'nW) is a European Strategic Cluster Partnership (ESCP), comprising seven research driven clusters in five EU countries which aims to nurture and harness the growth and innovation potential of European SMEs operating across the 'water-energy Nexus'. The ESCP will develop a common strategy for the partnership members to drive the international competitiveness of these European enterprises, developing solutions to global challenges and emerging market opportunities. This partnership will enable the participating clusters and regions to bring together knowledge and innovation potential by collaborating and mutually learning across trans-nationally sectors.

Country: Spain

### **Projects supported 2013-2016 to ZINNAE:**

"Test Bench of water saving products", "Sustainable management of the water cycle in low technified municipalities"; "Smart monitoring of urban discharges". See annex 3 information about the projects.

### **"National call to support collaborative projects of clusters "Agrupaciones Empresariales innovadoras"**

AEI is the national call that supports innovation through projects. The projects are based in small consortium within a single cluster or inter-cluster.

### **The NewTech Fund, Israel**

Mrs. Adi Yefet, from the Ministry of Economy of Israel presented to the Water Cluster the possibilities of receiving funding for innovative proposals from NewTech programme of the Ministry.

[Website](#)

### **The Watec Fund, Mekorot, Israel**

Mr. Sivan Bleich from Mekorot -the National Water Company of Israel presented to the Water Cluster the possibilities of receiving funding for innovative proposals from Mekorot. WaTech® extends different forms of assistance for advancing innovative technologies developed by start-ups and established companies. [Website](#)



**Local Enterprise Partnerships UK with innovation vouchers and other grant schemes such as the  
Low Carbon Innovation fund**

Funded by the European Regional Development Fund (ERDF) and the East of England Development Agency, the Low Carbon KEEP programme provides funding to support East of England businesses to innovate and grow through University partnerships, knowledge transfer and resource efficiency. By utilising funding to improve internal capabilities and implement a resource efficient approach to business through academic guidance, companies can increase profitability, reduce costs and develop new products or services.

The Low Carbon KEEP programme aims to support East of England businesses to innovate and grow through University partnerships and knowledge transfer. By using funding to improve internal capabilities and implement a resource-efficient approach to business through academic guidance, companies can increase profitability and competitiveness. Typical Low Carbon KEEP projects run for four to 11 months; however, the benefits of such collaborations far outlast the length of the project. Funded by the European Regional Development Fund (ERDF), the Low Carbon KEEP grant will cover 40% of eligible project costs as well as fund up to 40% of the costs of purchasing capital items, such as essential equipment or software, which are fundamental to the success of a Low Carbon KEEP project. The contribution expected from the participating business varies from project to project, but on average amounts to £20,000-£24,000 per year.

[http://ww2.anglia.ac.uk/ruskin/en/home/microsites/low\\_carbon\\_keep/for\\_businesses.html](http://ww2.anglia.ac.uk/ruskin/en/home/microsites/low_carbon_keep/for_businesses.html)

At the end of this document it is summarised the WE@EU workshops: Travel plan 2013-2016.



## 5. Collaborative trans-regional projects and R&D activities

### 5.1. Introduction

This section corresponds with the development of Task 4.3: Dynamization of the action plan of WE@EU Project

#### **Task Objectives**

- To provide contents to the internet resources used by the project through social media channels
- To effectively communicate the Joint Action Plan of the WE@EU project to the target groups.
- To increase the knowledge related to water management and exchange of experiences
- To communicate the project's goals, accomplishments and results.

Therefore, efforts concentrated on improving collaboration between SME/ACADEMIA to develop innovative solutions for water efficiency and Organization of B2B meetings during projects meetings/events

Events	Country	Number of B2B meetings organized	Results
General Assembly 07/2014	Aix en Provence, France	18	Altereo submitted an H2020 proposal with Paragon, but it was unsuccessful. H2020: Innovative Decision Support System for Water Industry.
Project meeting 11/2014	Zaragoza, Spain	22	LM2P2 and Unizar potential creation of new R&D programmes
Project meeting/Malta Water Week 03/2015	Valletta, Malta	19	Helio Pur Technologies & Paragon: discussions were held regarding a pilot site in Malta – Pilot site not found. Helio Pur Technologie keeps cooperating with Cognit from Zinnae Cluster They also exhibited on Zinnae stand during Smagua 2016.



Water Connect 2015 – 07/2015	Peterborough, UK	158	Potential creation of collaborative partnerships across the East of England, nationally and internationally. Interest in the new Future Business Centre – Peterborough
Project Meeting/ WATEC Exhibition 10/2015	Tel Aviv, Israel	150	Annex 1 lists the names and organisations that visited the WATEC booth and are interested in collaboration
Brussels Event, May 2015	Brussels, Belgium	15	Anglia Ruskin University (ESCP), UK and Alliance for Water Efficiency, USA currently discussing potential projects. Israel and Malta discussed cooperation

### Dynamisations of the JAP

MIGAL and CAMPUS are involved in developing further activities with European entities in order to develop collaborative projects in the water sector. Several attempts by the other WE@EU clusters' members were undertaken in order to exchange information and plan new, innovative products and methodologies on water issues. Using the opportunity of the secondment to other regions, the WE@EU members could both meet partners from other clusters who came to these meetings as well as the local clusters' members to see their current activities, facilities and discuss potential joint activities. Several project proposals were initiated as a result of those meetings and the travel of additional cluster members to other regions, and were submitted to different foundations (both Horizon 2020, national and bi-national foundations).

Using the internet as a key tool to achieve the dissemination of a variety of ideas and initiatives, we were actively pushing forward innovative ideas on the issues of water and wastewater utilisation, as well as in irrigation, water control systems and developing sensors for the water sector. In this way, the dynamization of the Joint Action Plan showed to be a fundamental base for the use of the resources that were provided by internet. In collaboration with WP7, this task distributed the internet resources used by the project around the website. A Marie Skłodowska-Curie proposal (RISE) is drafted that will involve several SMEs and companies in the different regions with the universities and research centres' researchers in order to examine innovative ideas and bring some of them into the market. This proposal will be submitted after the project's end.

#### **6.1 Building an international partners network in Water efficiency**



- Identification of international clusters and development of International Cooperation Agreements.

#### **International Cooperation Agreement - PERU**

Objective: The purpose of this International Cooperation Agreement (ICA) is to propose, facilitate and sustain knowledge and expertise transfer between the Centro de Competencias del Agua, Peru and Zinnae, Spain individually and on behalf of the EU FP7 funded project Water Efficiency in Urban Areas project and consortium (Grant no. 320007), hereafter "WE@EU". This is with a view of strengthening internationalisation of research, development and innovation in water efficiency and urban water management in areas such as (but not limited to) leakage detection and management; water-energy nexus; flood and drought risk management; water governance and behavioural change; climate change resilience; financing for innovation and decision support systems, smart monitoring and technology. We have developed 2 actions as result of this ICA:

- 1.- Participation in Expoagua Perú (Lima, 21-23 October 2015)
- 2.- Participation Peruvian delegation (Water Peruvian Cluster, SEDAPAL-public company that manages water in Lima and Water National Authority-ANA) in Smagua 2016 (Zaragoza, 8-11 March 2016) and participation in the workshop "Challenges of the management of water in Peru. "Exchange experiences Aragón-regions Peru" (Zaragoza, 8 March 2016).

Next action: participation in second edition Expoagua Perú (Lima, 19-21 October 2016)



### International Cooperation Agreement - USA

Objective: The purpose of this International Cooperation Agreement (ICA) is to propose, facilitate and sustain knowledge and expertise transfer between the Nevada Centre of Excellence (now known as WaterStart), USA and The Water Cluster, UK individually and on behalf of the EU FP7 funded project Water Efficiency in Urban Areas project and consortium (Grant no. 320007), hereafter "WE@EU". This is with a view of strengthening internationalisation of research, development and innovation in water efficiency and urban water management in areas such as (but not limited to) leakage detection and management; water-energy nexus; flood and drought risk management; water governance and behavioural change; climate change resilience; financing for innovation and decision support systems, smart monitoring and technology. We have developed 2 actions as result of this ICA:

- 1.- Request for Information presents the requirements for Nevada's interest in receiving offers and suggestions for advancing water technology development and management. Designed to leverage existing regional assets and support the implementation of water technology solutions for communities. Providing funding on a competitive basis to support economic development, foster job creation, and attract private investment in Nevada. Funds awarded may be used to support the following activities: • testing and evaluation of new technologies • demonstration projects • technical support with research and development • big data computing • legal and regulatory assistance • talent development • marketing and networking • pursuit of third-party funding opportunities (September 2015).
- 2.- Promoting the state's commitment to innovation in water technology by announcing and disseminating Round 4 of a competitive matching grant process for water tech companies, with individual grants ranging from \$25,000-\$100,000 (June 2016).



## 5.2. Participating in international fairs, conference, exhibitions

### List of up-coming international water events

Date	Type of Event	Link
23-24 March 2015	4th European Water Conference 2015	<a href="http://ec.europa.eu/environment/water/2015conference/index_en.htm">http://ec.europa.eu/environment/water/2015conference/index_en.htm</a>
14-17 June 2015	EXPOAPA Romanian Water Fair	<a href="http://www.araexpoapa.ro/exhibition-3">http://www.araexpoapa.ro/exhibition-3</a>
6-9 July 2015	Water Connect 2015	<a href="https://www.b2match.eu/waterconnect2015">https://www.b2match.eu/waterconnect2015</a>
9 July 2015	Water Conference at Cambridge	<a href="https://www.instituteofwater.org.uk/event-s-info/247/">https://www.instituteofwater.org.uk/event-s-info/247/</a>
10-14 July 2015	Singapore International Water Week	<a href="http://www.eip-water.eu/singapore-international-water-week-0">http://www.eip-water.eu/singapore-international-water-week-0</a>
23-24 November 2015	WssTP Brokerage and Working Groups Event	<a href="http://wsstp.eu/">http://wsstp.eu/</a>
27-29 July 2016	4 <sup>th</sup> IAHR Europe Congress, Belgium	<a href="http://www.iahr2016.ulg.ac.be/">http://www.iahr2016.ulg.ac.be/</a>
4-8 August 2015	EWRI Watershed Management Conference, US	<a href="http://watershedmanagementconference.org/">http://watershedmanagementconference.org/</a>
13-15 October 2015	WATEC Israel , Tel Aviv	<a href="http://watec-israel.com/cms/WATEC-Israel-2015-Exhibitors-Profile">http://watec-israel.com/cms/WATEC-Israel-2015-Exhibitors-Profile</a>
8-11 March 2016	Smagua 2016, Zaragoza	<a href="http://www.feriazaragoza.es/Archivos/Descargas/Smagua/2016/Bolet%C3%ADn%20Postferia%20SMAGUA.16.pdf">http://www.feriazaragoza.es/Archivos/Descargas/Smagua/2016/Bolet%C3%ADn%20Postferia%20SMAGUA.16.pdf</a>
27-28 May	Hydrogaya Fair 2016	<a href="http://www.hydrogaia-expo.com/">http://www.hydrogaia-expo.com/</a>



### 5.3. Enhancing participation and competitiveness of the cluster members in Horizon 2020 and other EU programme

#### List of up-coming calls

N/EU//OTHER	Programme/Topic	Call
Horizon2020	Draft Work Programme <b>2016-2017</b> Societal Challenge 5 'Climate action, environment, resource efficiency and raw materials' Version of 1/04/2015	<a href="#">CIRC-2-2016/2017: Water in the context of the circular economy</a>
Horizon2020	Draft Work Programme <b>2016-2017</b> Societal Challenge 5 'Climate action, environment, resource efficiency and raw materials' Version of 1/04/2015	<a href="#">CIRC-2-2016: Demonstrating the potential of efficient nutrient recovery from water</a>
Horizon2020	Draft Work Programme <b>2016-2017</b> Societal Challenge 5 'Climate action, environment, resource efficiency and raw materials' Version of 1/04/2015	<a href="#">CIRC-2-2017: Towards the next generation of water systems and services– large scale demonstration projects</a>
Horizon2020	<b>Prof Litaor-MIGAL:</b> Phosphorus Capture Recycling and Utilization for Sustainable Agriculture Using (Al/Fe)/ Organic Composite Water Treatment Residuals. This proposal will be a collaboration of some of the partners with the coordination of Wageningen University.	<a href="#">CIRC-2-2016: Demonstrating the potential of efficient nutrient recovery from water</a>



## 5.4. Benchmarking - Learning from other clusters

## List of potential clusters to learn from:

Units/Cluster + web link	Contact person	Mail	Country
<a href="#">WaTech Mekorot</a>	Yossi Yaacoby	<a href="mailto:yyaacoby@MEKOROT.CO.IL">yyaacoby@MEKOROT.CO.IL</a>	Israel
Netwerc H2O	Richard Elelman	<a href="mailto:Mail.ctm@ctm.com.es">Mail.ctm@ctm.com.es</a>	EU
<a href="#">CTM Centre Tecnològic</a>	Richard Elelman	<a href="mailto:Mail.ctm@ctm.com.es">Mail.ctm@ctm.com.es</a>	Spain
<a href="#">WISE</a>		<a href="http://community.eea.europa.eu/">http://community.eea.europa.eu/</a>	EU
<a href="#">Lancaster Environment centre</a>	Mark Bacon	<a href="mailto:m.bacon@lancaster.ac.uk">m.bacon@lancaster.ac.uk</a>	UK
<a href="#">Centre for Sustainable Agriculture</a>	Ian Dodd	<a href="mailto:i.dodd@lancaster.ac.uk">i.dodd@lancaster.ac.uk</a>	UK
<a href="#">Centre for Sustainable Water Management</a>	Phil Haygarth	<a href="mailto:p.haygarth@lancaster.ac.uk">p.haygarth@lancaster.ac.uk</a>	UK
<a href="#">Environmental Sustainability Knowledge Transfer Network</a>	Jonathan Abra	<a href="mailto:Jonathan.abra@ktn-uk.org">Jonathan.abra@ktn-uk.org</a>	UK
<a href="#">NIREAS - IWRC</a>	Konstantinos Kostarelos	<a href="mailto:dino@ucy.ac.cy">dino@ucy.ac.cy</a>	Cyprus
<a href="#">IMIDA Murcia Region Institute of Agri-Food Research and Development</a>	Dr. Juan Gabriel Perez-Perez	<a href="mailto:Juang.perez@carm.es">Juang.perez@carm.es</a>	Spain
<a href="#">Catalan Water Partnership</a>	Xavier Amores	<a href="mailto:xavier.amores@cwpcat.cat">xavier.amores@cwpcat.cat</a>	Spain
<a href="#">Water Alliance</a>	Bart Volkers	<a href="mailto:b.volkers@wateralliance.nl">b.volkers@wateralliance.nl</a>	Netherlands



5.5. Participation in EU boards for public policy related water - To influence by the WE@EU activities and also to get update by the EU policy

#### List of EU water boards

Acronym	Full name+ Web link
WFD	<a href="#">EU Water Framework Directive</a>
EIP	<a href="#">Commission Communication on the European Innovation Partnership (EIP) on Water adopted Market Place</a>
WISE	<a href="#">The water information system for Europe</a>
netwerch2o	<a href="#">Network for water in European Regions and cities</a>
JRC-IES	<a href="#">Institute for Environment and Sustainability</a>
CTM	<a href="#">CTM Centre Tecnològic</a>
CIS	<a href="#">Common Implementation Strategy</a>
ERRIN Water Group	<a href="#">European Region Research and Innovation Association</a>

5.6. Creation of events with ANGLES & Spin- off companies/new business/young companies

Spin-of company	Field of expertise	Country	Contact details
GEEZAR soluciones SL	Monitoring	Spain	<a href="mailto:info@geezar.es">info@geezar.es</a>
GEOSPATIUMLAB S.L.	Software developments	Spain	<a href="mailto:info@geoslab.com">info@geoslab.com</a>
Saturas, Israel	Precision Irrigation	Israel	<a href="http://www.saturas-ag.com">http://www.saturas-ag.com</a>



## Annex 1: List of contacts during the WATEC 2015 Exhibition

Name	Person	Web-site	Remarks
Galilee International Management Institute	Ms. Liz Shani Project Developer Director Agriculture & Environment Training Centre	<a href="http://www.galilcol.ac.il">www.galilcol.ac.il</a>	
Safewater Fraunhofer-Iosb	Project coordinator team	Safewater-project.eu	
Ronit Talor – Law Office	Intellectual property Biogaz-International project		Owner of international initiative for BIOGAZ and WATER PURIFICATION Interests in Israeli technologies for third countries in the area of water purification for drinking
E.ELGRESSY LTD. Environment Technologies	Inbal Levavi Environmental Specialist	<a href="http://www.elgressy-international.com">www.elgressy-international.com</a>	Oil pollution in ground water, heavy metals, everything with Electric charge or positive or negative
Fairfax county Economic development authority	Nadav Zohar	<a href="http://www.fairfaxcountyeda.org">www.fairfaxcountyeda.org</a>	Helping to companies to get into the USA market
Bagheera capital ltd.	Ian Taylor Director business development	<a href="mailto:iantaylor99@gmail.com">iantaylor99@gmail.com</a>	Interests in the Galilee Water Cluster
MAKBI	Ing. Carlos Watemala	WWW.MAKBI.COM	Interests in STURAS
Triem	Dr Michal Volkin	<a href="mailto:mwolkim@mmm.com">mwolkim@mmm.com</a>	Interests in Giora Rytwo
Geo Danya -	Zohar Arzi Site engineer	<a href="http://www.geodanya.co.il">www.geodanya.co.il</a>	Interests in Giora Rytwo & Iggy Litaor
Tsolutions	Sara Lekach	<a href="http://www.tsolutions.co.il">www.tsolutions.co.il</a>	
Greenlane	Natan Barak Co-funder	<a href="http://www.greenlane.co.il">www.greenlane.co.il</a>	Interests in Water purification



AQUABELL A Organic Solutions	Bella Ohana Ph.D.	<a href="http://www.aquabellaorganics.com">www.aquabellaorganics.com</a>	Interests in fish pool and water pool
University of Miskolc – Hungary, Faculty of Earth Science and Engineering	Tamas Madarasz Ph.D.	<a href="http://www.hidrotanszek.hu">www.hidrotanszek.hu</a>	Interests in cooperation in projects
AALBORG UNIVERSITY Denmark	Prof Morten Lykkegaard Christenes	<a href="http://www.bio.aau.dk">www.bio.aau.dk</a>	Interests in cooperation in projects
ASK – Beijing – China	Lois Wang		Looking for technologies and solutions in water
SHENG ENTERPRISES	Jenny Raichel	<a href="http://www.sheng-cn.com.cn">www.sheng-cn.com.cn</a>	Dealing with technological cooperation's between Chinese companies and Israeli companies
A.Y.S Everything Green LTD	Halfon Ofir		Water treatment which rise the oxygen level – for Sewage treatment/ fish pools Looking for academic cooperation
China Israel Cooperation & Investment Consultant	Andre Yip Consulting Group		Looking for investment in products after stage 1. Looking for agricultural guidance, for third countries
Genis & Genius	Roy Genis	<a href="http://www.genis-genius.com">www.genis-genius.com</a>	Helping with investments and entrance to the Chinese market – in the water technologies field
Sunshine Ventures ltd	Yaakov Alan		Looking for coal main technologies and agriculture
BERMAD Water Control Solutions	Eyal Geller Product Manager Zvi Vaingertan – CTO	<a href="http://www.bermad.com">www.bermad.com</a>	Looking for participating in EU projects with MIGAL Looking for solutions in water systems at "cold countries" like Canada
MTR Wireless communications ltd.	Oren Arazi Business Development Manger	<a href="http://www.mtr-wireless.com">www.mtr-wireless.com</a>	Remote Reading for gaz, water, electricity
Kore-Israel	Dborah Schabes	<a href="mailto:debras@koril.org">debras@koril.org</a>	Looking for cooperation



Industrial R&D FOUNDATION	Israel Manager		
Ofer Preiss	RD&I Pichincha county-Ecuador		Looking for agricultural guides
EWRE Haifa – Israel	Hagit Viner Dr Jacob Ben-Shabat		They have a lots of projects with the EU  CO2 , drainage, lowering ground water
MAAGAN FILTRATION Pure Innovation-Clear Solutions	Shira Gur-Reznik PhD	<a href="http://www.maaganfiltration.com">www.maaganfiltration.com</a>	Strat-up
UOG Universal Oil& Gas	Joshua Beagelman	<a href="http://www.universaloilgas.com">www.universaloilgas.com</a>	
Innovation and cooperation with France	Anne Baer France Embassy		Can help with: Partner search Pilot sites
University of Ben-Gurion	Itzik litbak		Revolutionary irrigating method



## Annex 2: Plan for water devices renewal

In Aragón, according to data from the Aragonese Institute for statistics, there are more than 790,000 homes and more than 540,000 households. More than 735,000 of these houses predate 1996. The toilets Park in Aragon is very aged and the updating to more efficient (and modern?) equipment would achieve savings of more than 30% of household water bills. Zinnae has worked during 2015 and 2016 on the launch of a renew toilet plan, with models of toilets that are more efficient. The preparation of the renew toilet plan has been met with the support of the Department of economy, industry and employment of the Government of Aragon.

Actions that Zinnae has developed during 2015 and 2016:

1. Dialogue between manufacturers and installers for the joint renew toilet plan
2. Elaboration of a protocol of operation of the renew toilet plan
3. Calculation of the cost of management of renew toilet plan
4. Calculation of the cost of development software tool
5. Design of the creativity of advertising campaign
6. Development software tool for the management of the plan
7. Database installers and businesses.
8. Agreement participation of leading manufacturers

During 2016 Zinnae will keep working to launch the renew toilet plan in 2017 in Aragon with the objective of changing 3.000 equipment.



## Annex 3: Spanish National call to support collaborative projects of clusters

The projects are based in a consortium within a single cluster or inter-cluster to enhance innovation collaborative projects with the participation of the business sector research centres, and the collaboration and support of public entities. Zinnae has developed three projects according to the JAP strategic line “Collaborative projects and RD&I activities”:

### **Project 1: “Test Bench of water saving products”**

At present, there is a lack of information, surveys and methodologies for analysing the performance of water saving devices in real environments. The project test bench enables a move to a legislative framework from the launching of an open innovation space for the evaluation of water saving devices, with the involvement of manufacturers, installers and users. The project has enabled verification of the resulting savings in water and in the associated energy, and in addition it has been possible to extract valuable information about each of the actors involved. This information is related to the tested product for improving it.

#### Development of works

The test bench for water-saving products is based on the launching of an Open Innovation Space focused on the innovation of products linked to the efficient use of water, based on the Living Lab researching concept. This methodology is based on the performance of innovation activities led by the needs and restrictions from the communities benefitting from the results. In the Zinnae test bench for water-saving products the following actors have been considered: manufacturers, distributors, installers, regional and municipal government, public building manager, homeowner, constructor, building owners.

The pilot phase of the project has consisted of the selection of a sample of dwellings for the evaluation of this product: water-saving toilets. For continuous monitoring, a unique water consumption meter has been designed. This device can store flow data and analyse consumer standards. This data, together with surveys of the dwellings have enabled the collection of valuable information for the participating companies (installer and manufacturer) such as:

- Installed products assessment.
- Information about the pattern of use of devices and water saving (and associated energy) reached with the introduction of saving devices.
- Information about the return on equity for the homes of the saving products introduction, including an assessment of the associated costs and benefits.

#### Toilet's test bench results:

The data obtained in the toilet's test bench during the year 2014-15 has enabled a comparison of the performance of toilets with discharging capacities up to 10l (the great majority of toilets installed today) against ecological toilets with a discharging capacity of 2, 4-6 litres (independent dual-flush depending on the kind of use). From this comparison it can be seen that the toilet's replacement for the sample dwellings enables a reduction of the daily consumption per home, consumption per person and so the annual consumption. This reduction is outstanding because it's equivalent to 31% of the old consumption. However, the financial analysis of the toilet's substitution provides a negative profit: despite the water consumption relevance, the reduced cost of the water leads to extended period for recovering the investment.



The results reached enable validation of the "test bench for water-saving products from Zinnae" as a tool for the evaluation, improvement and development of new products linked to the use of water (taps and showers). Testing these types of products (that use hot water) would be especially relevant because of the potential for energy savings with its associated cost.

Partners: Zinnae, two businesses (Alfredo Sajuán & Jacob Delafon España) and a Research Centre (Universidad de Zaragoza).

Financial backer: Ministerio de Industria, Energía y Turismo (Spanish Ministry of Industry)

### **Project 2: "Sustainable management of the water cycle in low technified municipalities"**

A big part of the national territory, like many European regions is composed by small urban areas where the control and water management is performed with little financial, human and technical resource. For approaching this problem, the project designed a smart and integral management toll based on a modular solution. This solution improves the efficiency and sustainability in the use of water in rural areas.

#### Development of works

The project Sustainable Management of the Integral Water Cycle in Number of Modernized Urban Areas started in 2014 for developing an efficient water management software tool in towns currently experiencing difficulties through a lack of financial, human and technical resources. It's the first time such a product is developed by integrating the users' point of view in the design phase.

For this purpose, about twenty interviews with the local governments from municipalities belonging to the Ebro river basin were conducted. The municipality sizes ranged from less than 50 to more the 2,000 inhabitants. The purpose of the interviews was collecting the needs to be fulfilled by the tool. Many management scenarios were found, ranging from the volunteer management led by the municipality inhabitants, municipal integrated management and sporadic externalised management. The ideal scenario for the platform implementation is an association of municipalities.

The needs met by the management tools are:

1. Upstream supply: tank levels monitoring, pumping and regulatory requirements.
2. Distribution network: leakage checking.
3. Quality of the water supply and sewage service: compliance with regulatory requirements.
4. Supply and sewage cost control: from the simplification of the billing process and better understanding of the municipal water service's cost.
5. Communication: monitoring and communication towards supra-municipal agents, responsible for the integral water cycle users.

The main benefits offered by the proposed solution are:

1. Cost saving: water and associated energy saving, increased efficiency in supplier management, human resources and materials for the municipal service.
2. Security of supply: supplied water quantity and quality's integral monitoring and therefore higher quality municipal water service,
3. Legal compliance: facilitate the regulatory compliance requirements
4. Decision support: more and better information, organized for meeting the municipality needs. It allows prioritizing service improvement actions.

The platform allows efficient water cycle management and considers all the parties, from users to the supra-municipal monitoring. Therefore, it contributes to the sustainable development of the municipalities implementing this system.

Partners: Zinnae, two businesses (Cognit & Zeta Amatea) and a Research Centre (Universidad de Zaragoza).



Financial backer: Ministerio de Industria, Energía y Turismo (Spanish Ministry of Industry)

### **Project 3: “Smart monitoring of urban discharges”**

The project started in 2014 with an exhaustive discussion about the existing regulations, parameters and technology for the draining point monitoring. Furthermore, we have focused in the analysis of the technology related to biosensors as pathogen detector device in the environment, the project's innovative side. When it came to the legislative framework analysis in Spain, the entry into force of the Real Decreto 1290/2012 was a clear turning point in the regulatory framework. The Ministry of Agriculture, Food and Environment modified the regulation of the Public Water Domain, from which a legal framework was created related to the overflowing of the sanitation systems when rainy weather. The RD1290/2012 establishes the requirement of the overflowing point list for the holders of industrial discharges and the holders of urban discharges with a population bigger than 2000 equivalent inhabitants. Also, it is considered the provision of overflowing quantification systems.

#### Development of works

The solution proposed by PROMOVER focuses on the relief quantification system, conducting the monitoring of a point in the city of Zaragoza, from discharge duration, frequency, quantity and quality control based on the following parameters:

- Temperature gradient measurement for the discharge duration and frequency measurement and as a water quality characterization parameter.
- Level measurement and flow estimation from the control section.
- Turbidity measurement for suspended particulates estimation.

The possibility to correlate quality parameters opens the possibility of a broader vision about the condition of the receiving environment. Additionally, it is required to look for some rationality in the variables and the equipment to use for getting a smart control system (and thus low cost). Both working lines have been identified as a continuation of the PROMOVER project.

#### Living lab in the city

Within the framework of the Research Project PROMO-VER (Smart monitoring project of discharges from the sewer network) funded by the Ministry of Industry, Energy and Tourism, a range of sensors was set up in a relief camera belonging to the sewer network of Zaragoza. In the project, led by Escuela Politécnica de La Almunia (EUPLA also included ECOCIUDAD Zaragoza, S.A.U. (municipal society responsible for city's network management), the ZINNAE Cluster (Urban cluster for the efficient use of water) and the societies AQUARA, Aqualogy and Alphasip.

The deployment of the sensors was led by personnel from Escuela Politécnica de La Almunia supported by Ecociudad Zaragoza, municipal society for the management of the city's sewer and supervised by the Drainage Management from the society Aqualogy. The camera is located in Plaza Carlos V in Zaragoza and alleviates to the Huerva River the discharges from the sewer system that exceed the capacity of the network. These surpluses are originated when heavy rain occurs. The monitoring system is pioneer in Aragón and has been designed and implemented in EUPLA.

This system sends real time information about the relevant hydraulic variables (such as flows and dumping's length) and about water quality. The measures of the sensors are kept in real time. With the results taken from the project, we expect to know and properly evaluate the impacts produced on the environment for the alleviations originated in case of heavy rains.

Partners: Zinnae, two business (Alphasip and Aquara), a public company (Ecociudad Zaragoza) and a research centre (Escuela Universitaria Politécnica de la Almunia).

Financial backer: Ministerio de Industria, Energía y Turismo (Spanish Ministry of Industry).



## Annex 4: WE@EU Workshops: Travel Plan 2013-2016

### Background

The Region of Knowledge (RoK) programme is aimed at building a European network of water-clusters and building bridges between the research community, industry and authorities. In general, clusters are entities with small infrastructures but a lot of companies (most of them SMEs), public bodies and research centres associated.

The main objective of the WE@EU project is to advance the involvement of additional SMEs, water authorities, and researchers, in order to achieve the objectives mentioned in the proposal.

In the grant agreement, it is stated that WE@EU must “**Promote international cooperation**”: *WE@EU will identify and coordinate joint initiatives among the participating regions and also third countries. Initiatives will include, for instance, capacity building; promotion of benchmarking and harmonization of water-efficiency products and services; by multilateral, bilateral and regional dialogues; cooperation programmes; or trade visits, fairs, negotiations and establishment of trade agreements.*

By bringing to WE@EU workshops some key person from the regions in order to discuss new possibilities, initiate new projects and meet entities in the regions that are part of WE@EU we are creating the framework and infrastructure for future collaboration and establishing the ERA interaction.

Success of the clusters is in providing them with solutions to their problems and new business opportunities. Thus, the project's travel plan included the participation of WE@EU cluster members as a natural way for increasing the cooperation among the different regions. WE@EU workshops have been outstanding scenarios for developing others events such as trans-regional workshops, international dialogues, conferences, B2B sessions and WE@EU visibility in key water events across Europe.



## WE@EU Workshops as a whole

The following Workshops have taken place, covering several tasks of the work plan of WE@Eu as planned in the grant agreement:

WORKSHOP	WORK PACKAGE	TASKS	DATE	VENUE
A.	WP1	1.2	Zaragoza, Spain, July 2nd-3rd 2013	Spain
B.	WP4, WP6	4.2, 6.1, 6.3	Valleta, Malta. March 25th-27th 2015	Malta
C.	WP1, WP2, WP3, WP4, WP6	1.2, 2.2, 3.1, 4.2, 6.2	Aix-en-Provence, France. July 2nd- 3rd 2014	France
D.	WP3, WP4, WP6	3.1, 4.2, 6.2	Zaragoza, Spain. November 3rd-4th 2014	Spain
E.	WP1, WP4, WP5, WP6	1.2, 4.2, 5.2, 6.2	Peterborough, United Kingdom. July 6-8th 2015	UK
F.	WP3, WP4, WP6	3.2, 4.2, 6.2	Tel Aviv, Israel. October 13 <sup>th</sup> -15 <sup>th</sup> 2015	Israel
G.	WP3	3.3	Cambridge (UK), November 25 <sup>th</sup> 2015 Zaragoza (Spain), March 8 <sup>th</sup> – 10 <sup>th</sup> 2016 Kiryat-Shmona (Israel), March 14 <sup>th</sup> 2016 Aix-en-Provence (France); March 15 <sup>th</sup> 2016 Malta, May 3 <sup>rd</sup> 2016	5 regions
H.	WP5, WP7	5.2, 7.2.2	Brussels, Belgium. May 17-19 <sup>th</sup> 2016	Brussels
I.	WP1	1.2, 7.2.2	Zaragoza, Spain. June 15 <sup>th</sup> -16 <sup>th</sup> 2016	Spain

The coming sections summarized the participants on each workshop including WE@EU partners from Clusters and their cluster members.



## Zaragoza, Spain (2013)

Meeting: WE@EU Workshop A (Kick off Meeting)

Leading partner: UNIZAR

Dates: November, 2nd-3rd 2013

Corresponding partner	Organisation and name	Activities
UNIZAR	F. Javier Zarazaga-Soria Covadonga Fernández	Organizing – Leading Consortium Meeting
EGMA	Uri Marchaim	Consortium Meeting
MIGAL	Dan Levanon	Consortium Meeting
PARAGON	Anton Theuma Mauro Sammut	Consortium Meeting
PELEG-HAGALIL	Edi Shosev	Consortium Meeting
EA ECOENTREPRISES	Christelle Maffre Munier Cédric	Consortium Meeting
OP	Sarah Weaving Gareth Jones	Consortium Meeting
ZINNAE	M <sup>a</sup> Luisa Fernández Virginia Gómez	Organizing – Leading Partner. Consortium Meeting
ARU	Candice Howarth	Consortium Meeting

## Aix-en-Provence, France (2014)

Meeting: WE@EU Workshop C

Leading partner: EA-Ecoentreprises

Dates: July, 2nd-3rd 2014

Corresponding partner	Organisation and name	Activities
UNIZAR	F. Javier Zarazaga-Soria	Assembly, B2B
EGMA	Uri Marchaim	Assembly, B2B
MIGAL	Dan Levanon Aharon Valency (Drainage Authority)	Assembly, B2B Advisory Committee
PARAGON	Anton Theuma Sara Meli	Assembly, B2B, Technical Visits
PELEG-HAGALIL	Edi Shosev	Assembly, B2B, Technical Visits
EA ECOENTREPRISES	Christian Laplaud Martine Didier Lounis Mebarek Garance Muraille Hadrien Michel Nicolas Roche (LM2P2) Jean-François (LOSETALTEREO) Grégory MAURIN (ALTEREO)	Assembly, B2Bs, Site Visits



	Franck Sanfilippo (SCP) Marc Brihiez (AX'EAU) Laurent Sohier (Heliopur Technologies)	
OP	Katie Hiscock Nilam Patel	Assembly, B2Bs, Site Visits
ZINNAE	M <sup>a</sup> Luisa Fernández Clara Presa Paola Del Chicca (COGNIT NRG) Marta Gracia (Grupo Verne) Joaquín Murría (Ingeobras)	Assembly, B2B, Technical Visits
ARU	Michael Green	Assembly, B2Bs, Site Visits

## Zaragoza - Barcelona, Spain (2014)

Meeting: WE@EU Workshop D  
Leading partner: ZINNAE, UNIZAR  
Dates: November, 2nd-3rd 2014

Corresponding partner	Organisation and name	Activities
UNIZAR	F. Javier Zarazaga-Soria Covadonga Fernández Miguel Usón	Organizing, Consortium Meeting, B2B, Public Event, Technical visits, Paralell Event in Barcelona EIP-Water Conference
EGMA	Uri Marchaim	Consortium Meeting
MIGAL	Dan Levanom Smadar Dahan Sivan Bleich (Mekorot)	Consortium Meeting Technical visits B2B
PARAGON	Anton Theuma Sara McGuire nee Meli	Consortium Meeting, B2B, Public Event, Technical visits, Parallel Event in Barcelona EIP-Water Conference
PELEG-HAGALIL	Edi Shosev	Consortium Meeting
EA ECOENTREPRISES	Christelle Maffre Hélène Theveneau Pauline Daniau (Syntea) Javier Esgueva (Syntea) Jean Henry Ferasse (LM2P2)	Consortium Meeting, B2Bs, Public Event, Technical Visits, Parallel EVENT IN Barcelona EIP-Water Conference.
OP	Katie Hiscock	Consortium Meeting, B2B, Public Event, Technical visits, Parallel Event in



		Barcelona EIP-Water Conference
ZINNAE	M <sup>a</sup> Luisa Fernández Clara Presa	Organizing, Consortium Meeting, B2B, Public Event, Technical visits, Paralell Event in Barcelona EIP-Water Conference
ARU	Michael Green	Consortium Meeting, B2B, Public Event, Technical visits, Parallel Event in Barcelona EIP-Water Conference

## Valleta, Malta (2015)

Meeting: WE@EU Workshop B  
 Leading partner: Paragon Europe  
 Dates: March 25th-27th 2015

Corresponding partner	Organisation and name	Activities
UNIZAR	F.J. López	Consortium Meeting, Conference, Training workshops, B2B, Technical Visits
EGMA	Uri Marchaim	Consortium Meeting
MIGAL	Dan Levanon Iggy Litaor	Consortium Meeting Conference, Training workshops,
PARAGON	Anton Theuma Sara McGuire nee Meli	Organizing, Consortium Meeting, Conference, Training workshops, B2B, Technical Visits
PELEG-HAGALIL	Edi Shosev	Consortium Meeting
EA ECOENTREPRISES	Christelle Maffre Felicien Poncelet (INNOVERTIS) Guillaume Vanot (Lyveo) Lurent Sohier, (Helio Pur Technologies) Jacqueline Gailo (GERME) Julie Paume (GERME)	Consortium Meeting, Conference, Training workshops, Cluster Trainings, B2Bs
OP	Katie Hiscock Amrit Rai Ben Tam (Anglian Water)	Consortium Meeting, Conference, Training workshops, Cluster Trainings, B2Bs
ZINNAE	Clara Presa Joaquín Murría (Ingeobras)	Consortium Meeting, Conference, Training workshops, Cluster Trainings



	Javier Celma (Ayuntamiento de Zaragoza) Ángel Martínez (GEEZAR Soluciones)	
ARU	Michael Green	Consortium Meeting, Conference, Training workshops, Cluster Trainings, B2Bs

## Peterborough, UK (2015)

Meeting: WE@EU Workshop E

Leading partner: Opportunity Peterborough, Anglia Ruskin University

Dates: July 6-8th 2015

Corresponding partner	Organisation and name	Activities
UNIZAR	F. Javier Zarazaga-Soria Pilar García Navarro	Consortium Meeting – Assembly, B2B, Conference
EGMA	Uri Marchaim	Consortium Meeting
MIGAL	Dan Levanon Smadar Dahan Iggy Litaor Giora Rytwo Rina Shahar (Amiad)	Consortium Meeting Consortium Meeting Assembly, B2B, Conference Assembly, B2B
PARAGON	Sara McGuire nee Meli	Consortium Meeting – Assembly, B2B, Conference
PELEG-HAGALIL	Edi Shosev Sivan Bleich (Mekorot) Edvah Zach-Maor (Amiad)	Consortium Meeting Assembly, B2B Assembly, B2B
EA ECOENTREPRISES	Christelle Maffre	Consortium Meeting – Assembly, B2B, Conference
OP	Katie Hiscock Amrit Rai Samantha Demaio Nilam Patel Richard Elelman (CTM - Eurecat; WE@EU Advisory Board) Pieter de Jong (Wetsus; WE@EU Advisory Board) Gilles Neuveu (International Office for Water; WE@EU Advisory Board) Ashley Roe (British Water)	Organizing, Consortium Meeting – Assembly, B2B, Conference



ZINNAE	M <sup>a</sup> Luisa Fernández Sara Espuelas (AREX)	Consortium Meeting – Assembly, B2B, Conference
ARU	Michael Green Aled Jones	Organizing, Consortium Meeting – Assembly, B2B, Conference

## Israel, October 2015

Meeting: WE@EU Workshop F

Leading partner: Opportunity Peterborough, Anglia Ruskin University

Dates: October 13<sup>th</sup>-15<sup>th</sup> 2015

<b>Corresponding partner</b>	<b>Organisation and name</b>	<b>Activities</b>
UNIZAR	Ruben Béjar	Consortium Meeting, Conference
EGMA	Uri Marchaim	Organizing, Consortium Meeting, Conference
MIGAL	Dan Levanon Smadar Dahan + 25 Galilee Cluster members	Organizing, Consortium Meeting, Conference
PARAGON	Sara McGuire nee Meli Maurice Rizzo (Eco-Sol) Juan Jose Bonello (MCAST) George Mantas (AquaBioTech) Kirsten Cutajar Miller (NexiaBT)	Consortium Meeting, Water exhibition, Conference, B2B, Technical Visits
PELEG-HAGALIL	Edi Shosev	Consortium Meeting, Conference
EA ECOENTREPRISES	Cristina Casian Christelle Maffre Laurent Depraz (Imageau) Felicien Poncelet (Innovertis) Rachid Mouflih (Hemera Innovation) Frédéric Pelladeau (Altereo)	Consortium Meeting, Water exhibition, Conference, B2B, Technical Visits
OP	Katie Hiscock James Phillips	Consortium Meeting, Water exhibition, Conference, B2B, Technical Visits
ZINNAE	Clara Presa Eva Martínez (FCC Aqualia) Alberto López (Feria de Zaragoza)	Consortium Meeting; Water exhibition; Conference; B2B; Technical Visits



	Jorge Esteban (Feria de Zaragoza) Fermín Orna (Grupo Verne)	
ARU	Michael Green	Consortium Meeting, Water exhibition, Conference, B2B, Technical Visits

## Brussels, Belgium (2016)

Meeting: WE@EU Workshop H

Leading partner: ZINNAE, AREX, OP, ARU

Dates: May 17-19<sup>th</sup> 2016

Corresponding partner	Organisation and name	Activities
UNIZAR	F. Javier Zarazaga-Soria	Final dissemination Event, International Dialogue with ICA partners, Consortium Meeting
EGMA	Uri Marchaim	Final dissemination Event, International Dialogue with ICA partners, Consortium Meeting
MIGAL	Dan Levanon Aharon Valency (Drainage Authority)	Final dissemination Event, International Dialogue with ICA partners, Consortium Meeting
PARAGON	Anton Theuma Sara McGuire nee Meli Manuel Sapiano (SEWCU) Edwin Ward	Final dissemination Event, International Dialogue with ICA partners, Consortium Meeting
PELEG-HAGALIL	-	
EA ECOENTREPRISES	Cristina Casian Christian Pietri	Final dissemination Event, International Dialogue with ICA partners, Consortium Meeting
OP	Katie Hiscock James Phillips Steve Bowyer Mary Ann Dickinson (Alliance for Water Efficiency; WE@EU Advisory Board) Richard Elelman (CTM - Eurecat; WE@EU Advisory Board)	Final dissemination Event, International Dialogue with ICA partners, Consortium Meeting
ZINNAE	M <sup>a</sup> Luisa Fernández Clara Presa Sara Espuelas (AREX)	Final dissemination Event, International Dialogue with ICA partners, Consortium Meeting



	Alicia Minaya (CCA – Peru; WE@EU Advisory Board and ICA)	
ARU	Michael Green Aled Jones	Final dissemination Event, International Dialogue with ICA partners, Consortium Meeting

## Zaragoza, Spain (2016)

Meeting: WE@EU Workshop I

Leading partner: UNIZAR, ZINNAE

Dates: June 15<sup>th</sup>-16<sup>th</sup> 2016

Corresponding partner	Organisation and name	Activities
UNIZAR	F. Javier Zarazaga – Soria Covadonga Fernández	Consortium Meeting
EGMA	Uri Marchaim	Consortium Meeting
MIGAL	Dan Levanon	Consortium Meeting
PARAGON	Oronzo Daloso	Consortium Meeting
PELEG-HAGALIL	-	
EA ECOENTREPRISES	Cristina Casian	Consortium Meeting
OP	Katie Hiscock	
ZINNAE	M <sup>a</sup> Luisa Fernández Clara Presa	Consortium Meeting
ARU	-	



## Partners



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