SWAMP
SMART WATER MANAGEMENT PLATFORM

Project n°: 777112

WP6

D6.8 Intermediate Dissemination and Communication Activity Report

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Participant no.	Participant organisation name	Part. short name	Country
1 (European Coord.)	Teknologian tutkimuskeskus VTT	VTT	FI
2	Intercrop	ICRO	ES
3	University of Bologna	UBO	IT
4	Consorzio di Bonifica dell'Emilia Centrale	CBEC	IT
5	Quaternium	QUAT	ES
6 (Brazilian Coord.)	Federal University of ABC	ABC	BR
7	Centro Universitário da FEI	FEI	BR
8	Federal University of Pernambuco	UFPE	BR
9	LeverTech Tecnologia Sustentável	LEV	BR
10	Brazilian Agricultural Research Corporation	EMBR	BR

Document revision history

Date	Issue	Author/Editor/Contributor	Summary of main changes
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13 November 2019	0.3	Carlos Kamienski (UFABC)	First complete version

Internal review history

Date	Reviewer	Summary of comments

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Abbreviations

ICT	Information and Communication Technologies
IoT	Internet of Things
KPI	Key Performance Indicator
SWAMP	Smart Water Management Platform

Executive Summary

SWAMP (Smart Water Management Platform) is a Europe-Brazil cooperation project aiming at developing Internet of Things (IoT) based methods and approaches for smart water management in the precision irrigation domain and to pilot the approaches in four places, two pilots in Europe (Italy and Spain) and two pilots in Brazil. SWAMP aims at improving precision irrigation by increasing the awareness of the condition of the crop, by monitoring the field based on crop status (size, growing phase), soil conditions and environment (e.g., weather forecast) and to adjust the irrigation prescription map accordingly. The smart water management pilots aim at guaranteeing that technological components are flexible enough to adapt to different contexts and to be replicable in different locations and settings. The same underlying SWAMP platform can be customized to different pilots considering different countries, climates, soils, and crops.

This document reports dissemination and communication activities developed by the SWAMP members during the second year of the project, between November 2018 and October 2019. These activities have been guided by the SWAMP Dissemination [1] and Communication [2] Plans. It also activities planned from November 2019 on and accepted papers.

During the second year of the project most activities involved the use the knowledge and experience obtained in the first year in the development of platform, devices, irrigation and water distribution models, and management systems. First and foremost, these activities focused on implementing all technological components into the SWAMP pilots. The project members did a remarkable effort in making available to the general public the choices, insights and achievements of the second year that are presented in the following subsections. Within dissemination management activities, the editorial plan developed in the first year has helped partners to focus on particular subjects worth publishing in journal and conferences.

Due to the very nature of the project that allies key ICT technologies with important societal challenges in agriculture, the SWAMP project continued to cause a positive repercussion within the different stakeholders interested in the project, as well as it received a significant coverage by the traditional media channels.

An important point to highlight is that SWAMP members belonging to different partner institutions have been working together toward the development of dissemination and communication activities.

1. Introduction

1.1. Purpose and Context of this Deliverable

The primary objective of the SWAMP (Smart Water Management Platform) project is to develop IoT (Internet of Things) based methods and approaches for smart water management in the precision irrigation domain and to pilot the approaches in four places, two pilots in Europe (Italy and Spain) and two pilots in Brazil. The key challenges faced by SWAMP are:

- Automating advanced platforms and integrating different technologies and solutions;
- Reducing effort in software development by exploiting IoT, big data, cloud and artificial intelligence;
- Integrating heterogeneous sensors (also drones) for precision irrigation;
- Providing flexibility and adaptability to different contexts and locations.

SWAMP aims at improving precision irrigation by increasing the awareness of the condition of the crop, by monitoring the field based on crop status (size, growing phase), soil conditions and environment (e.g., weather forecast) and to adjust the irrigation prescription map accordingly. The smart water management pilots aim at guaranteeing that technological components are flexible enough to adapt to different contexts and to be replicable in different locations and settings. The same underlying SWAMP platform can be customized to different pilots considering different countries, climates, soils, and crops.

The present document reports the dissemination and communication activities developed by the SWAMP member during the second year of the project, between November 2018 and October 2019. These activities have been guided by the SWAMP Dissemination Plan (Deliverable D6.1 [1]) and SWAMP Communication Plan (Deliverable D6.2 [2]).

1.2. Scope of this Deliverable

This document reports dissemination and communication activities undertaken by SWAMP members during the second year of the project, as well as spontaneous media coverage. It also reports news about the project before its starting date, as well as includes activities that ware planned up to October 2018 and accepted papers.

1.3. Deliverable Structure

The remainder of this document is organized into five chapters, following the same structure used for the first year report [3].

- Chapter 2 (Dissemination Activities: SWAMP Year #2) reports dissemination activities during the second year of the project, which includes papers, posters, workshops and community/clustering activities.
- Chapter 3 (Communication Activities: SWAMP Year #2) reports communication activities during the second year of the project, which includes news, talks, panels, etc.
- Chapter 4 (Online Communication Channels) reports the use and access of online communication channels, such as the SWAMP website and the Twitter account.
- Chapter 5 (Key Performance Indicators (KPI)), reports a comparison of numbers achieved in the second year of the project against the numbers planned for the whole project duration.
- Chapter 6 (Final Remarks) presents some final thoughts regarding dissemination and communication activities.

2. Dissemination Activities: SWAMP Year #2

During the second year of the project, partners started to harvest the effort undertaken in the first year so that the number of publications and other related activities increased. The experience gained throughout two years of running the project generated knowledge that is worth making public. The editorial plan for dissemination management has helped team members to focus on the important issues that must be brought to the general public, both in the academic and professional worlds.

An important point to highlight is that SWAMP members belonging to different partner institutions have been working together in the development of dissemination activities, which may be observed in the author list in this section.

2.1. Journal Papers

During the second year of the project, four papers has been published in journals and magazines, as depicted by TABLE 1. Two of them are written in Portuguese and therefore they have a higher impact in communication and dissemination of the achievements of the SWAMP project to farmers and government authorities in Brazil. Also, two journal papers are currently under review (TABLE 2) and two other papers are under development to be submitted soon (TABLE 3). It is worth remarking that a paper published by SWAMP members in the Sensors journal (number 2 in the table) has being causing a considerable impact in the scientific community. Published in January 2019, up to the October 2019, 22 citations were reported by Google Scholar, 9 by Web of Science and 10 by Scopus[1].

TABLE 1: JOURNAL PAPERS - PUBLISHED

#	Title	Authors & Affiliation	Journal	Issue (Vol., N.)	Year	Publisher	DOI	Target Audience
1	SWAMP: a Platform for IoT-based Precision Agriculture (in Portuguese: SWAMP: uma plataforma para irrigação de precisão baseada na Internet das Coisas)	Carlos Kamienski (UFABC) Marcos Visoli (Embrapa)	Fonte	Ed. 20	2018 (Dec)	PRODENGE		ICT and IoT Practitioners Farmers Government Authorities
2	Smart Water Management Platform: IoT-Based Precision Irrigation for Agriculture	Carlos Kamienski (UFABC) Juha-Pekka Soininen (VTT)	Sensors	v. 19	2019 (Jan)	MDPI	10.3390/s19020276	IoT Scientific Community

[1] https://www.mdpi.com/1424-8220/19/2/276

		Markus Taumberger (VTT) Ramide Dantas (UFPE) Tullio Salmon Cinotti (UNIBO) Rodrigo Filev Maia (FEI) André Torre Neto (Embrapa)						
3	Internet of Things boots Irrigation in Agriculture (in Portuguese: A Internet das Coisas impulsiona a Irrigação na Agricultura)	Carlos Kamienski (UFABC) Ramide Dantas (UFPE) Rodrigo Filev Maia (FEI)	Computação Brasil	v. 40	2019 (Jul)	SBC (Brazilian Computer Society)		ICT and IoT Practitioners Farmers Government Authorities IoT Scientific Community
4	Building the Semantic Web of Things through a Dynamic Ontology	Francesco Antoniazzi (ARCES-UNIBO) Fabio Viola (INFN-Bologna)	IEEEE IoT Journal	Not available yet	2019	IEEE	10.1109/JIOT.2019.2939882	IoT Scientific Community

TABLE 2: JOURNAL PAPERS – UNDER REVIEW

#	Title	Authors & Affiliation	Journal	Publisher	Target Audience	Note
1	Advancing IoT-based Smart Irrigation	Rodrigo Togneri (UFABC), Carlos Kamienski (UFABC), Ramide Dantas (UFPE), Ronaldo Prati (UFABC), Attilio Toscano (UNIBO), Juha-Pekka Soininen (VTT), Tullio Salmon Cinotti (UNIBO)	IoT Magazine	IEEE	IoT Practitioners	Second version submitting after receiving a major revision

2	Architecting and Deploying IoT Smart Applications: A Performance-Oriented Approach	Ivan Zyrianoff (UFABC), Alexandre Heideker (UFABC), Dener Silva (UFABC), João H. Kleinschmidt (UFABC), Juha-Pekka Soininen (VTT), Tullio Salmon Cinotti (UNIBO), Carlos Kamienski (UFABC)	Sensors	MDPI	IoT Scientific Community IoT Practitioners	First version submitted.

TABLE 3: JOURNAL PAPERS – UNDER DEVELOPMENT

#	Title	Authors & Affiliation	Journal	Publisher	Target Audience	Note
1	Analysis of the variables that affect the intention to adopt Precision Agriculture for smart water management in Agriculture 4.0 context	Sergio Monteleone (FEI), Edmilson Moraes (FEI), Rodrigo Filev Maia (FEI), Plinio Aquino (FEI), Kari Kolehmainen (VTT), Juha-Pekka Soininen (VTT), Carlos Kamienski (UFABC), Tullio Salmon Cinotti (UNIBO), Alessio Domeneghetti (UNIBO)	Sensors	MDPI	IoT Scientific Community	To be submitted until Dec 15th
2	Handling Heterogeneity in an Internet of Things Platform for Smart Water Management in Agriculture	Rodrigo Filev Maia (FEI), Ronaldo Prati (UFABC), Guilherme Lopes (FEI), Kari Kolehmainen (VTT), Cristiano Aguzzi (UNIBO), Luiz Bittencourt (Unicamp), Carlos Kamienski (UFABC)	TBD	TBD	IoT Scientific Community	To be submitted in 2020

2.2. Conference Papers

Since the path for publishing papers in conferences is shorter compared to journal, SWAMP members manage to publish 11 papers in important conferences during the second year of the project, as listed in TABLE 4. Also, two papers have been accepted for conferences, as listed in

TABLE 5.

TABLE 4: CONFERENCE PAPERS – PUBLISHED

#	Conference	Venue	Date	Subject or Title	Authors	Participants	Note
1	FRUCT 23 - International Workshop on advances in IoT based Methods for Smart Water Distribution and	Bologna, Italy	13-16 November 2018	Soil water balance model CRITERIA-1D in SWAMP Project: Proof of Concept	Giulia Villani, Paolo Castaldi, Attilio Toscano, Camilla Stanghellini and Tullio Salmon Cinotti		Target: IoT scientific community

	Management in Agriculture (IMSA18)						
2	FRUCT 23 - International Workshop on advances in IoT based Methods for Smart Water Distribution and Management in Agriculture (IMSA18)	Bologna, Italy	13-16 November 2018	Control Methods in Automated Gravity Irrigation Systems: a review	C. Bragalli, L. Zingali, A. Domeneghetti, A. Brath		Target: IoT scientific community
3	FRUCT 23 - International Workshop on advances in IoT based Methods for Smart Water Distribution and Management in Agriculture (IMSA18)	Bologna, Italy	13-16 November 2018	Scalability of an Internet of Things Platform for Smart Water Management for Agriculture	I. Zyrianoff, A. Heideker, D. Silva, C. Kamienski	Ivan Zyrianoff	Target: IoT scientific community
4	FRUCT 24	Moscow, Russia	8-12 April 2019	Mapping the NGSI-LD Context Model on Top of a SPARQL Event Processing Architecture: Implementation Guidelines	Viola, Fabio; Antoniazzi, Francesco; Aguzzi, Cristiano; Kamienski, Carlos; Roffia, Luca	Luca Roffia	Target: IoT scientific community
5	IEEE Global IoT Summit 2019	Aarhus (Denmark)	17 - 21 June. 2019	Analysis of the variables that affect the intention to adopt Precision Agriculture for smart water management in Agriculture 4.0 context	Sergio Monteleone, Edmilson Alves de Moraes, Rodrigo Filev Maia	Sergio Monteleone	
6	COBISA 2019 - Brazilian Congress of Instrumentation and Automation System	Campinas (São Paulo - Brazil)	14 - 16 May 2019	Analysis of the variables that affect the intention to adopt Precision Agriculture for smart water management in Agriculture 4.0 context	Sergio Monteleone, Edmilson Alves de Moraes, Rodrigo Filev Maia	Sergio Monteleone	
7	Brazilian Symposium on Computer Networks and Distributed Systems (SBRC 2019)	Gramado (Brazil)	6-10 May 2019	IMAIoT: Infrastructure Monitoring Agent for IoT (in Portuguese)	Alexandre Heideker, Dener Silva, Ivan Zyrianoff, João Kleinschmidt, Carlos Kamienski	Alexandre Heideker	Tools Exhibition Session
8	Workshop on Clouds and Applications (WCGA 2019)	Gramado (Brazil)	6 May 2019	Impact of LoRaWAN on the performance of Cloud-Fog IoT Platforms (In Portuguese)	Ivan Zyrianoff, Alexandre Heideker, Dener Silva, João Kleinschmidt, Carlos Kamienski	Ivan Zyrianoff	Collocated with SBRC 2019
9	Workshop on Cloud Networks (WCN 2019)	Belem (Brazil)	16 July 2019	Designing an Open IoT Ecosystem	Carlos Kamienski, Ronaldo Prati, João Kleinschmidt, Juha-Pekka Soininen	Carlos Kamienski	Clustering Activity
10	EnANPAD 2019 - Meeting of National Association of Postgraduate and Research in Administration	São Paulo (Brazil)	2 - 4 October 2019	Exploring the Precision Agriculture adoption for smart water management in the context of Agriculture 4.0 through System Dynamics	Sergio Monteleone	Sergio Monteleone	Doctoral consortium of ANPAD
11	IEEE Global Humanitarian Technology	Seattle (USA)	17-20	A Digital Twin for Smart Farming	Rafael Alves, Gilberto Souza,	Rafael Alves	

	Conference (GHTC 2019)		October 2019		Rodrigo Filev Maia, Anh Lan Ho Tran, Carlos Kamienski, Juha-Pekka Soininen, Plinio Aquino, Fabio Lima		

TABLE 5: CONFERENCE PAPERS – ACCEPTED

#	Conference	Venue	Date	Subject or Title	Authors	Participants	Note
1	IEEE Latin-American Conference on Communications (Latincom 2019)	Salvador (Brazil)	11-13 November 2019	Foundations of Data Quality Assurance for IoT-based Smart Applications	Rodrigo Togneri, Glauber Camponogara, Juha-Pekka Soininen, Carlos Kamienski		
2	CLADS 2019 - XVII Latin American Conference and Colombian Meeting of System Dynamics	Bogota (Colombia)	13-15 November 2019	Exploring the Precision Agriculture diffusion in the context of Agriculture 4.0 through System Dynamics	Sergio Monteleone, Edmilson Alves de Moraes, Rodrigo Filev Maia		

2.3. Posters, Short Papers, Demos, Exhibitions

By the very nature of posters, short papers, demos and exhibitions, there are more opportunities to disseminate the work developed within the project through those means. During the second year of the project, SWAMP members engaged in the presentation of nine activities of this kind (TABLE 6) and manage to have one short paper accepted (TABLE 7).

TABLE 6: POSTERS, SHORT PAPERS, DEMOS, EXHIBITIONS – PRESENTED

#	Event	Venue	Date	Title	Authors	Participants	Note
1	International Workshop on advances in IoT based Methods for Smart Water Distribution and Management in Agriculture (IMSA18)	Bologna, Italy	15 Nov 2018	Drones in precision irrigation applications (poster, short paper and Pecha Kucha presentation)	K. Kolehmainen, P. Castaldi, M. Menghini, A. Fuentes, M. Taumberger, A. Toscano, T. Salmon Cinotti, J.-P. Soininen	VTT, UNIBO, Quaternium	Target: IoT scientific community
2	International Workshop on advances in IoT based Methods for Smart Water Distribution and Management in Agriculture (IMSA18)	Bologna, Italy	15 Nov 2018	Platforms and devices for smart agriculture (poster and Pecha Kucha presentation)	A. Torre-Neto, K. Kolehmainen, L. Perilli, L. Roffia, C. Stanghellini, C. Bragalli, A. Domeneghetti, N. Alberti, T. Polonelli, E. Franchi Scarselli, A. Toscano, G. Villani, C. Kamienski, J-P Soininen, P. Zanetti, L. Zingali, T. Salmon Cinotti	EMBRAPA, VTT, UNIBO, UFABC, CBEC	Target: IoT scientific community
3	International Workshop on advances in IoT based Methods for Smart Water	Bologna, Italy	15 Nov 2018	SWAMP multi-parameter and multi-depth soil probe (poster,	A. Torre-Neto, E. Ferreira; L. Bassoi, M. Visoli	EMBRAPA, UFABC, UGA	Target: IoT scientific

	Distribution and Management in Agriculture (IMSA18)			short paper and Pecha Kucha presentation)	C. Kamienski, J. Kleinschmidt, J. Cotrim, G. Vellidis		community
4	International Workshop on advances in IoT based Methods for Smart Water Distribution and Management in Agriculture (IMSA18)	Bologna, Italy	15 Nov 2018	Drone based automatic surveys for precision farming (poster and Pecha Kucha presentation)	P. Castaldi, M. Menghini, C. Stanghellini, G. Villani, A. Toscano, P. Zanetti T. Salmon Cinotti	UNIBO, CBEC	Target: IoT scientific community
5	Ecomondo 2018	Rimini (Italy)	6-9 November 2018	SWAMP and green economy: presentation of the project	Attilio Toscano	Industries, start-ups, universities, ministries and research institutions	
6	NETCOM 2019 - Telecom Network Infrastructure Professionals and Internet Providers Meeting	São Paulo (Brazil)	27-29 August 2019	SWAMP Project: IoT applied to the optimization of water resources in agribusiness	Brenno Tondato de Faria, Sergio Monteleone	Telecom Network Infrastructure Professionals and Internet Providers Meeting	
7	SensorNet - IoT per un territorio smart (https://lepida.net/news/2019-10/sensornet-iot-territorio-smart)	Bologna (Italy)	9 October 2019	L'IoT nel Consorzio di Bonifica dell'Emilia Centrale	Nico Alberti (CBEC)	50 (Local Authorities of Emilia Romagna small commons, stakeholders of the farming and water distribution domain, SWAMP researchers from CBEC	

						and UNIBO	
8	International Symposium On Precision Management of Orchards and Vineyards http://www.pmov2019.it/	Palermo (Italy)	7-11 October 2019	Assessment of Leaf Area Index in Orchards and Vineyards at Different Spatial and Temporal Scales	Vincenzo Alagna, Gabriele Baroni, Paolo Castaldi, Massimiliano Menghini, Tamara Ricchi, Tullio Salmon Cinotti, Attilio Toscano	180 people from 40 countries	
9	ENAFEI 2019 - FEI Meeting of Administration	São Paulo (Brazil)	2 – 3 May 2019	Analysis of the variables that affect the intention to adopt Precision Agriculture for smart water management in Agriculture 4.0 context	Sergio Monteleone	Administration community of FEI	

TABLE 7: POSTERS, SHORT PAPERS, DEMOS, EXHIBITIONS – ACCEPTED

#	Event	Venue	Date	Title	Authors	Participants	Note
1	1st Workshop on vAlidation and verification in FuturE cybeR-physical Systems (WAFERS)	Natal (Brazil)	21 November 2019	End-to-end Security in the IoT Computing Continuum: Perspectives in the SWAMP Project	João Kleinschmidt, Carlos Kamienski, Ronaldo Prati, Kari Kolehmainen, Cristiano Aguzzi		Collocated with ACM LADC 2019

2.4. Workshop Organization

According to TABLE 8, two workshops to the scientific community have been organized during the second year of the project. Both happened in November 2018.

TABLE 8: WORKSHOP ORGANIZATION

#	Workshop/Event	Venue	Date	Participants	Target stakeholders	Note
1	Sustainable and Efficient Management of Water in Agriculture: Smart Irrigation and Water Reuse @ECOMONDO https://en.ecomondo.com/events/program/seminars-and-conferences/e8586708/sustainable-and-efficient-management-of-water-in-agriculture-smart-irrigation-and-water-reuse.html	Rimini, Italy	07/11/18	UBO, VTT, all partners	Water Distributors, Agriculture experts, Irrigation Operators, System administrators	A workshop on agricultural water management and water reuse held at ECOMONDO (https://en.ecomondo.com/), considered the leading euro-Mediterranean green and circular economy expo. The workshop was organised, among others, by UBO and SWAMP consortium.

2	Workshop on Advances in IoT based methods for Water Distribution and Management in Agriculture https://www.fruct.org/imsa18	Bologna, Italy	15/11/18	UBO, all partners	Scientific community in ICT, water management and agriculture, IoT community	Held in conjunction with FRUCT23, a conference of Open Innovations in ICT co-organized by a Finnish-Russian university association and UBO.

2.5. Internal Dissemination Workshops, Meetings and Visits

During the second year of the project, the implementation of pilot, platform and models was considered a priority for SWAMP members, therefore two visits involving more than two partners have been organized, as depicted by TABLE 9. Also, a general face-to-face project meeting in Brazil has been organized. Intra-partner and inter-partner meetings are organized regularly and on-demand. In many of these, internal dissemination occurs. These meetings are not reported here.

TABLE 10 shows the researcher exchanges among partners that happened during the 2nd year, which plays an important role in promoting higher collaboration levels inside the project.

TABLE 9: INTERNAL DISSEMINATION WORKSHOPS, MEETINGS AND VISITS

#	Workshop/Meeting/Visit	Venue	Date	Participants	Target stakeholders	Note
1	Visit to the CBEC Pilot	Reggio Emilia (Italy)	31 October 2019	UNIBO, CBEC, UFABC	SWAMP Partners	Visit to installations, office, and farms served by the Consorzio Di Bonifica dell'Emilia Centrale (CBEC). Brazilians partners did not participate in the first visit due to a delay in the contract, so now this visit compensated it.
2	Visit to the Intercrop Pilot – Drone Task Force	Cartagena, Spain	28-31 October 2019	Intercrop, VTT, Quaternium	SWAMP Partners	
3	SWAMP General F2F Meeting	Santo André (Brazil)	8-10 May 2019	VTT, UNIBO, CBEC, Intercrop, Quaternium, UFABC, UFPE, FEI, Embrapa, Levertech	SWAMP Partners	General meeting for planning the activities for the second half of the project

TABLE 10: RESEARCHER EXCHANGES AMONG PROJECT PARTNERS

#	Researcher / Partner	Receiving Partner / Place	Period
1	Rodrigo Filev Maia (FEI)	VTT (Oulu / Finland)	November 2018 to January 2019
2	Luca Roffia (UNIBO)	UFABC (Santo André / Brazil) and FEI (São Bernardo) Brazil	Second week of May 2019
3	Carlos Kamienski (UFABC)	UNIBO (Bologna / Italy)	Last week of October 2019

2.6. Cluster and Community Activities

During the second year of the project, SWAMP members engaged in three cluster and community activities for dissemination purposes, as depicted by TABLE 11.

TABLE 11: CLUSTERING AND COMMUNITY ACTIVITIES

#	Cluster/Community	Venue	Date	Participants	Motivation	Note
1	ICT4 Water Cluster (General Assembly meeting)	Brussels, Belgium	Feb. 5th, 2019	VTT	SWAMP is a member of ICT4Water cluster	Event organised by EU water cluster.
2	WRNP 2019 (RNP Workshop)	Gramado, Brazil	May 2019	UFABC, FEI	SWAMP was presented in a panel and a stand	RNP is the funding agency for the Brazilian partners
3	Cloudscape Brazil	Belem, Brazil	July 2019	UFABC	SWAMP was presented	Event organized by another EU-BR CSA project to cluster projects under the European-Brazilian collaboration

3. Communication Activities: SWAMP Year #2

SWAMP members have been having great opportunities for actively engaging in communication activities, as shown in TABLE 12. In total, 16 communication activities have been reported in the second year of the project, involving blogging, conferences, exhibitions, interviews, lectures, news, panels, pitch sessions, and talks/speeches. Also, the SWAMP Communication Report Form[2] has been serving well its purpose, since it made easier to gather the information from the partners, who have been using it just nicely.

[2] http://swamp-project.org/forms

3.1. Communication Activities developed by SWAMP Members

TABLE 12: COMMUNICATION ACTIVITIES UNDERTAKEN BY SWAMP PARTNERS

#	Title	Means	Place	Audience	Date	Partners	URL	Attendees(*)
1	ISMA18 Opening Talk	Lecture	Bologna	IoT Scientific Community	11/11/18	VTT	http://www.fruct.org/IMSA18	40
2	Regional agriculture agency of Central Ostrobothnia, Finland	Meeting		Farmers, Government, Clustering projects	19/02/19	VTT	Not available	4
3	SWAMP project presentation	Meeting	Helsinki,, Finland	SoilFool Oy, Natural Resources Institute, Finland, EU H2020 CIRLES project.	26/02/2019	VTT	Not available	6
4	Internet of Things: Technologies and Applications	Lecture (Computing Week – Uni-FACEF)	Franca (Brazil)	Computer Science Students	28/05/19	UFABC, Embrapa	http://eventos.unifacef.com.br/fem/2019/site/programacao#192	80
5	Tecnologia a servizio dell'agricoltura: con Swamp un sistema per ridurre lo spreco d'acqua	News in Portal	UNIBO Magazine	General Public	03/06/2019	UNIBO	https://magazine.unibo.it/archivio/2019/06/03/tecnologia-a-servizio-dell2019agricoltura-con-swamp-un-sistema-per-ridurre-lo-spreco-d2019acqua	--
6	ICT4Water event	Community Meeting	Brussels	ICT professionals (sensors, IoT, analytics, cloud, telecom, etc.), Agriculture professionals (agronomists,	11/06/19	VTT	https://www.ict4water.eu/	80

				engineers, etc.), Scientific community, Clustering projects				
7	WssTP ICT working group meeting	Workshop	Brussels	ICT professionals (sensors, IoT, analytics, cloud, telecom, etc.), Scientific community, Government, Clustering projects	12/06/19	VTT	http://watereurope.eu/	20
8	The experience of the water distribution consortia in sustainable management of water for irrigation	Round Table	Rome / Italy	Agriculture Professionals	12/06/19	CBEC	https://www.anbi.it/evn/eventi-territorio/1849-risparmio-idrico-in-agricoltura-sim-project-tavola-rotonda-l	--
9	Water Innovation Europe 2019	Workshop	Brussels	ICT professionals (sensors, IoT, analytics, cloud, telecom, etc.), Scientific community, Irrigation technology providers, Government, Clustering projects	13/06/19	VTT	https://waterinnovationeurope.eu/	150
10	Value Creation in IoT-enabled Smart Irrigation	Panel (IoT Week 2019)	Aarhus (Denmark)	IoT Practitioners, Scientific Community	19/06/19	UFABC	https://sites.grenadine.co/sites/iot/en/aarhus-2019/schedule/3840/5ad0cb621f2dac4032ac52535f0eb8eafa56ad85/Applied+IoT+Value+Creation	50

11	Towards an IoT Computing Continuum and its Application in Smart Agriculture	Panel (Cloudscape Brazil 2019)	Belem (Brazil)	Scientific Community, Clustering Projects	15/07/19	UFABC	https://www.atmosphere-eubrazil.eu/cloudscape-brazil-2019-15th-july-agenda#overlay-context=cloudscape-brazil-and-workshop-cloud-networks-2019	30
12	SWAMP Project	Panel (WCN 2019)	Belem (Brazil)	Scientific Community, Clustering Projects	16/07/19	UFABC	https://www.atmosphere-eubrazil.eu/wcn-2019-16th-july-agenda#overlay-context=cloudscape-brazil-and-workshop-cloud-networks-2019	30
13	12th Brazilian Cotton Congress	Exposition	Goiânia (Brazil)	Farmers	27-19/08/19	Levertech, Embrapa	http://swamp-project.org/swamp-participates-in-the-brazilian-cotton-congress-2019/	200
14	IoT and Agriculture	Panel (Latin American IoT Conference 2019)	São Paulo (Brazil)	IoT Practitioners	18/09/19	UFABC, Embrapa	technologyhub.com.br	40
15	Irrigation in the IoT Age	Lecture (Agrinordeste 2019)	Recife (Brazil)	Farmers, Agronomists, Students of agriculture related fields	26/09/19	UFABC	https://www.agrinordeste.com.br/programacao.php	60
16	SWAMP Project	Meeting at	Ancona (Italy)	Loccioni Employees	29/10/19	UNIBO,	https://www.loccio	6

	Presentation	Loccioni				UFABC	ni.com	

(*) Approximate

3.2. Media Coverage

During the second year of the project, media coverage (specially in Brazil) remained and important communication channel (TABLE 13). In fact, media coverage tends to be more intense in the final year, when partners expect to have more meaningful results to present.

TABLE 13: COMMUNICATION ACTIVITIES – MEDIA COVERAGE

#	Title	Portal	Type	Date	URL
1	Custos de irrigação no Brasil podem diminuir com soluções de IOT	Revista Cultivar Online	News	14/01/19	https://www.grupocultivar.com.br/noticias/custos-de-irrigacao-no-brasil-podem-diminuir-com-solucoes-de-iot
2	Irrigação deve chegar à era da Internet das Coisas	A Lavoura	News	01/11/18	https://alavoura.com.br/biblioteca/a-lavoura-720/irrigacao-deve-chegar-a-era-da-internet-das-coisas
3	Campo fértil para a IOT	Diário de Pernambuco	News	28/09/19	http://www.impresso.diariodepernambuco.com.br/noticia/cadernos/economia/2019/09/campo-fertil-para-a-iot.html

4. Online Communication Channels

The online communication channels played an important role during the second year of the project, with a special highlight for the project website that received a number of visits much higher than estimated.

4.1. Website

The SWAMP Website[3] is by far the most accessed communication channel during the second year of the project. TABLE 14 shows statistics obtained by the website provider, where according to different metrics, accesses reached a monthly average of 888 unique visitors (by IP address), 1,547 visits (considering returning visitors), 6,274page views (mostly HTML objects) and 24,707 hits (all objects).

TABLE 14: ACCESS TO THE WEBSITE: VISITORS, VISITS, PAGES AND HITS

Month	Unique Visitors	Number of visits	Pages	Hits (objects, including pages)
Nov 2018	983	1,428	4,177	18,169
Dec 2018	670	1,188	4,287	15,680
Jan 2019	691	1,242	4,174	18,757
Feb 2019	1,007	1,547	4,360	19,854
Mar 2019	841	1,522	4,701	20,046
Apr 2019	777	1,371	4,782	19,202
May 2019	1,025	1,729	5,303	24,472
Jun 2019	983	1,711	9,407	27,332
Jul 2019	1,020	1,722	10,359	25,944
Aug 2019	722	1,443	9,294	28,395
Sept 2019	901	1,736	5,780	44,155
Oct 2019	1,030	1,926	8,665	34,473
Total	10,650	18,565	75,289	296,479
Average	888	1,547	6,274	24,707

TABLE 15 shows the 20th top most countries where the accesses to the website originated from. Apart from the home countries of the SWAMP partners (Brazil, Finland, Italy, Spain), it is clear that SWAMP is attracting the attention from the community of countries such as the United States, Ukraine, Russia, China, India, Canada and France.

TABLE 15: ACCESS TO THE WEBSITE BY COUNTRY

#	Country	Pages (%)	#	Country	Hits (%)
1	United States	36.99	1	Brazil	26.15
2	Brazil	36.45	2	United States	25.10
3	Ukraine	5.19	3	Italy	15.11

[3] http://swamp-project.org5

4	Russian Federation	2.57	4	India	3.55
5	Italy	2.31	5	China	2.26
6	France	1.59	6	Great Britain	1.66
7	India	1.33	7	Canada	1.50
8	Canada	1.30	8	Ukraine	1.48
9	Great Britain	1.23	9	France	1.44
10	China	1.20	10	Spain	1.31
11	South Korea	0.73	11	Finland	1.26
12	Turkey	0.57	12	Russian Federation	1.23
13	Germany	0.50	13	Germany	1.14
14	Greece	0.34	14	Greece	1.00
15	Spain	0.34	15	South Korea	0.70
16	Indonesia	0.32	16	Turkey	0.67
17	Netherlands	0.31	17	Indonesia	0.59
18	Thailand	0.29	18	Australia	0.57
19	Romania	0.27	19	Netherlands	0.52
20	Argentina	0.27	20	Sweden	0.52
	Others	5.89		Others	12.24

In order to communicate important activities of the project, 10 pieces of news have been published in the SWAMP Website:

1 SWAMP organizes Workshop on Advances in IoT based methods for Smart Water Distribution and Management in Agriculture
2 SWAMP and green economy: presentation of the project @Ecomondo 2018
3 SWAMP Represented at the FRUCT 24 Conference in Moscow
4 SWAMP takes part in the 20th RNP Workshop (WRNP 2019)
5 SWAMP Consortium has F2F Meeting at UFABC and FEI
6 SWAMP participates in Cloudscape 2019 and WCN 2019 in Belém (Brazil)
7 SWAMP Participates in the Brazilian Cotton Congress 2019
8 SWAMP presented at the Latin American IoT Conference 2019
9 SWAMP presented at Agrinordeste 2019 in Recife (Brazil)
10 SWAMP takes part at the International Symposium PMOV 2019

4.2. Twitter

The SWAMP Twitter account[4] (@SwampProject) has been the most active social media communication channel during the second year of the project. TABLE 16 shows the monthly statistics for the second year of the project, including the number of Tweets (created by the project account, which does not count retweets), Impressions (number of times tweets were shown to other users), Engagements, Profile Visits, Mentions (number of times the @SwampProject was mention in another tweet) and the number of new

[4] https://twitter.com/SwampProject

followers. Also, all tweets and retweets made by the SWAMP account go directly to the first page of the Website.

TABLE 16: STATISTICS OF THE SWAMP TWITTER ACCOUNT

Month	Tweets	Impressions	Engagements	Profile Visits	Mentions	New Followers
Nov 2018	6	4,644	205	0	0	3
Dec 2018	3	3,261	96	0	0	3
Jan 2019	1	4,097	49	0	0	3
Feb 2019	0	1,747	0	4	0	1
Mar 2019	0	2,408	0	55	1	2
Apr 2019	0	1,910	0	43	7	2
May 2019	11	6,635	315	181	11	3
Jun 2019	2	3,129	23	75	8	8
Jul 2019	2	2,250	59	44	2	2
Aug 2019	1	2,322	52	4	1	3
Sept 2019	3	4,627	91	38	0	2
Oct 2019	1	2,416	19	108	9	2
Total	**30**	**39,446**	**909**	**552**	**39**	**34**

4.3. ResearchGate, YouTube and LinkedIn

The ResearchGate SWAMP Project[5] has been the most active social media service for academic and research results related to the project. So far, 22 SWAMP members are included as collaborators, dozens of research items have been added, the project has 31 followers and received 264 reads.

The SWAMP YouTube channel[6] has been primarily used for storing videos that are shared via other communication channels and SWAMP LinkedIn[7] project page is intended to be the key online channel targeting the professional community. YouTube and LinkedIn have not been very active social networks for the SWAMP Projects.

5. Key Performance Indicators (KPI)

TABLE 17 presents the Target KPIs for the three years of the SWAMP project as approved in the proposal and also kept in the SWAMP Dissemination Plan and SWAMP Communication Plan, as well as it provides some estimated numbers for the second year. It becomes clear that for most of the KPIs their target values have been surpassed or they are far ahead of 2/3 that might be considered the fair share for the second year.

TABLE 17: TARGET KPIS FOR DISSEMINATION AND COMMUNICATION ACTIONS

Key Performance Indicator (KPI)	Target value	1st Year	2nd Year
Number of journal paper published	12	1	4

[5] https://www.researchgate.net/project/SWAMP-Smart-Water-Management-Platform-2
[6] https://www.youtube.com/channel/UCBhiat4FfEv65I2Nofrv2lg
[7] https://www.linkedin.com/company/swamp-project/

Number of conference papers published	20	6	11
Number of participants in communication activities	150	+1000	+1000
Number of workshops and meetings organised by project members	8	2+6	2+4
Number of participations in different community/cluster events	12	7	3
Number of updates in social media channels	50	79	40
Number of visitors per month in Website	50	1185 (average)	887 (average)
Number of followers and comments in social media channels	150	141	150+
Number of press releases	12	1	0
Number of posters, leaflets, and presentations created	4	11	19
Number of participations in scientific conferences and workshops	20	15	11

6. Final Remarks

During the second year of the project, between November 2018 and October 2019, dissemination and communication activities have been playing an important role in the SWAMP project and members have been putting a lot of effort to make sure that the society and all involved stakeholders understand its importance and contributions. An important point to highlight is that SWAMP members belonging to different partner institutions have been working together toward the development of dissemination and communication activities.

Building upon the knowledge and experience gained in the first year, in the second year the project partners could harvest some important results in term of dissemination. As for communication activities, due to the very nature of the project that allies key ICT technologies with important societal challenges in agriculture, the SWAMP project has been having a good repercussion within the different stakeholders interested in the project, as well as it received a significant coverage by the traditional media channels.

SWAMP partners have planned a considerable number of journal and conference papers for the third and final year, which are expected to make justice to the interdisciplinary effort that has been developed within the project. Also, communication activities are expected to continue in the same pace, with some increase when the project will have actual results to publicize.

References

[1] Salmon-Cinotti, T., et al., “Dissemination Plan”, SWAMP Deliverable D6.1, April 2018.

[2] Kamienski, C., “Communication Plan”, SWAMP Deliverable D6.2, April 2018.

[3] Kamienski, C., Salmon-Cinotti, T., “D6.3 Intermediate Dissemination and Communication Activity Report”, November 2018.