MADFORWATER

Contract no. **688320**

MADFORWATER

DevelopMent AnD application of integrated technological and management solutions FOR wasteWATER treatment and efficient reuse in agriculture tailored to the needs of Mediterranean African Countries

Deliverable No.	**D7.4**
Deliverable Full title	**Final plan on the dissemination and communication activities**
Work Package No. and Title	**WP7 - Exploitation & Dissemination**
Lead beneficiary (extended name and acronym)	**PNO Consultants BV [PNO]**
Authors **(Acronyms of beneficiaries contributing to the deliverable)**	**PNO**
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Project website	**www.madforwater.eu**
Project start date and duration	**01 June 2016** **48 months**

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Content

Executive Summary

This deliverable outlines the dissemination and communication tools and activities implemented over the three-year period since that start of MADFORWATER aimed to communicate project activities and results to stakeholders and the wider audience. This revised and updated Dissemination and Communication Plan includes the initiatives related to project duration and is also to be considered as a guide to support the consortium to carry out the dissemination activities using the right material and channels. The document also looks at the dissemination and communication materials realized and those still to be achieved, including: project website and social media, press releases, project leaflet, videos, newsletters, presentations, journal articles, attendance at (non)academic events, stakeholder consultation workshops and interaction with other projects and forums. Furthermore, an evaluation of performance against the Key Performance Indicators (as set in the Grant Agreement) is added.

1 Introduction

1.1 Background on the MADFORWATER project

MADFORWATER is a research and innovation project funded by the European Union's Horizon 2020 programme and coordinated by the University of Bologna. Its full title is "*DevelopMent AnD application of integrated technological and management solutions FOR waste water WATER treatment and efficient reuse in agriculture tailored to the needs of Mediterranean African Countries*".

The general objective of MADFORWATER is to develop an integrated set of technological and management instruments for the enhancement of wastewater treatment, treated wastewater reuse for irrigation and water efficiency in agriculture, with the final aim to reduce water vulnerability in selected basins in Egypt, Morocco and Tunisia. MADFORWATER will primarily tackle the integration of the supply (wastewater treatment) and demand (water reuse in agriculture) sides and the consequent adaptation of the proposed solutions to the local context through:

- The installation and optimization of four field pilot plants of integrated wastewater treatment and efficient reuse in agriculture;
- A participatory and multidisciplinary approach for the design of technologies and management solutions, attained by means of an international cooperation framework characterized by a consolidated collaboration between EU and Mediterranean African Countries (MAC) partners;
- A strong dialogue between the consortium and numerous MAC and international stakeholders involved in the Stakeholder Advisory Board, to maximize the suitability of the proposed solutions in relation to the local context, and therefore the expected long- term impact of the MADFORWATER technologies, water management strategies and policies.

The main benefits and impacts of MADFORWATER are:

- MADFORWATER will implement innovative technical approaches and solutions resulting in an increasing long-term trend of wastewater treated in Egypt, Morocco and Tunisia. The project's technologies and solutions will be piloted in four locations.
- MADFORWATER will provide tools for a better water vulnerability analysis, leading to a correct identification of the most water-vulnerable areas and to potential areas for treated wastewater reuse in agriculture.
- MADFORWATER will develop decision support tools and economic instruments leading to an operational and effective application of integrated water management.
- MADFORWATER will support the capacity building of local actors in relation to the implementation of the selected technologies, strategies and policies, through training, knowledge transfer and increased social acceptance activities.
- MADFORWATER will increase economic and social well-being in Mediterranean African Countries, through an increased agricultural production, a higher food security, a decreased food contamination, a decreased cost of waste water treatment, and an increased income and employment in the water treatment and agricultural sectors in Egypt, Morocco and Tunisia.
- MADFORWATER will support the achievement of internationally agreed water-related goals in Egypt, Morocco and Tunisia by increasing treated wastewater reuse in agriculture, reducing groundwater catchment, implementing integrated and participated water management approaches at basin and country level, reducing fertilizer consumption and decreasing energy consumption and CO2 emissions.
- MADFORWATER will increase the competitiveness and market penetration in MACs of European water and irrigation industries.

1.2 Specific objectives of deliverable D7.4

The main objective of this deliverable is to present the dissemination and communication activities for the MADFORWATER project that have taken place, as well as those that are foreseen until and beyond the end of the official project's period. In this context, the term dissemination refers to the process of making available the concepts, results and deliverables to relevant stakeholders and to the wider audience. The potential stakeholders include targeted end users, SMEs, technology providers, research communities, health policy makers, and so on. This deliverable collates, reports and analyses both the individual partner and consortium wide dissemination and exploitation activities carried out over the project lifetime.

An initial version of the Dissemination and Communication Plan (DCP) was prepared in month 6 of the project and updated in month 18. This version builds on the previous versions and covers the activities until month 36.

1.3 Context, scope and structuring of this deliverable

This deliverable presents a plan of the dissemination activities. The aim of the Dissemination and Communication activities is to widespread the project objectives and potential benefits towards the stakeholders in order to generate awareness without compromising IPR, and to obtain feedback and suggestions about the intermediate project results so as to get a comprehensive validation from stakeholders covering all the targeted market sectors. In addition to the previous version, this revised and updated D7.4 DCP includes the following main points:

- The available dissemination channels and instruments,
- The major stakeholders and targets groups to focus on,
- The main dissemination strategies actions thus far for each partner,
- The MADFORWATER events, publications and all the other disseminations activities.

The document is structured in 5 main section as follows: Section 1 introduces the purpose of this deliverable and provides background information on the project and its objectives. Section 2 focuses on the MADFORWATER approach to its dissemination where the communication strategy is being presented in order to reach a real impact on the relevant stakeholders. Section 3 reports on the dissemination materials developed within MADFORWATER thus far, including an overview of the activities carried out and planned by each consortium partner including conferences, press release, presentations and papers. Then Section 4 provides an overview and status reporting of the project's indicators. Finally, in Section 5 the conclusions and future activities are briefly discussed.

2 MADFORWATER Dissemination and Communication Plan

In the next section the approach taken for dissemination purpose will be explained. It is based on three main pillars: the methodology, the stakeholders that will be targeted and the dissemination channels that will be used.

2.1 Methodology

The MADFORWATER project effectively communicates with the external world, in order to engage the entire consortium; spread project results to the stakeholders; and raise public consensus on the environmental, social and economic benefit of the proposed solution.

To this end a defined dissemination methodology is needed. The MADFORWATER dissemination methodology is sustained by the following key points:

- The dissemination strategy establishes a plan to promote the widespread adoption of MADFORWATER initiatives;
- Realization of dissemination materials
- Activities to ensure wide visibility

Actions included in the strategy are:

- Design of the MADFORWATER brand (logo, color, pictures etc.);
- Realization of promotional materials such as: website, brochures, template for project documents, power point presentations, newsletters, etc.;
- Stakeholders analysis to build awareness around project initiatives and valorize project results;
- Launch of a media campaign existing through the use of articles in magazines, press releases, social networks, newsletters etc.;
- Participation in the most important events such as exhibitions, conferences, workshops, specialized international meetings, etc.;
- Synergies with other projects and initiative

The strategy foresees to actively involve all the partners. The partner responsible for dissemination (PNO) is working to ensure proper information to support the full communication of the project results.

All consortium partners have an important role in the diffusion of project results and all the partners are committed to present project outcomes in order to obtain a balanced participation from each partner. Partners are contacted to define and execute dissemination efforts in order to provide a structured and dynamic approach to the communication of project results. The research of events has started at the beginning of the project, it is still ongoing and it will continue till end of project. The results of the research are posted on the project communication website in order to promote an active participation by both partners and contacts.

2.2 MADFORWATER Stakeholders

The success of the MADFORWATER efforts to enter the market and the society is based on the knowledge that the target audience has about the MADFORWATER project. In the development phase of the MADFORWATER project a preliminary stakeholder analysis was conducted. In M6 a more detailed stakeholder mapping and analysis was delivered. In this activity a stakeholder analysis was conducted in order to *(i)* identify other stakeholders in addition to those included in the SAB during proposal preparation so as to widen the SAB, *(ii)* create a large database of MAC stakeholders that will be

periodically informed about the main project outcomes, and *(iii)* map the stakeholder community so as to develop dissemination and communication activities tailored for the single stakeholder group. The identified stakeholders were categorized based on 4 criteria: sector of activity / competences, nature of stakeholder, preferred language for dissemination and communication, country. For each criterion, the following possible values were assigned:

Sector of activity / competencies:

- Agriculture
- Waste water producers
- Water resources management
- Treated wastewater users
- Environmental and social legal aspects
- End-users & consumers

Nature of stakeholder

- Commercial companies
- Academic and research institutes/universities
- Local/National/EU public authorities, bodies or governments
- Investors
- (International) Associations & NGOs
- Media organizations
- Consulting

Preferred language for dissemination and communication

- Arabic
- English
- French

The resulting database of relevant MADFORWATER stakeholders is presented in deliverable D7.1. Facilitating dissemination and communication activities, the consortium also engaged in ”Stakeholder Consultation Workshops” (SCW) which sought to identify and define the perception of the stakeholder group on the proposed MADFORWATER results and solutions. The results of these SCW are used to improve the MADFORWATER message, and define the channels to be used to deliver this content to each group.

3 Dissemination channels

The MADFORWATER dissemination strategy required a diverse range of dissemination channels to be able to reach the different stakeholder groups mentioned in Section 2. Each target group had specific needs and profiles that influence how the project concepts and results were delivered to them. To that end, the dissemination channels can be grouped as follows:

- MADFORWATER website
- MADFORWATER social media channels
- Project communication materials (leaflets, newsletters etc.)
- Scientific publications
- Externally-organised events
- MADFORWATER organised events
- Scientific exchanges

The project dissemination over these different channels is described in the rest of this section.

Table 1: Dissemination channels

Channels	Link	# of users
MADFORWATER website	http://www.madforwater.eu/	/
Innovation Place: CTECH/PNO web-portal (Europe)	https://www.innovationplace.eu	> 10,000
Ricerca & innovazione: CTECH/PNO web-portal (Italy)	http://www.ricercaeinnovazione.it/	6,000
INNOVATION PLACE Facebook account	https://www.facebook.com/innovation.place	200
MADFORWATER Facebook account	https://www.facebook.com/madforwater/	116
Linkedin Innovation Place group	https://www.linkedin.com/groups/4086674	836
Linkedin PNO page	https://www.linkedin.com/company/innovation-place	111
Linkedin MADFORWATER project page	https://nl.linkedin.com/company/madforwater	99
Madforwater Twitter account- @madforwater	https://twitter.com/madforwater	33

3.1 MADFORWATER website

A dedicated project website was created at the beginning of the project (M3 online) and will be maintained active for at least 3 years after the end of the project. The main pages of the public section are also available in French and Arabic. The website includes several sections including *About MADFORWATER, News and events, Public documents, Associated projects* and *Contact*. Several adjustments were applied and measures were taken to ensure that the project website is in compliance with GDRP regulations The website can be found at www.madforwater.eu

Figure 1: Project website

3.2 Social media channels

In order to increase the project visibility and implement an effective dissemination strategy, MADFORWATER social media accounts have been created on the world's most famous social networks (LinkedIn, Facebook, Twitter) and have been regularly updated.

Figure 2: Linkedin

Figure 3: Twitter

Figure 4: Facebook

3.3 Other communication channels

3.3.1 Innovation Place

InnovationPlace is an on line service supporting organisations to achieve their strategic R&D objectives through the matching and managing of R&D projects, organisations and grants. InnovationPlace is based on the Open Innovation paradigm, with active involvement of industry leaders, multinational organisations, high-level research centres, public bodies and innovative SMEs all around Europe. During the last years the number of users registered in the web platform has drastically increased.

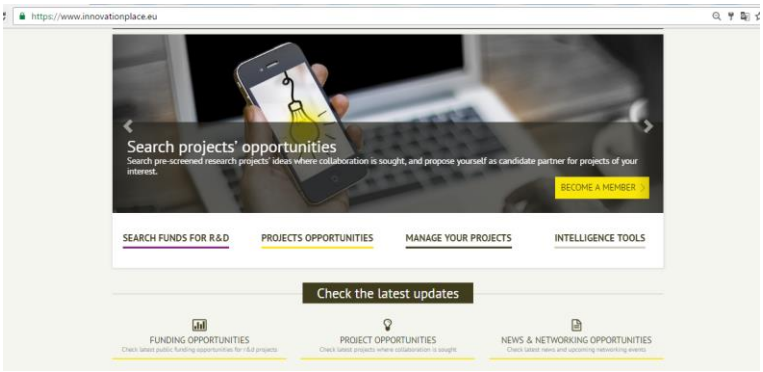

Figure 5 : Innovation Place

3.3.2 Ricerca & Innovazione

Ricerca & Innovazione is the Italian Open Innovation platform that supports collaborative research through the successful combination of research and development projects, excellent European organizations and the most important public funding opportunities at European, national and regional level.

Figure 6: Ricerca & Innovazione

3.4 Project dissemination and communication materials

Several dissemination materials and tools have been produced and other will be produced throughout the entire course of the project. The dissemination materials will be realized according to different communication needs, to various event typologies and to follow the project evolution and results.

In relation to the dissemination materials and tools already produced in the first six months of the project, they are analytically described in the Deliverable 7.6 “First report on the dissemination activities and materials. Visual identity, promotion materials, online engagement with stakeholders, media activity, technical dissemination”.

3.4.1 Visual identity

A graphical logo was been selected among several ideas realized with the main intention to remember the name of the project in one hand and the main project goal (water efficiency in agriculture) on the other.

Figure 7: Project logo

Furthermore, a MADFORWATER project template for presentations was developed with main attention to recall the project logo and visual identity.

Figure 8: Presentation template

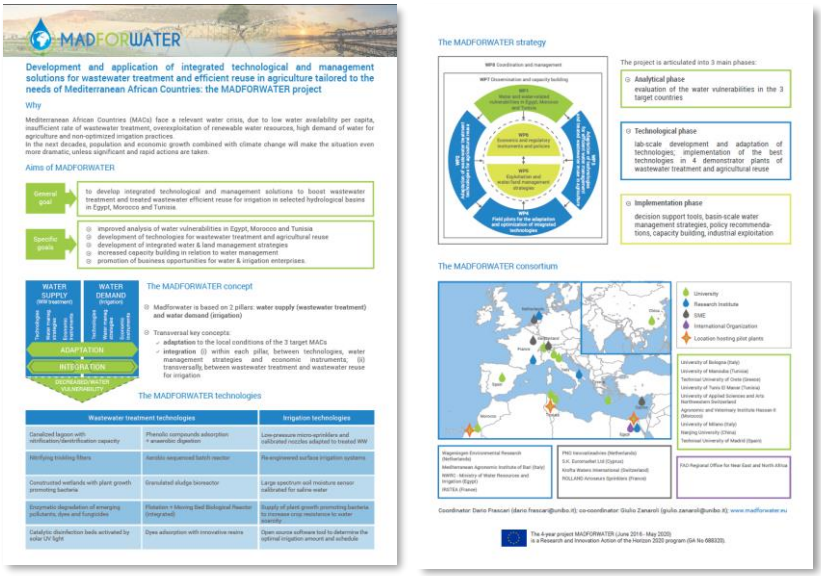

Figure 9: Project leaflet

3.4.2 Project leaflet

The MADFORWATER objectives and benefits are described, together with a contact sections and presentation of the partners involved in the project

3.4.3 Poster

In the poster, the MADFORWATER ratio, objectives, benefits and impact, as well as the technologies affected by the project are described, together with a contact sections and the logos of the partners involved in the project.

3.4.4 Project videos

Technical videos (at least 5) aimed at presenting the project outcomes to a technical audience, as well as 2 professional-quality promotional-informative videos (3 and 15 minutes) addressed to the general public will be available on the project website, on YouTube and on the websites of the project partners. The videos will be realized when more results will be available to the consortium and more insights will be obtained, so that the stakeholder should be involved more closely in the project. The videos will be sent to the stakeholders identified, and they will be uploaded on the MADFORWATER website and widely disseminated through all the channels identified in table 2. A first professional video was published on the project's website and on Youtube, providing a general presentation of the MADFORWATER project. With the pilots being realised, preparations for the second professional video as well as for the more technically-oriented videos have started.

3.5 Scientific publications

During the project's lifetime, MADFORWATER's partners aim to disseminate their research results through scientific journals and equivalent channels. As shown in the following table, so far MADFORWATER partners published 15 articles in scientific journals with impact factor, 1 book chapter and 3 articles in the proceedings of international conferences.

Table 2: The MADFORWATER Scientific publications relative to months 1-36

Type of scientific publication	Title of the scientific publication	Partner name	Title of the journal or equivalent	DOI	Publisher	Year of publication	Peer-review	Open access
Article in journal	Batch and continuous flow adsorption of phenolic compounds from olive mill wastewater: a comparison between non-ionic and ion exchange resins.	UNIBO	International Journal of Chemical Engineering	https://doi.org/10.1155/2016/9349627	Hindawi	2016	Yes	Gold Open Access
Article in journal	Integrated technological and management solutions for wastewater treatment and efficient agricultural reuse in Egypt, Morocco, and Tunisia	UNIBO	Integrated Environmental Assessment and Management	https://doi.org/10.1002/ieam.4045	Wiley	2018	Yes	Gold Open Access
Article in journal	Valorisation of olive mill wastewater by phenolic compounds adsorption: development and application of a procedure for adsorbent selection	UNIBO	Chemical Engineering Journal	https://doi.org/10.1016/j.cej.2018.11.188	Elsevier	2019	Yes	Green Open Access
Article in journal	Continuous flow adsorption of phenolic compounds from olive mill wastewater with resin XAD16N: life cycle assessment, cost-benefit analysis and process optimization	UNIBO	Journal of Chemical Technology and Biotechnology	https://doi.org/10.1002/jctb.5980	Wiley	2019	Yes	Green Open Access
Article in journal	A novel thermally stable heteropolysaccharide-based bioflocculant from hydrocarbonoclastic strain Kocuria rosea BU22S and its application in dye removal	UMA	Environmental Technology	https://doi.org/10.1080/09593330.2017.1313886	Taylor & Francis	2017	Yes	Green Open Access
Article in journal	Pseudomonas rhizophila S211, a New Plant Growth-Promoting Rhizobacterium with Potential in Pesticide-Bioremediation	UMA	Frontiers in microbiology	https://doi.org/10.3389/fmicb.2018.00034	Frontiers media SA	2018	Yes	Gold Open Access
Article in journal	Soil parameters drive the diversity of Citrus sinensis rhizosphere microbiota which exhibits a potential in plant drought stress alleviation	UTM, UMIL	Applied Soil Ecology	https://doi.org/10.1016/j.apsoil.2018.12.006	Elsevier	2019	Yes	Green Open Access
Article in journal	Bacterial Endophytes of Mangrove Propagules Elicit Early Establishment of the Natural Host and Promote Growth of Cereal Crops under Salt Stress	UMIL	Microbiological research	https://doi.org/10.1016/j.micres.2019.03.008	Elsevier	2019	Yes	No
Article in journal	Application of UV absorbance and fluorescence indicators to assess the formation of biodegradable dissolved organic carbon and bromate during ozonation	NJU	Water Research	https://doi.org/10.1016/j.watres.2017.01.009	Elsevier	2017	Yes	Green Open Access
Article in journal	Applying UV Absorbance and Fluorescence Indices to Estimate Inactivation of Bacteria and Formation of Bromate during Ozonation of Water and Wastewater Effluent	NJU	Water Research	https://doi.org/10.1016/j.watres.2018.08.030	Elsevier	2018	Yes	Green Open Access
Article in journal	Preparation of Permanent Magnetic Resin Crosslinking by Diallyl Itaconate and Its Adsorptive and Anti-fouling Behaviors for Humic Acid Removal	NJU	Scientific Reports	https://doi.org/10.1038/s41598-017-17360-8	Nature	2017	Yes	Gold Open Access
Article in journal	High-efficient removal of phthalate esters from aqueous solution with an easily regenerative magnetic resin: Hydrolytic degradation and simultaneous adsorption	NJU	Journal of Cleaner Production	https://doi.org/10.1016/j.jclepro.2017.11.121	Elsevier	2018	Yes	Green Open Access

Type of scientific publication	Title of the scientific publication	Partner name	Title of the journal or equivalent	DOI	Publisher	Year of publication	Peer-review	Open access
Article in journal	Poseidon—Decision Support Tool for Water Reuse	FHNW	Water	https://doi.org/10.3390/w11010153		2019	Yes	Gold Open Access
Article in journal	Treatment of Olive Mill Wastewater through Employing Sequencing Batch Reactor: Performance and Microbial Diversity Assessment	UTM	3 Biotech	https://doi.org/10.1007/s13205-018-1486-6	Springer	2018	Yes	Green Open Access
Article in journal	The reuse of reclaimed water for irrigation around the Mediterranean Rim: a step towards a more virtuous cycle?	IRSTE	Regional Environmental Change	https://doi.org/10.1007/s10113-018-1292-z	Springer	2018	Yes	Green Open Access
Chapter in book	Microbial Bioremediation of Petroleum Hydrocarbon–Contaminated Marine Environments	UMA	Recent Insights in Petroleum Science and Engineering	https://doi.org/10.5772/intechopen.72207	IntechOpen	2018	Yes	Gold Open Access
Publication in Conference proceedings/workshop	Groundwater Resources Scarcity in Souss-Massa Region and Alternative Solutions for Sustainable Agricultural Development	IAV	Groundwater and global change in the western Mediterranean area	https://doi.org/10.1007/978-3-319-69356-9_22	Springer	2017	Yes	Green Open Access
Publication in Conference proceedings/workshop	Climate change and water valuation in Souss-Massa region: Which management and adaptive measures	IAV	European Water	-	E.W. Publications	2017	No	No
Publication in Conference proceedings/workshop	Wastewater treatment and reuse for irrigation as alternative resource for water safeguarding in Souss-Massa region, Morocco	IAV	European Water	-	E.W. Publications	2017	No	No

3.6 Participation to scientific conferences and other externally-organised events

An intense effort was made and will be continued to disseminate findings through presentations and participations at (inter)national research and professional conferences. Overall, the MADFORWATER consortium participated in about 80 events in the first three-year period of the project, in which a target audience of over 24.000 persons was reached. In the table below a non-exhaustive overview of events is shown, in which one or more MADFORWATER partners have participated.

Table 3: Participation of MADFORWATER partners to scientific conferences and other events

Lead partner	Event title	Date	Place	Audience
UNIBO	Water Global Expo - Ecomondo 2016 Fair & congress. General presentation on the MADFORWATER project	8 November 2016	Rimini, Italy	130
UNIBO	GRICU - The 2020 horizons of chemical engineering. Presentation of UNIBO results relative to WP2.	13 September 2016	Anacapri, Italy	260
UNIBO	9th International Conference on Environmental Engineering and Management. Presentation of UNIBO results relative to WP2.	8 September 2017	Bologna, Italy	750
UNIBO	10th World Congress of Chemical engineering. Presentation of UNIBO results relative to WP2.	3 October 2017	Barcelona , Spain	280
UNIBO	Water Global Expo - Ecomondo 2017 Fair & congress. General presentation on the MADFORWATER project	8 November 2017	Rimini, Italy	85
UNIBO	7th European Bioremediation Conference & 11th International Society for Environmental Biotechnology Conference, General presentation of the MADFORWATER project.	28 June 2018	Chania, Greece	330
UNIBO	International Conference “Managing Water Scarcity in River Basins: Innovation and Sustainable Development”. General presentation of the MADFORWATER project.	5 October 2018	Agadir, Morocco	265
UNIBO	Ecomondo 2018 Fair & Congress. General presentation of the MADFORWATER project.	7 November 2018	Rimini, Italy	90
UNIBO	Ecomondo 2018 Fair & Congress. Presentation of UNIBO results relative to WP2.	7 November 2018	Rimini, Italy	90
UMA	International Congress of Environmental Science & Technologies 2017 "Energy Biotechnolgy Process Engineering Water and Waste Water Treatment	13 - 15 January 2017	Hammamet, Tunisia	100
TUC	Conference presentation in 7th Mikrobiokosmos Conference 2017.	7 - 9 April 2017	Athens, Greece	200
TUC	Conference presentation in 9th International Conference on Environmental Engineering and Management	6 – 9 September 2017	Bologna, Italy	500
TUC	Conference presentation in 14th International Phytotechnologies Conference	25 - 29 September 2017	Montréal, Canada	300
TUC	Conference presentation in 14th International Phytotechnologies Conference	25 - 29 September 2017	Montréal, Canada	300
TUC	Conference presentation in 7th European Bioremediation Conference & 11th ISEB Conference	25 - 28 June 2018	Chania, Greece	260
TUC	Conference presentation in the 7th European Bioremediation Conference & 11th ISEB Conference	25 - 28 June 2018	Chania, Greece	260
TUC	Conference presentation in 12th Chemical Engineering Conference 2019	29 - 31 May 2019	Athens, Greece	25-50
UTM	The third international Conference ATEM iii on Microbial Ecology in association with The 19th International meeting on Frankia and Actinorhizal plants. Presentation of UTM results relative to WP2.	17 - 19 March 2018	Hammamet, Tunisia	25-50
UTM	The 7th European Bioremediation Conference & 11th ISEB Conference. Presentation of UTM results relative to WP2.	25 - 28 June 2018	Chania, GREECE	25-50
UTM	International Conference on Managing Water Scarcity in River Basins: Innovation and Sustainable Development. Presentation of UTM results relative to WP2. "	4 - 6 October 2018	Agadir, MOROCCO	25-50
IAV	Groundwater and global change in the western Mediterranean. Vulnerability of groundwater in Souss Massa region and alternative solutions for agriculture development. Oral presentation	5 - 10 November 2017	GRANADA, SPAIN	300
IAV	Climate Chance Summit 2017 - The progress of Climate Action by Non-State Actors	11 - 13 September 2017	Agadir, Morocco	5000
IAV	EWRA 2017: 10th World Congress on Water Resources and Environment. Climate change and water valuation in Souss-Massa region: Which management and adaptive measures. Oral presentation	5 - 9 July 2017	Athene, Greece	600

UNIBO	Industry Water: From Single Use to Integrated Management	20 April 2017	Bruxelles, Belgium	45
UMA	Participation in the event EU for Youth, with Stand	20 - 22 November 2018	Jordan	35
UTM	METRIS MICROBIAL ELECTRON TRANSPORT RESEARCH AND INNOVATION FOR SOCIAL WELFARE.	26 November 2018	Cairo, Egypt	25-50
UMA	Participation with Madforwater research activities in the - National Days of Research Valorization with research and socio-economic partners	13 - 14 December, 2017	Tunis, Tunisia	25-50
UTM	H2020 infoday. Researchers from UTM participated to this event and introduced the Tunisian contribution to MADFOWATER Project	16 March 2017	Tunis, Tunisia	25-50
UTM	"Researchers' Night "Living Lab el Jem and Innovative Labs in Action", LiLa JemILA, organized within the framework of the "Association of Tunisia to the European Program of Research and Innovation Horizon 2020". General presentation.	28 September 2018	Tunis, Tunisia	25-50
IAV	7th European Bioremediation Conference (EBC-VII) and 11th International Society for Environmental Biotechnology conference (ISEB 2018). Oral presentation	25 - 28 June 2018	Chania, Crete	25-50
IAV	FAO Land & Water days. Oral presentation on Model-based strategies to optimize cropping patterns and treated wastewater management in agriculture	31 March- 4 April 2019	Cairo, Egypt	25-50
IAV	MANAGING WATER SCARCITY IN RIVER BASINS : INNOVATION AND SUSTAINABLE DEVELOPMENT. Poster presentation	04 - 06 October 2018	Agadir, Morocco	300
IAV	2nd Atlas Geo-resources International Congress: Applied Geosciences for Groundwater. Oral presentation	28 - 30 March 2019	Hammamet , Tunisia	200
IAV	7th European Bioremediation Conference (EBC-VII) and 11th International Society for Environmental Biotechnology conference (ISEB 2018). Oral presentation	25 - 28 June 2018	Chania, Crete	25-50
UMIL	Participation to the RAI3 television program "Geo". Microorganisms promoting the growth of plants in arid environments	4 March 2017; 14 April 2017	Rome, Italy	25-50
UMIL	XXII Workshop on the Developments in the Italian PhD Research on Food Science Technology and Biotechnology. Poster	20 - 22 September 2017	Bolzano, Italy	250
UMIL	ICEEM09, Circular Economy and Environmental Sustainability. oral presentation	6 - 9 September 2017	Bologna, Italy	100
UMIL	4th International Conference on Microbial Diversity 2017. oral presentation and extended abstract published in conference proceedings	24 - 26 October 2017	Bari, Italy	100
UMIL	"Microbe-assisted crop production - opportunities, challenges and needs" organised by AIT Austrian Institute of Technology and by the Austrian Association of Molecular Life Sciences and Biotechnology (ÖGMBT),	4 - 7 De ecember2017	Vienna, Austria	320
UMIL	"International phytotechnology conference"	1 - 5 October 2018	Novi Sad, Serbia	100
UMIL	7th European Bioremediation Conference (EBC-VII) and the 11th International Society for Environmental Biotechnology conference (ISEB 2018),	25 - 28 June 2018	Chania, Greece	250
FAORN	Nonconventional water resources within the Regional Water Scarcity Initiative	17 March 19	Cairo, Egypt	25-50
UPM	Summer School 2016: Transformative human-environment research & participatory methods: from co-production to co-producing. (The MADFORWATER Project was briefly introduced in the context of a following presentation	23 - 30 September 2016	Berlin, Germany	40
UPM	2016 Conference of the ISEE: 'Transforming the Economy: Sustaining Food, Water, Energy and Justice' (The MADFORWATER Project was briefly introduced in the context of a communication	26 – 29 June 2016	Washington DC, USA	25-50
UPM	International Workshop LINCGlobal-CCG on Global Change	24 - 26 May 2017	Madrid, Spain	25-50
UPM	Informative leaflet with a short description of the M4W project, goals and expected impacts, produced and distributed by UPM during the Summer School 2016:	26 September2016	Madrid, Spain	30
UPM	Informative and detailed presentation of the M4W project within a series of research activities developed by the UPM team in Biodiversity International (a CGIAR research centre) and CATIE (Centro Agronómico Tropical de Investigación y Enseñanza)	15 September -15 December 2017	San José, Costa Rica	60
UPM	High level event 'Harnessing Research and Innovation for FOOD 2030' that served to disseminate successful European Research and Innovation (R&I) initiatives and contribute to the ongoing science-policy dialogue in the area of Food Nutrition and Security. M4W Project was briefly introduced to some participants during the climate session and the networking session.	16 October 2017	Brussels, Belgium	140

UPM	Master in food, agriculture and natural resource economics, Universidad Politécnica de Madrid	04 September - 30 November 2017	Madrid, Spain	30
UPM	Kick-off meeting of the Action Cost 'Drylands Facing Change: Interdisciplinary research on Climate Change, Food Insecurity and Political Instability'. Informal presentation of the project during the kick-off meeting	20 - 21 November 2017	Brussels, Belgium	80
UPM	Open Dialogue/Round Table on 'The environmemtal challenge in Sustainable Development Goals, organized by the University of Salamanca (Spain)'. Informal presentation of the project	19 December 2017	Salamanca, Spain	200
UPM	Informal presentation in the 1st meeting of the Action Cost 'Drylands Facing Change: Interdisciplinary research on Climate Change, Food Insecurity and Political Instability'	8 - 9 March 2018	Wageningen, The Netherlands	80
UPM	International Seminar 'Gerir a Carência de Água: Uma Oportunidade? (Water scarcity: Is it an opportunity?)' Presentation of the M4W project	18 April 2018	Beja, Portugal	50
UPM	2nd FOOD 2030 High Level Event "Research and Innovation for Food and Nutrition Security: Transforming our food systems". M4W project was briefly introduced to some participants	14 - 15 June2018	Plovdiv, Bulgaria	140
UPM	1st Ibero-American Conference on Sustainable Development Goals. Presentation of the M4W project	27 – 29 June 2018	Salamanca, Spain	350
UPM	7th European Bioremediation Conference (EBC-VII) and the 11th International Society for Environmental Biotechnology conference (ISEB 2018). Oral presentation	25 – 28 June2018	Chania, Greece	250
UPM	1st Ibero-American Congress on Rural Studies. Informal presentation of the M4W project	4 – 6 July 2018	Segovia, Spain	200
UPM	Scientific-Technical Conference CeiA3 and VI conference of the Spanish Legume Association "Legumes in agriculture and food". The MADFORWATER project was briefly introduced as part of the research carried out by UPM team.	22 – 23 October 2018	Cordoba, Spain	60
IAMB	7th European Bioremediation Conference & 11th International Society for Environmental Biotechnology Conference.	27 June 2018	Chania, Greece	115
IAMB	International Conference “Managing Water Scarcity in River Basins: Innovation and Sustainable Development”. General presentation of the MADFORWATER project.	5 October 2018	Agadir, Morocco	265
IAMB	International Conference “Managing Water Scarcity in River Basins: Innovation and Sustainable Development”. General presentation of the MADFORWATER project.	5 October 2018	Agadir, Morocco	265
IAMB	NENA Land and Water Days -Session N. SE7 -Advancing water security in the NENA region - opportunities and challenges for intensifying agricultural reuse of treated wastewater,	02 April 2019	Cairo, Egypt	35
IAMB	7th European Bioremediation Conference & 11th International Society for Environmental Biotechnology Conference, presentation	27 June 2018	Chania, Greece	115
IRSTE	Salon International de l'Agriculture	27 February 2017	Paris, France	40
IRSTE	Club "Gestion de l'eau en agriculture"	19 October 2017	Bordeaux, France	22
IRSTE	Réutiliser des Eaux Usées Traitées en Irrigation, Quels bénéfices pour quelle durabilité ?	November 2018	Paris, France	25-50
IRSTE	Irtsea's annual workshop on Wastewater reuse	November 2018	Lyon, France	25-50
IRSTE	Treated Wastewater reuse regulation, a missed opportunity?	5 – 6 november 2018	Bologne, , France	40
IRSTE	Journées Techniques de l'Eau et des Déchets	20 – 21 May 2019	Toulouse, France	25-50
IRSTE	I12th IWA International Conference on Water Reclamation and Reuse	16 - 20 June 2019	Berlin, Germany	25-50
IRSTE	Managing Water Scarcity in River Basins: Innovation and Sustainable Development	4 - 6 October 2018,	Agadir, Morocco	25-50
NJU	Application of UV & fluorescence as indicators for the disinfection efficiency during ozonation treatment	22 October 2017	Hangzhou, China	6200
NJU	The management of hazardous chemicals in China	13 October 2017	Nanjing, China	400
NJU	Apply UV Absorbance and Fluorescence Indices for Assessing the Oxidation and Disinfection Efficiency of Ozonation Process	6 - 8 May , 2018	Atlanta, USA	1000
NJU	Apply UV absorbance and Fluorescence Indices for Assessing the Oxidation and Disinfection Efficiency of Ozonation Process	27 - 31 May 2018	Nanjing, China	800
NJU	Applying UV absorbance and fluorescence indices to estimate deactivation of bacteria and formation of bromate during ozonation of water and wastewater effluent	14 - 18 May 2018	Beijing, China	350

3.7 MADFORWATER-organised events

3.7.1 Stakeholder Consultation Workshops

This activity aims to enable a multi-stakeholder approach that will address both technologies and non-technological instruments. The MADFORWATER adaptation approach relies – among other elements - on periodic stakeholder consultation workshops (SCWs). Each SCW consists of a centralized meeting to be held in a MAC country. In the framework of MADFORWATER several SCW were organised, including:

- An initial stakeholder consultation workshop, which took place on the 16th of December 2016 in Agadir Morocco. ALTER also organized country-specific SCWs in Egypt (17th of November 2016) and Tunisia (16th of May 2017).
- A stakeholder consultation workshop in Tunis, on May 8-9, 2018. 24 Tunisian stakeholders active in the fields of wastewater treatment, irrigation and water management met with MADFORWATER researchers at the City of Science, in Tunis. . During the meeting, stakeholders were asked to fill-in a questionnaire on each MADFORWATER technology, in order to evaluate the level of suitability in relation to the social, technical, cultural and legislative context of Tunisia. The results of these questionnaires were taken into account for the selection of the technologies to be scaled up in the MADFORWATER field pilots.
- A stakeholder consultation workshop in Cairo, on April 2, 2019, in the framework of the FAO congress "NENA Land and Water Days". Four panellists and 28 stakeholders from several Near East and North African countries participated to this SCW, that was articulated into 3 sections: in the 1st one, MADFORWATER researchers presented the main results relative to the project's water management strategies and technologies, with specific focus on the irrigation technologies. The 2nd section consisted in a panel discussion, moderated by ALTER, on how to maximize the effectiveness and impact of the MADFORWATER technologies and water management strategies, taking into account the specific features of the Tunisian, Moroccan and Egyptian context. The 3rd section consisted in questions and feedbacks form the participants to the session.

The outcomes of these stakeholder consultation workshops will be presented in detail in Deliverable 7.5 "Stakeholder Consultation Workshops" (month 46).

3.7.2 Final conference

The consortium partners will organize a final scientific MADFORWATER event in the framework of a larger conference, in which the project's results will be presented and discussed with the attending stakeholder community. Initial preparations for this final event have started, the event is expected to be held in the spring of 2020.

3.8 Newsletters and press releases

3.8.1 Press releases

Short press releases (at least three) announcing the project progresses, updates, news, relevant participation to the main events will be periodically prepared and widespread through the channels reported in table 1 and by using the partners' websites.

3.8.2 Newsletters

A periodic MADFORWATER project newsletter is released annually, providing digest of the project progress and related events, as well as items to look forward to in the period after the newsletter. A PDF copy of the first two newsletters were uploaded on the Public Documents page of the project website and a link to these newsletters was provided on the project's social media accounts. Furthermore these newsletters were distributed by email to the consortium partner organisations and to other parties who have subscribed to it by registering online. The consortium members also shared the newsletter amongst their contacts. The newsletters were translated in both French and Arabic. The publication schedule and the relevant issues that will be treated are shown in Table 4.

Table 4: Newsletter publication schedule

Newsletter no.	Month	Status	Issues of the newsletter
1	12	Published	Role of the organizations involved in the project and updates on the first year project results
2	24	Published	Updates on partners participation to relevant events (realized and planned) and updates on the second year project results
3	36	Pending	Updates on partners participation to relevant events (realized and planned) and updates on the third year project results
4	48	Pending	Updates on the final project results

3.9 Interaction with other European Commission-funded projects

MADFORWATER has actively sought to link and interact with other EC-funded projects that are and were active within the same topic. The seven Water for Africa projects associated with MADFORWATER were selected in the context of these two Horizon 2020 calls and share the same common goals:

- A better preparedness in Africa to address water and climate change vulnerabilities, with less fragmentation of efforts, better monitoring and forecasting tools, and enhanced knowledge sharing and technology transfer;
- Application of innovative technological approaches and solutions adapted to local conditions, operational and effective application of integrated water management, better identification of water vulnerability by policy makers, advanced regulatory and economic instruments, improved capacity building of local actors, and increased economic and social well-being at local and regional levels in non-EU Mediterranean countries and Africa;
- Support to internationally agreed water-related goals, including in the context of the post-2015 development framework and Rio+20 follow up, by bridging the water and sanitation gaps.

Several joint activities were initiated, including a joint participation at the EBC VII - ISEB 2018 conferences in Chania - Crete. In addition, MADFORWATER is promoting and coordinating the publication of a special issue of the journal "Integrated Environmental Assessment and Management" entitled "Improving water security in Africa", in which the main results of these 7 projects will be presented.

In the following table information is provided on these associated projects.

Table 5: The 7 "Water for Africa" projects

Associated project	Project description
AFRIALLIANCE https://afrialliance.org/	The Africa-EU Innovation Alliance for Water and Climate, galvanising existing networks and institutions to facilitate knowledge exchange within Africa and between Africa and the EU. AfriAlliance is supporting the existing networks in identifying appropriate social innovation and technological solutions for key water and climate change challenges. It is capitalising on the knowledge and innovation base and potential in Africa and in the EU.
DAFNE http://dafne-project.eu	As part of the 7 Water for Africa projects the DAFNE project addresses the ongoing transformations in these regions by means of an integrated and participatory approach that can trigger change by promoting a shared learning of the risks and opportunities associated with these nexus-related challenges. The project combines excellence in research across a broad range of disciplines, from engineering and environmental sciences, to social science, economics and law.
FLOWERED http://www.floweredproject.org	FLOWERED is to contribute to the development of a sustainable water management system in areas affected by fluoride contamination in water, soil and food in the African Rift Valley (Ethiopia, Kenya and Tanzania), thus to improve living standards of its population. FLOWERED aims to study, test and implement innovative defluoridation technologies for drinking and irrigation water that will mainly operate at small village scale and to develop an integrated, sustainable and participative water and agriculture management at a cross-boundary catchment scale
SAFEWATERAFRICA www.safewaterafrica.eu	The overall goal of the SafeWaterAfrica project is to develop, introduce and apply a new and "Made in Africa" autonomous water purification system with an adapted and integrated European low energy water treatment technology based on chemical-free electrochemical degradation of organic and microbial contaminants. The system is designed to provide 300 people in rural areas with safe water.
VICINAQUA www.vicinaqua.eu	VicInAqua follows an integrated approach in order to develop a sustainable combined sanitation and recirculating aquaculture system (RAS) for wastewater treatment and reuse in agriculture in the Victoria Lake Basin area. The core of the project concept is to develop and test a novel self-cleaning water filters which consist of a highly efficient particle filter as well as a membrane bioreactor (MBR) as principal treatment unit

	within a combined treatment system where the nutrient rich effluent water will be used for agricultural irrigation
WATERSPOUTT http://www.waterspoutt.eu/	The aim of WATERSPOUTT is transform access to safe drinking water through integrated social sciences, education & solar technologies, thus improving health, survival, societal well-being & economic growth in low-to-middle-income African nations. These goals will be achieved by developing solar-optical, point-of-use water treatment technologies for vulnerable communities who remain without access to safe drinking water in Africa.

4 Evaluation of dissemination and communication indicators

The following table reviews the actual performance of the dissemination and exploitation activities against KPI targets as previously defined in the Grant Agreement.

Table 6: Progress of the KPIs related to Dissemination and Communication

No.	KPI	Status	Results and comments
1	Project website online at the beginning of the project (M3)		Website was launched and is online
2	# of non-scientific articles prepared for special magazines		3 non-scientific articles were prepared, this activity is on-going
3	# of scientific open-access publications		15 scientific articles were published thus far
4	Four newsletters published in English, French and Arabic		Two newsletters have been published, the third is in preparation
5	≥ 5 technical videos produced		No technical videos have been produced yet
6	2 professional-quality promotional-informative videos		1 video was published in the beginning of the project, a second on we is in preparation
7	# of presentations at international research and professional conferences		≥ 80 events were attended, with ≥40 presentations given
8	Final project conference organized		Not started yet
9	Visual identity available		Visual identity has been realized
10	Project leaflet available		Leaflet is available
11	Set up of social media accounts		Twitter, Facebook and LinkedIn accounts have been established
12	Final project leaflet available (M42)		Not started yet
13	Field pilots leaflet and poster (M42)		Not started yet
14	At least 3 press releases produced		No press releases published yet, expected during pilots
15	# of policy briefs		Not started yet
16	1 booklet on the MADFORWATER technologies and on wastewater reuse good practices		Not started yet

= Achieved; = in progress; = underachieved; = not started yet

A significant increase in the scope and scale of D&C activities has been noted since the intermediate D&C deliverable (D7.2). Some KPIs have been achieved, whereas others have shown significant progress, such as the attendance of events and the publication of scientific open-access articles. However, other D&C items need to be raised and improved.

5 List of abbreviations and definitions

Abbreviation	Definition
EC	European Commission
REA	Research Executive Agency
DCP	Dissemination and Communication Plan
MACs	Mediterranean African Countries
SME	Small and Medium Enterprises
DoA	Description of the Action
SAB	Stakeholder Advisory Board
R&D	Research and Development
SCW	Stakeholder Consultation Workshop
KPI	Key Performance Indicators