

HYDROUSA

H2020-CIRC-2-2017 Water in the context of circular economy

Full project title:

Demonstration of water loops with innovative regenerative business models for the Mediterranean region

Deliverable: D49 Relative Number in WP D8.4

Marketing activities

Due date of deliverable: 30/06/2023 Submission date of revised deliverable: 12/03/2024



HYDROUSA D8.4

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 776643





DOCUMENT INFORMATION

Deliverable	Number	8.4	Title:	Marketing Activities
Work Package	Number	8	Title:	Marketing and Exploitation

Due date of deliverable	Contractual	60		Actua	1	60
Version number	1.9					
Format	MS Office Word docu	MS Office Word document				
Creation date	01/03/2023	01/03/2023				
Version date	12/03/2024					
Туре	⊠R	□ DEM □ DEC □ OTHER □ETHICS				
Dissemination Level	☑ PU Public □ CO Confidential					
Rights	Copyright "HYDROUSA Consortium". During the drafting process, access is generally limited to the HYDROUSA Partners.					

Responsible authors	Name:	Eric MINO Maha AL- SALEHI Noah PEYSSON	E-mail:	e.mino@semide.org m.alsalehi@semide.org n.peysson@semide.org
	Partner:	SEMIDE	Phone:	+ 33 4 92 942 290

Brief Description	This document provides detailed information on the marketing and exploitation activities that have been engaged in over the course of the HYDROUSA project, as well as associated measurable marketing and exploitation results at this point.
Keywords	marketing; commercialization; water technologies; water services; circular economy; water reuse; water innovation; rainwater harvesting; agrotourism; wastewater treatment; HYDROUSA

Version log						
Rev. No.	Issue Date	Modified by	Comments			
1.0	01/03/2023	Eric MINO, Maha AL- SALEHI,	Structure			





1.1	15/03/2023	Noah PEYSSON	First draft
1.2	17/04/2023	Najla KAMERGI, Eric MINO	Internal review
1.3	10/05/2023	Noah PEYSSON	Second draft
1.4	17/6/2023	IHA (Dimitris Kokkinakis)	Internal reviewer
1.5	26/06/2023	Noah Peysson	Final draft
1.6	27/06/2023	Eric MINO	Final review
1.7	28/06/2023	Eric MINO	Final version with integration of statistics from communication activities (WP9) and annexes
1.8	30/06/2023	Simos Malamis	Final review & editing
1.9	12/03/2024	NTUA	Revised according to final review comments





TABLE OF CONTENTS

DOC TAB LIST LIST EXE ABB 1. 2.	CUMENT INFORMATION LE OF CONTENTS OF TABLES OF FIGURES CUTIVE SUMMARY REVIATIONS INTRODUCTION MARKETING ACTIVITIES	2 4 5 7 8 9 13
2.1	Marketing strategy objectives	13
2.2	Marketing strategy target audience	16
2.3 2 2 3.	Marketing strategy channels and activities .3.1 Marketing channels .3.2 Marketing activities description. RESULTS AND ASSESSMENT OF MARKETING AND EXPLOITATION ACTIVITIES	20 20 21 50
3.1	Marketing activities overview	50
3.2 4	Exploitation results MARKETING AND EXPLOITATION ACTIVITIES AFTER THE TERMINATION OF HYDROUSA	51 61
4.1	Branding names	61
4.2 5 6	Memorandum of Understanding for commercialising HYDROUSA solutions CONCLUSION ANNEXES	62 64 65
6.1	General Survey Questionnaire	65
6.2	Exploitation Survey questionnaire	73
6.3	HYDRO 6 Survey Questionnaire	76
6.4 7	HYDROUSA technologies and solutions factsheets WEBOGRAPHY	80 81





LIST OF TABLES

Table 2.1: Summary of the Market Size & segmentation for each exploitation scenario (Take	n from D8.9)
	17
Table 2.2 Technology & HYDRO factsheets developed.	24
Table 2.3 List of pitches participated in.	44
Table 3.1 Marketing related activities summary	50
Table 3.2: Exploitation results summary	51
Table 3.3 Individual technologies ready for exploitation by partners.	
Table 3.4 Feasibility scores of the Mediterranean replication sites	53
Table 4.1 Brand names and IPR	61

LIST OF FIGURES

Figure 2.1 Presentation video on the HYDROUSA Website	14
Figure 2.2 Poster prepared for the 102ème Congrès de l'Astee (June 2023, France)	14
Figure 2.3 Poster prepared for the Bergamo Agri Travel and Slow Travel Fair (April 2023, Italy)	15
Figure 2.4 Poster prepared for the Cairo WATREX Expo (May 2023, Egypt)	15
Figure 2.5 News on the HYDROUSA Website	22
Figure 2.6 HYDROUSA Project presented at the Greek Nationwide News Broadcast of ANT1!	23
Figure 2.7 Media Clippings on the HYDROUSA website	23
Figure 2.8 Constructed Wetlands Factsheet	23
Figure 2.9 HYDROUSA at EXPOAGUA PERU 2018	25
Figure 2.10 HYDROUSA at ECOMODO trade fair (2021 & 2022)	26
Figure 2.11 HYDROUSA at the Aquatech trade fair	27
Figure 2.12 HYDROUSA at Dubai Expo G-Stic	27
Figure 2.13 HYDROUSA at Verde.tec trade fair	28
Figure 2.14 HYDROUSA at AGROTICA trade fair	28
Figure 2.15 HYDROUSA at the Agri Travel and Slow Travel Fair, in Bergamo	29
Figure 2.16 HYDROUSA at WATREX Expo 2023	29
Figure 2.17 HYDROUSA at 15 th IWA SWWS in Haifa	30
Figure 2.18 HYDROUSA at the COP25 in Madrid	30
Figure 2.19 HYDROUSA at 3 rd IWA RRC.	31
Figure 2.20 Some of the conferences that HYDROUSA solutions presented in 2021	31
Figure 2.21 HYDROUSA at WWCE.	32
Figure 2.22 HYDROUSA at 13 th International Conference on Water reclamation and reuse	32
Figure 2.23 HYDROUSA at ecoSTP 2023	33
Figure 2.24 Rethinking Water Event 2021	34
Figure 2.25 HYDROUSA at the World Water Forum	34
Figure 2.26 HYDROUSA presentation EU BAUHAUS	35
Figure 2.27 Laison workshops	36
Figure 2.28 HYDROUSA Workshop - MULTISOURCE and Water Europe	37
Figure 2.29 HYDROUSA Liaison Workshop - Water Europe Wetlands Lyon	38
Figure 2.30 HYDROUSA Liaison Workshop - Circular Water Solutions for a Water-Smart Society	39
Figure 2.31 Workshop on the Revision of the Urban Wastewater Treatment Directive	39
Figure 2.32 Stakeholder's meetings	40





Figure 2.33 Inspirational talk by Simos Malamis, Coordinator of HYDROUSA project (left) and I	Meet the
Expert session (right)	41
Figure 2.34 HYDROUSA info stand	41
Figure 2.35 Demo site introductory seminars	42
Figure 2.36 HYDROUSA's final conference – WICC 2023	42
Figure 2.37 HYDROUSA Open Days	43
Figure 2.38 Stakeholder categories who participated in the general survey.	45
Figure 2.39 Dedicated budget for water and wastewater management project of survey responde	ents 46
Figure 2.40 Willingness to pay by tourists for ecosystem services provided by HYDRO6	
Figure 2.41 Screenshot of the HYDROUSA serious game available on the website.	
Figure 2.42 Screenshot of the replication tool on the HYDROUSA website	49
Figure 3.1 Feasibility breakdown of the replication sites	53
Figure 3.2 Summary of HYDROUSA policy brief regarding the revision of the Urban Waste Water Tr	reatment
Directive available on the website	59
Figure 3.3 HYDROUSA policy brief on NBS	59
Figure 3.4 HYDROUSA policy brief regarding the European Green Deal and the battle against the O	COVID-19
pandemic	60





EXECUTIVE SUMMARY

This report provides a detailed overview of the marketing activities that have been implemented over the entire length of the HYDROUSA project. Considering that the marketing the and communication/dissemination activities are interrelated and have been performed in parallel, this report is closely linked to D9.4 (Updated report on Dissemination and Communication) and D9.5 (Report on the networking and marketing activities). It also makes frequent references to D8.1 and D8.9 (initial and final Exploitation Scenarios and Market Size) and D8.2 and D8.10 (initial and final Business Plan for Exploitation), in which the market segmentation and the marketing strategy are being discussed.

This document starts with an overall introduction to the HYDROUSA project, and then summarizes the key takeaways from each section of the report.

Then, in a second section, the marketing activities engaged to promote the HYDROUSA project are further detailed. It is presenting respectively the objectives as originally set in the marketing strategy of D8.10, the specific audiences and customer segments that have been targeted as part of the marketing activities for each solution, and finally the type of activities and channels used to achieve the intended promotional objectives.

In a third section, the results of the marketing and exploitation activities that are measurable so far are being presented and assessed. Similarly, to the communication activities, even if some partners took more responsibility, the marketing activities have to a certain extent also been conducted by all of the HYDROUSA partners. A total of **420 activities** with clear marketing benefits have been identified, with a total reach of more **123,321 persons**.

Finally, the last section describes the marketing and exploitation activities which are going to be pursued after the official termination of the project. Indeed, those actions will help to guarantee that the brand name will continue to be used and promoted.

HYDROUSA has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776643





ABBREVIATIONS

- CWP Catalan Water Partnership
- NBS Nature-based solutions
- ICT Information and communication technologies
- IHA Impact Hub Athens
- NTUA National Technical University Athens
- UBRUN University of Brunel
- EC European Commission
- EU European Union





INTRODUCTION

Water resources are facing considerable challenges across the globe: problematic waste and resource management, destruction of natural ecosystems and shrinking water availability aggravated by increasing climate change impacts and exponentially booming demography. To manage water more sustainably, and particularly in water-scarce regions such as surrounding the Mediterranean Sea, one way is to close water loops. This approach of using and reusing alternative water sources than ground water is encouraged by the HYDROUSA project, an EU-funded project under Horizon 2020 programme. HYDROUSA is developing new circular business models suitable for the Mediterranean region as well as other water-scarce regions in Europe and worldwide. Unlike the traditional way of managing water in broken loops, HYDROUSA's closed loops are managing water sustainably while creating additional products and ecosystem services, leading to a win-win-win situation for the economy, the environment, and the community.

The six exploitation scenarios have been analysed in detail in *Deliverable 8.9 Exploitation Scenarios and Market Size (confidential report)*, and are summarized below:

- **HYDRO1**: Resource recovery from wastewater treatment. It is based on the combination of several technologies/services: anaerobic treatment and sludge composting, constructed wetlands, water reuse and biogas production.
- HYDRO1&2: Resource recovery from wastewater treatment together with irrigation/fertigation of an agroforestry system using the nutrient-rich reclaimed water. It is based on the integrated solution: Anaerobic treatment and sludge composting, constructed wetlands, water reuse and biogas (biomethane) production, design of agroforestry system and precision irrigation system.
- **HYDRO3:** Rainwater harvesting system and irrigation of high value crops with low irrigation requirements. It is based on construction of a sub-surface rainwater collection, and it uses a precision irrigation system.
- **HYDRO4**: Decentralised rainwater harvesting and aquifer storage and recovery system. It is based on building a residential rainwater collection structure comprising of three separate, but interrelated subsystems for domestic use and for agricultural irrigation. It also uses slow sand filtration system to treat rainwater and a precision irrigation system.
- **HYDRO5:** Seawater and brine desalination used to irrigate fruits in a greenhouse. It is based on a Mangrove Still system which produces clean water via evaporation and condensation. The clean water is used to irrigate fruits in a greenhouse.
- **HYDRO6:** Closing water loops within eco-tourist facilities. It is based on a combination of technologies/services: constructed wetlands, compost cultivator, water vapour condensation, precision irrigation systems, selection and production of crops. The treated and collected water is used for irrigation and for domestic uses (e.g., flushing toilet).





HYDROUSA goes beyond the current water and wastewater management practices, adopting innovative, nature-based, and nature-inspired water management solutions for different types of water. Closing the water loops and boosting their agricultural and energy profiles, the systems are characterised by low energy footprints. By making water use circular, the whole water value chain is transformed from a disruptive approach to an integrated one; turning the challenges faced by the water sector into opportunities.

HYDROUSA aims to create a community of 'water allies' which believe and work on shifting the development paradigm of our world from an open market society based on economic profits to a world where local communities are empowered to develop tailor-made solutions to improve their well-being while regenerating the local environmental ecosystems. This gives the opportunity to local operators to develop economic, social and environmental services based on closed water loops where decentralised, low-tech systems are favoured.

HYDROUSA solutions provide several services and integrated technologies which are based on traditional handcraft and ancient methods combined with modern NBS, ICT connection and automation systems. The proposed solutions show a perfect combination of building green infrastructures to make use of the plantbearing benefits and generating green growth within an existing and demanding market while restoring ecosystems. Hence, the HYDROUSA exploitation scenarios are focusing on the integrated services provided to the end-users rather than on the exploitation of the specific technologies.

Marketing activities objectives

Over the course of the project (July 2018 - June 2023), the marketing activities have been performed alongside general communication activities. While the communication activities intended to reach a broader audience, making the scientific, economic, and political communities aware of the challenges addressed and the solutions developed by the HYDROUSA project, the marketing activities aimed on top of that to reach previously identified potential end-users and/or investors, industry and corporate experts, and promote the HYDROUSA solutions to them. Section 2.1 of the current report is developing further the marketing objectives as described in the *Market deployment strategy from the business plan* (D8.10).

Marketing activities target audience

As is defined in D8.1 *Exploitation scenarios and market size*, depending on the technology and services offered, the marketing strategy has been targeting for each HYDROUSA solution a set of specific customer segments. Indeed, the characteristics and the design of the different solutions make them suitable for specific targets, as explained in section 2.2. of this document. Nevertheless, as introduced previously, the entire project and all the developed solutions have an initial focus on water scarce rural and coastal Mediterranean areas, such as islands. This is justified by the decentralized nature of the solutions, and the already worrying hydrological state of the region, witnessing severe water scarcity. This explains why most of the communication and marketing activities have focused on this region. While the target audience goes beyond only customers, the most relevant customer types can be separated into the following segments:

- Municipalities (HYDRO 1&2, HYDRO 3, HYDRO 4, HYDRO 5)
- Water utilities (HYDRO 1&2, HYDRO 4, HYDRO 5)
- Farmers and agricultural communities (HYDRO 1&2, HYDRO 3, HYDRO 5)





- Natural Park/protected areas (HYDRO 3, HYDRO6)
- Agro-eco-tourism remote facilities (HYDRO 6).

Marketing activities channels

As described in section 11.1. (*Marketing strategy*) of deliverable D8.2 and elaborated in section 2.3. of this document, no permanent physical channel such as shops have been used and are not foreseen to market the solutions. Instead, a strong online presence has been ensured throughout the project. This has been achieved with the development of a dedicated website, a YouTube channel, and other social media through which valuable information and digital promotional material could be shared. Press releases have also been organised to boost the visibility of the HYDROUSA project within desired audiences. Nevertheless, temporary physical channels have been exploited to further strengthen the communication and marketing activities, promote the brand and the solutions of HYDROUSA, primarily through in-person participation of members of the HYDROUSA consortium to relevant events (trade fairs, conferences, pitch presentations, workshops etc). Finally, as part of HYDROUSA replication activities (Working Package 7), a total of 26 replication studies have been conducted across Europe and the world. Those are briefly elaborated in section 3.2 (*Exploitation results*). They have all been used to support the marketing activities, exploring the technical, economic, and social suitability of the various solutions with local stakeholders from potential target markets across the Mediterranean region and in other water scarce areas, and creating business cases to promote.

Type of marketing activities

As mentioned above, a combination of communication and marketing activities have been performed over the entire length of the project, supporting one another. Some will even continue beyond the official end of the project in June 2023. However, as the project advanced, the motivation and purpose behind the activities engaged in evolved, shifting from ideation and validation-seeking activities to purely promotional and commercial activities. This led to a wide range of marketing activities being implemented over the course of the project, using the channels listed above. The activities and channels used are described in more detail in section 2.3 of this document.

Marketing and communication activities shared responsibilities

While Impact Hub Athens (IHA) was responsible for leading the communication activities and drafting the report covering it, SEMIDE was responsible for leading the marketing activities and drafting this report. SEMIDE has used its experience on other European projects on similar tasks of exploitation, commercialization, communication, and marketing, while IHA, established in Greece and thus closer to the replication sites, could use its regional and national network to focus on spreading the word about the progress of the HYDROUSA project. Both have closely collaborated, for instance when preparing this document. Nevertheless, as already mentioned, all partners have to some extent participated in communicating and promoting the project in their respective fields and networks.

Marketing activities results





In total, 632 activities have been organized. Out of those, **420** activities have been identified as marketing activities, due to representatives of the target audience attending (plus 146 press releases and media briefings reaching 870,000 persons), and therefore promotional benefits being expected. For those communication activities, the calculated total reach is above 1,000,000 persons, while the marketing activities reached more than **123,321** persons. Thus, the reach of the marketing activities exceeds by far the originally set KPI of 10.000.

Exploitation activities results (drawn from a survey shared with all the consortium members).

- 10 technologies further developed during the project, successfully demonstrated are going to be exploited by partners on the market.
- > 800.000€ of indirect revenues initiated by project partners on these technologies.
- 26 replication sites in 20 countries.
- 19 new European projects started in relation to the HYDROUSA project.
- 3 policy recommendations drafted.
- ETV accreditation for water treatment solution (HYDRO1) by AERIS and IRIDRA





MARKETING ACTIVITIES

This chapter provides an overview of the marketing activities, summarizing their objectives as defined in the marketing strategy of D8.2 (*Business Plan for Exploitation*), the target audiences as set in D8.1 (*Exploitation Scenarios and Market Size*), and the channels and activities used and implemented as part of the marketing strategy as described in D8.2.

2.1 Marketing strategy objectives

From the marketing point of view, 4 distinct objectives have been as part of the marketing strategy (defined in D8.2). Those have all successfully been achieved over the course of the HYDROUSA project:

1. Studying further the market needs, e.g., through workshops, conferences, and dedicated surveys (see subchapter 3 for more details and <u>D9.4 & D9.5 for the full list</u>).

One of the purposes behind the marketing activities was to further understand the needs and challenges faced by stakeholders from water scarce areas. By studying potential customers' requirements and identifying barriers and incentives to improve their situation, the feedback collected from outside stakeholders was used to refine and validate the concepts developed as part of the project. Therefore, surveys have been conducted, as well as workshops and conferences organized or attended to benefit from outsider's inputs and adapt and tailor the solutions to their requirements.

A <u>general survey</u> (provided in annex) has been produced with the motivation to analyse the challenges faced by Mediterranean region and islands. Shared online and during trade fairs and conferences, it has received **91** responses. Those numbers have been updated towards the end of the project. This provided a good opportunity to estimate the suitability of and interest in the different HYDROUSA solutions to address Mediterranean water challenges. Furthermore, in the case of HYDRO6 and Tinos Ecolodge, on-site workshops with as many as 40 participants have been conducted, and a specific <u>survey</u> ((provided in annex) developed and filled by 12 visitors. The results of this survey have been used to assess, validate, and promote the perception of the benefits and added value of such a service. A specific section of Chapter 2.3 analyses the questionnaire's results, while the questions of all three questionnaires can be found in the Annexes.

2. Raise the awareness around water scarcity and the acceptability of water re-use solutions.

Acknowledging that the HYDROUSA project attempts to address the dramatic implications of water scarcity through innovative, currently under-used solutions, an important requirement is for policies to evolve and adapt. Indeed, new policies could facilitate and encourage the uptake of rainwater harvesting and wastewater re-use, such as offered in the market-ready solutions the HYDROUSA project developed. Such an evolution could help lift some of the administrative and legal barriers that currently hinder a faster implementation of the technologies. To this extent, HYDROUSA partners advocated for reworked policy through intensive networking with political representatives, regulators, and water authorities (in particular for licencing of HYDRO1 in Greece and policy recommendations at EU level, see section 3 of this report). Additionally, the





redaction of a total of 3 policy briefs, the participation in or organization of high-level conferences by HYDROUSA partners, or the redaction of scientific publications have been opportunities to accelerate the discussions around those issues.

3. Promoting the solutions and attracting potential customers.

In a later stage of the project, the focus turned on communicating and promoting the solutions that have been developed. To do so, dedicated promotional material (factsheets, posters, leaflets, demonstration videos) and some business storylines have been prepared, covering the results of the demo-sites and the replication sites.



Figure 2.1 Presentation video on the HYDROUSA Website

HYDROUSA						
	2					Biolician anno 1990 Series an
-	-	0.000	Alexand	Desiling of Second	12. I	10-107 10-107
-		11.10	Balance of State		E 2	1925
-	_	84	Lillion Ada	State and a local	- 7	TSW.
		2	- panetes	Construction of the law of the la	E	
				Corver.		
		17-2-3		and the second second		8 8 6
-		1000,11F				00 0-01
-		11:11		-	And Part of the	- 1982
	And in case of				_	

Figure 2.2 Poster prepared for the 102ème Congrès de l'Astee (June 2023, France).







Figure 2.3 Poster prepared for the Bergamo Agri Travel and Slow Travel Fair (April 2023, Italy).

OCCENTRALIDED NATURE RASED			E AND DOMETRIC USES
General concepts Beternel		Consta mitigation and improved use of second tellowicesences	
Technologies & Services over	View Retriet	L implies of an a herb 1 array of a contract 2 array of a contract	Andrew Station Andrew Station Sport Andrew Station Station Andrew Station Station Station Station Station Station Station Station Station Station Station Station Station Station Station S
		1 Subsetion Services, 20	Internet of the view counter
Contrag units: Intern while and some Event Aussential and an and an and Aussential and Aussentia	A desilition. A data Sector land Sector la	An and tree family in the second sec	Add previous halo ingetie <u>Notice yes</u> terms of table (2010) constant (2010) constant
Replication and demo sites (15	Application stars Application stars Application stars Demo stars
SEMIDE OR			0000

Figure 2.4 Poster prepared for the Cairo WATREX Expo (May 2023, Egypt).

All those actions helped spread the word to reach the targeted market segments, to communicate the objectives, results, and benefits of the different HYDROUSA solutions. Section 2.3 on marketing activities describes in more detail the different activities that have been implemented.

Strengthening the brand of HYDROUSA as a holistic solution provider of nature inspired innovations and technologies.

Finally, the marketing and communication activities intended to boost and enlarge the network around the HYDROUSA project, and the community awareness of its existence and the concepts it is offering. Multiple events have been organized and attended to ensure the brand name is being promoted and recognized. For





instance, the HYDROUSA consortium was represented at the Ecomondo trade fair in Italy, at the Aquatech trade fair in the Netherlands, and participated at the World Climate Summit during the Cop 25 in Madrid, just to name a few. More information is given in section 2.3.2. and the full list of the aforementioned activities is presented in D9.4.

2.2 Marketing strategy target audience

Since HYDROUSA is presenting 6 distinct solutions, each with their own applicability potential, a range of target audience, customer segments, and potential investors can be listed. A more extensive analysis of the market segment can be found in D8.1 covering *Exploitation Scenarios and Market Size* and in D8.9, the updated version of that document. This analysis has been validated and enhanced through an assessment of the results from the replication studies, as well as of existing exploitation results. Table 2.1 below presents an overview of each exploitation scenario, their market size, segments, and customers segments.





Table 2.1: Summary of the Market Size & segmentation for each exploitation scenario (Taken from D8.9)

HYDROUSA exploitation scenario	Estimated Market Size (# of units)	Comments	Market segments	Customers segments
HYDRO1	10,824	Lack of WWTPs and		- Water Utilities
		replacement/upgrade	- Mediterranean islands and	- Municipalities
		of not compliant	other similar islands.	
		WWTPs with	- Rural communities (semi-	
		UWWTD	collective wastewater	
HYDRO1&2	10,360	Sub-segment of	treatment)	- Water Utilities
		HYDRO1 with a space	- Coastal areas relying on	- Municipalities
		for agroforestry	groundwater	- Community of
				farmers
HYDRO3	Huge	Rural areas & Green		- Community of
	42,927 units	urban areas with		farmers
	estimated in 3	enough space	- Mediterranean islands and	- Natural
	replication sites		other similar islands.	parks/protected
	(Faro, Cabrera,		- Seasonal accommodation	area managers
	Hyeres)	D'ana tha an that	within protected areas (e.g.,	
HYDRO4	Huge	Discontinuous urban	national parks)	- Municipalities
	1,827 units	areas	- Coastal areas relying on	- Water utilities
	estimated in 3	Habitations within	groundwater	- Community of
		(ELL and non ELL sites)		Idfillers
	(Falo, Cablela,			- Urball latiliers
	Hugo		- Mediterranean islands and	
HIDROS	nuge	unused land to be	other similar islands	- Water utilities
	Estimated unitos in	valorised with small	- Coastal areas in different	- Community of
	replicability sites:	crons growing	areas E g Middle Fast	farmers
	8 400 (Mallorca	activities	(including Red sea, Arabian sea	lamers
	only)		and Persian Gulf islands)	
	Uniyy		- Areas with brackish water	
			resources	
HYDRO6	2,454	Different eco-labelled	- Agro-ecotourism structures as	- Agro-Ecotourism
		establishments and	well as other touristic	establishment
		lodges in	structures: lodges,	managers
		Mediterranean	leisure, recreation, holiday,	- Natural
		countries	green hotels (including "brand"	parks/protected
			category)	area managers
			luxury, upper-upscale and	
			upscale)	





Mediterranean islands and	
other similar islands.	
- Rural / remote communities:	
households not connected to	
wastewater treatment plant	
-Mediterranean islands and	
other similar islands.	

As already previously introduced, the general regions and areas looked at are rural, water scarce areas that are in great need for decentralized solutions. The following paragraphs explain the suitability of identified customer segments for each HYDROUSA exploitation scenario.

Customer segments:

- <u>Water utilities/Association of WWTP</u> (HYDRO1, 1&2, 4, 5)

Association of water treatment plants and of water utilities are an obvious customer target for several of the developed HYDROUSA solutions. The HYDRO 1 concept is offering possibilities to upgrade existing wastewater treatment plants to enable operations with a lower-environmental footprint, recovering energy and nutrients. Coupling it with HYDRO 2 can ensure that the water is re-used and valued locally, with economic and environmental benefits. HYDRO 4 and 5 can also gather interest of water utilities to secure water services, either by recharging the aquifers, or by implementing a more environmentally friendly saltwater desalination technology.

- <u>Municipalities</u> (HYDRO1, 1&2, 3, 4, 5)

Municipalities have a direct responsibility to develop the resilience, the attractivity, and the autonomy of the territory they oversee. Thus, they have been identified as potential investor or partner for several of the solutions developed, as they all enable to reduced local freshwater abduction by substitution to alternative sources (rainwater, seawater, wastewater), encouraging local food production, job creation. While most solutions have been designed for remote rural areas, making rural municipalities particularly suitable customer segments, some solutions can also be adapted to metropolitan urban areas, if the appropriate conditions exist. Municipalities can act as the springboards to advocate and highlight the need for circular solutions within the regions and at a policy level (e.g., rainwater collection systems to be obligatory in new constructions on the island) in order for the solutions to be promoted and prompt a top-down approach.

- <u>Communities of farmers</u> (HYDRO1&2, 3, 4, 5)

One central element of the HYDROUSA solutions has been to dedicate the use of alternative water sources for agricultural purposes, vital activities to foster autonomous and resilient communities. Therefore, communities of farmers can be seen as one clear target audience, as they could show interest in collectively reducing their reliance on groundwater. While the solutions have variable investment costs and outputs, farmers could





benefit from implementing, or partner with aforementioned stakeholders (municipalities, water utilities) to develop any of the HYDRO 1&2, 3, 4, or 5 concepts.

- Agricultural chambers (HYDRO 1&2, 3, 4, 5)

Being key stakeholders in the development of more resilient and sustainable agricultural systems, agricultural chambers are an interesting target audience to promote the HYDROUSA solutions, since it is their responsibility to support farmers to adapt and implement new innovative solutions.

- <u>Urban farmers</u> (HYDRO4)

By implementing rainwater harvesting on rooftops and other infrastructure, HYDRO4 can enable urban farmers to develop their water autonomy, contributing to the reduction of freshwater abstraction in their area. By lowering their dependence on groundwater, this significantly helps them be more resilient.

- Natural Park managers/Protected Area managers (HYDRO3/6)

Protected areas and natural parks, generally being located remotely, could also benefit from closing the wastewater and rainwater loops, harnessing the potential of rainwater and wastewater use for either irrigation, on-site domestic applications, or firefighting, as was demonstrated in the replication site of Cabrera Island National Park.

- <u>Campsites (HYDRO1, 6)</u>

Similarly, to natural parks, campsites could also find interest in closing the water loop. Often remotely located from networks, they nevertheless have domestic uses they need to fulfil. Nature-based solutions such as wetlands seem to be ideal solutions for such a business case.

- <u>Civil engineers and architects</u> (HYDRO3, 4, 6)

As it can be expected that customers demand and legislation for new buildings is going to increasingly require development plans to include considerations about rainwater recovery, targeting civil engineers and architects for the promotion of HYDRO 3 and HYDRO 4 seems relevant. As many constructions related professionals who are involved in the tourism industry show an increased interest in embodying circular solutions for water & energy management, both for economic and environmental purposes, HYDRO 6 is also relevant to promote.

- <u>Greenhouse providers</u> (HYDRO5)

With the development of the Mangrove Still system as part of HYDRO5, greenhouse providers might be interested in offering this innovative solution within their product portfolio.





- Agro-ecotourism establishment & hospitality managers (HYDRO6)

The holistic HYDRO 6 solution, designed specifically for remote touristic facilities, makes agro-ecotourism establishments that seek to increase their energy, food, and water autonomy while strengthening their resilience and attractivity, excellent customer segments for this all-in-one solution. General ecotourist facilities can be also targeted to upgrade their activities to also cover agro-tourism dimensions.

Besides potential customers, other stakeholders which have been reached through communication and marketing activities have been considered as key targets as part of the promotional activities. Indeed, since they can also indirectly influence the uptake of the different technologies provided as part of HYDROUSA, either facilitating regulation on the topic, increasing academic research, or generally putting societal pressure behind industry and political actors to implement those solutions, their importance is not to neglect.

- Legislators and regulators:

As mentioned in section 2.1, one of the objectives of the marketing strategy was to "raise the acceptability of water re-use solutions". Indeed, this can amongst others be accomplished through favourable legislation. Therefore, legislators and regulators represented one of the many target audiences, and dissemination activities have also aimed to reach them.

- <u>Scientific society</u>:

Through academic research, the scientific community can also encourage the solutions developed as part of HYDROUSA, supporting with studies the environmental, social and economic added values that can be drawn from those technologies, as well as the necessity to adapt our system to reduce the reliance on groundwater.

- <u>Civil society</u>:

Finally, indirectly, civil society can also foster a more positive attitude towards the development of the HYDROUSA solutions. Indeed, while they can push their political representatives for change, they can also themselves be involved in the uptake of some solutions, as could be the case in HYDRO 3 and 4.

2.3 Marketing strategy channels and activities

In order to reach the market segments described above, a combination of channels and activities has been implemented.

2.3.1 Marketing channels

While no permanent physical channel such as a shop has been used throughout the project to promote the HYDROUSA concept, a variety of complementary physical and online channels have been used to promote the solutions towards the desired target audience.





- Physical channels:

Regarding physical channels of promotion, in-person attendance to stakeholder meetings, conferences, trade fairs, exhibitions, workshops, seminars, pitches, commercial talks, and dedicated HYDROUSA events have been organized to guarantee suitable networking and marketing results, with the appropriate recognition of the project and its partners.

- Online channels:

Regarding online channels, a broad panel of activities has again been conducted. One of the main promotional channels has been the dedicated HYDROUSA website and social media, as well as the ones of all the solution providers, through which all the promotional materials and relevant updates have been communicated. Indeed, printed and electronic promotional materials have been developed, as well as questionnaires and publications. Furthermore, press releases and media briefings have been secured.

- <u>Media</u>:

Indeed, the HYDROUSA project has been promoted in newsletters, at the radio & on TV (particularly in national and regional channels in Greece, the country where all the pilot sites are being located). Articles in magazines have also been published.

- <u>Networks</u>:

Finally, a variety of networks have been used to further promote and communicate on the project intention, evolution, and results, either directly related to water (Global Water Partnership, Catalan Water Partnership, ICT4Water cluster, Water Europe, Horizon2020 water related projects etc), or to islands, one of the regional focuses of the HYDROUSA project (e.g., SMILO networks).

2.3.2 Marketing activities description.

The paragraphs below list and describe in more detail each of the promotional products and activities that have been conducted over the course of the project.

News and posts on HYDROUSA website, partners' website and association social media and the newsletter:

The HYDROUSA website (Figure 2.5) (https://www.hydrousa.org/) presents the project and its HYDROs in greater detail with regular news. Indeed, valuable promotional content is being frequently updated, such as events participated in or organized, or media clippings presenting the HYDROUSA solutions. The website was a way to reach out to all interested customer segments and stakeholders, regardless of how specific. Indeed, the website allows access to information on the project and its demo sites, as well as to easily get informed and contact the consortium. The different tools that have been developed are also available on the website (e.g Replication Tool).







Figure 2.5 News on the HYDROUSA Website

The project website will remain active for 5 years after the official termination of the project to ensure the communication activities continue, to ensure a successful market uptake. Furthermore, all that information has also been shared on the partners' websites, using their entire network to contribute to the marketing activities. Finally, the project and the provided solutions have also been exhaustively presented in all of the HYDROUSA social media platforms: <u>Twitter</u>, <u>Facebook</u>, <u>LinkedIn</u>, and <u>YouTube</u>.

<u>Printed and Electronic promotional materials including marketing factsheets and press releases media</u> <u>coverage including TV</u>:

For the interested customers willing to go further and access more technical information, several brochures, posters, and videos (including animation) have been prepared to promote HYDROUSA and the different scenarios. Indeed, a total of 12 marketing factsheets have been created (Table 2.2), one for each of the technology/service developed, as well as some for the overall integrated HYDRO (1, 2 and 6). They each show the business cases at the demo-sites, the added-value, and the contact information to reach out in case of interest. They have also been printed out and distributed at attended trade fairs. Furthermore, short films have demonstrated the demo solution and have been channelled through YouTube, Facebook, Twitter and HYDROUSA website. Six short movie clips have been developed illustrating the technologies applied in each demo site. These videos include technical details of the technologies and innovations that are used in each Demo Site. They have been conducted as a combination of a narrator explaining the technologies and innovations along with interviews with the different stakeholders in each HYDRO. Some of the promotional videos have gathered over 8000 views. Finally, many press releases have been published in different languages across the Euro-Mediterranean area to promote the project.







Figure 2.6 HYDROUSA Project presented at the Greek Nationwide News Broadcast of ANT1!



Figure 2.7 Media Clippings on the HYDROUSA website.



Figure 2.8 Constructed Wetlands Factsheet





Table 2.2 Technology & HYDRO factsheets developed.

List of technology & HYDRO factsheets.
HYDRO1: Wastewater treatment system and resource recovery
HYDRO2: Design and construction of an Agroforestry System
HYDRO6: Closing water loops in tourist facilities: HYDROUSA agro- ecotourism approach
Upflow Anaerobic Sludge Blanket
Constructed Wetlands
Biogas Upgrade
Bio-filter
Ardeusi Precision Irrigation System
Stone Channel Irrigation System
Rainwater Harvesting (HYDRO3)
Rainwater Harvesting and Aquifer Storage (HYDRO4)
Mangrove Still (HYDRO5)

Participation at dedicated events:

Besides producing communication material, HYDROUSA has been promoted in several local, national, and international events such as conferences, exhibitions, and workshops. Specifically, a total of 28 trade fairs and 185 conference participations were carried out over the course of the project with clear marketing purposes. As mentioned, the dissemination activities targeted all types of stakeholders during these events, while the events performed within the marketing task (T8.4) are more business oriented, targeting more specifically potential customers and related channels and networks. Indeed, towards the end of the project, dedicated trade fairs have been attended solely with marketing purposes to present market-ready solutions and the benefits that they offer.

The majority of the aforementioned conferences took place in Mediterranean countries, clearly underlining the focus of the project on this region. Other countries included water-scarce areas (South-Africa, Peru, Chile etc) or countries in which some of the HYDROUSA partners are established (Germany, Austria). In terms of focuses, the conferences have dealt with topics linked to water technologies, wastewater management, sustainability and environmental solutions, innovation, circular economy, the agricultural sector, the tourism sector, all particularly suitable to promote the HYDROUSA project.

Below is a small selection of the trade fairs that have been attended by some HYDROUSA partners (more information is provided in D9.5).

EXPOAGUA PERU: Lima, Peru (2018).

Expoagua PERU, the most important trade fair of the water sector in Perú, was held in Lima from 17 to 19 October 2018 (Figure 2.9). The trade fair counted with an exhibition area and three conference rooms and with a total number of visitors over 3500.







Figure 2.9 HYDROUSA at EXPOAGUA PERU 2018

The Catalan Water Partnership gave a presentation about "Circular Economy as a strategic axe to promote the competitiveness of the water sector entities". Sara Gabarron, project Manager of the CWP, introduced some general trends about Circular Economy models and had the opportunity to present the HYDROUSA project to the audience.

ECOMONDO Trade Fair; 2018, 2021 and 2022, Rimini, Italy and in Mexico 2022

Ecomondo is the reference event in Europe for the ecological transition and the new models of circular and regenerative economy. An international event with an innovative format that brings together all sectors of the circular economy on a single platform: from the recovery of materials and energy to sustainable development. The key sectors are waste and resources, reclamation and hydroecological risk, circular economy, integrated water cycle, in which all have been in line with the objectives of the HYDROUSA project. HYDROUSA was presented by its coordinator at the 3rd European Nutrient Event: Towards Circular Economy of Phosphorus and other nutrients, in Rimini, Italy, on 5-9th November 2018. On October 2021, experts from the HYDROUSA team presented the circular economy approach of HYDROs 1-6, invited to the event WATER PROJECTS EUROPE – Water-smart industrial and utility-industry symbiosis within the Ecomondo exhibition in Rimini, Italy. In 2022, the HYDROUSA team had the opportunity to participate in Ecomondo exhibition and providing tangible results on decentralised water reuse. In 2022 the workshop with title "Water Project Europe Challenges and eco-innovation actions addressing water scarcity and drought in Mediterranean countries" (Figure 2.10) was co-organized by NTUA and other project partners. In this workshop we discussed on climate change and its impacts on water scarcity and its political, economic and social implications. International collaboration and innovation actions are preferable mechanisms to tackle these challenges from a technical and socio-economic point of view. In addition, during ECOMONDO 2022 HYDROUSA was hosted at the booth of the European Union together with other EU-funded projects, presenting the circular solutions of the project as well as some of the derived products. Finally, HYDROUSA was also presented by UNIVPM team in Ecomondo trade fair in Mexico, in July 12-14 2022.







Figure 2.10 HYDROUSA at ECOMODO trade fair (2021 & 2022)

Aquatech Water event: Amsterdam, Netherlands (2019).

Aquatech Amsterdam is the world's leading water trade show for process, drinking and wastewater visited by over 20,000 water professionals. HYDROUSA was presented at the booth of ICT4Water cluster throughout the event, and even had a possibility to pitch the solutions developed (Figure 2.11).







Figure 2.11 HYDROUSA at the Aquatech trade fair.

Dubai Expo G-Stic - Local solutions for water and climate challenges in the Mediterranean region - UAE (2021)

HYDROUSA experience on decentralised water management was presented at Dubai Expo by the Coordinator (Simos Malamis) of the project on the 26th of October 2021, explaining how nature-inspired innovations help closing the loops on three Greek islands (Figure 2.12).



Figure 2.12 HYDROUSA at Dubai Expo G-Stic.

Verde.tec Trade fair (2022)

Verde. tec is one of the most important environmental technology events in Greece. It covers a wide range of topics on energy, circular economy and smart cities. On March 2022, HYDROUSA participated in Verde.tec trade fair at the booth of the Sanitary Engineering Laboratory (SEL) of the NTUA. The visitors had the opportunity to learn about HYDROUSA's solutions and also to have a close look at some of the derived products (oregano, lavender, aronia liqueurs, etc.) (see Figure 2.13).







Figure 2.13 HYDROUSA at Verde.tec trade fair.

AGROTICA Trade fair (2022)

The AGROTICA trade fair is the most central networking point for the agricultural sector and the agricultural economy of Greece. HYDROUSA's solutions were presented at the AGROTICA trade fair at the booth of the project partner AGENSO. In particular, the low-cost irrigation automation system was presented, which calculates the ideal amount of irrigation water based on crop needs (Figure 2.14).



Figure 2.14 HYDROUSA at AGROTICA trade fair

The trade fairs attended in 2023 have been joined close to the official end of the project, at a time when the technologies had already been developed across the selected test sites. At this point, being able to rely on proven case study experiences, it was important to accelerate the promotion and marketing of the HYDROUSA project. Thus, by selecting trade fairs internationally recognized, with both a Mediterranean focus, and with audiences matching our customer segments, they have been identified as relevant events to boost further the marketing activities. Some examples are presented below.

Agri travel and slow travel fair: Bergamo, Italy (2023).

Focusing on rural tourism, eco-tourism, slow-tourism, and agro-tourism, this event attracted over 20.000 visitors. Particularly suitable for the marketing of the HYDRO6 solution, this has been a great opportunity to





promote all solutions, since many public stakeholders and representatives from the rural agricultural field have been joining. Relevant contacts have been made (Figure 2.15).



Figure 2.15 HYDROUSA at the Agri Travel and Slow Travel Fair, in Bergamo

WATREX Expo: Cairo, Egypt (2023).

The WATREX Expo is being promoted by the organizers as "the biggest Exhibition and Conference for water and wastewater Technologies in the MENA Region". With in 2022 over 23.000 visitors primarily coming from water scarce region, and attendants representing all identified target audiences listed in 2.2, this event seems to be an excellent opportunity to showcase the EU-funded research and innovation project (Figure 2.16).



Figure 2.16 HYDROUSA at WATREX Expo 2023.





Members of the HYDROUSA project also took part in various conferences, few of which are presented below.

15th IWA International Conference on Small Water and Wastewater Systems: Haifa, Israel (2018)

At the 15th International Specialized Conference on Small Water and Wastewater Systems, held in Haifa, Israel, from 14 to 18 October 2018, the HYDROUSA project was presented by coordinator Dr Simos Malamis (Figure 2.17).



Figure 2.17 HYDROUSA at 15th IWA SWWS in Haifa

COP25: Madrid, Spain (2019)

The Catalan Water Partnership (CWP) participated in the 25th edition of the World Climate Summit COP25, which took place from 2nd-13th December 2019 in the IFEMA fairgrounds in Madrid. The World Climate Summit COP25 is organized by the United Nations, and it is one of the most important global events about climate change. The CWP participated in the Green Zone panel discussion to discuss the industrial ecosystems, cluster roles and innovation. In this session, Xavier Amores, cluster manager of the CWP, made a presentation focusing on circular economy in the water sector, highlighting the HYDROUSA project (Figure 2.18).



Figure 2.18 HYDROUSA at the COP25 in Madrid

3rd IWA resource recovery conference: Venice, Italy (2019)

The HYDROUSA project was presented at the 3rd IWA RRC (Figure 2.19), which took place in Venice, Italy, from 8 to 12 September 2019. The conference was organised by the Polytechnic University of Marche, the





University of Queensland, the University of Verona and the EU-HORIZON2020 SMART-PLANT consortium and covered a wide range of topics including resource recovery, wastewater treatment and sanitation infrastructure - global, regional and local perspectives.



Figure 2.19 HYDROUSA at 3rd IWA RRC.

In 2021, almost all international conferences were held online due to the COVID -19 pandemic. The HYDROUSA project was presented by many partners such as NTUA, UNIVPM, UBRUN, IRIDRA, ICRA, CWP, SEMIDE, RADKE, PLENUM and others in a considerable number of important conferences such as EcoSTP, CEST2021 and the 4th IWA RRC, which can be seen in Figure 2.20.



Figure 2.20 Some of the conferences that HYDROUSA solutions presented in 2021.

World Water Congress and Exhibition: Copenhagen, Denmark (2022)

HYDROUSA was strongly represented at the IWA World Water Congress in Copenhagen with three platform presentations, one pitch and two posters (Figure 2.21). The World Water Congress and Exhibition aims to bring together professionals from the water sector and also includes water consuming industries, agriculture, architects and urban planners, hydrologists and soil and groundwater experts, social sciences, the ICT sector,





the financial sector and others. HYDROUSA presented its vision, results and achievements as well as upcoming activities and conferences to a global audience.



Figure 2.21 HYDROUSA at WWCE.

13th International Conference on Water Reclamation and Reuse: Chennai, India (2023)

Fabio Masi from IRIDRA presented the HYDROUSA project at the 13th International Conference on Water Reclamation and Reuse, held in Chennai, India, from 15 to 19 January 2023. The HYDROUSA team was selected to present to the audience the results and outcomes of the HYDRO1 and HYDRO2 demonstration sites in Lesvos (Figure 2.22).



Figure 2.22 HYDROUSA at 13th International Conference on Water reclamation and reuse.

EcoSTP 2023, Girona, Spain (2023)

The EcoSTP-23 aimed to discuss the latest cutting-edge ecological technologies for a sustainable transition to wastewater treatment, reuse and resource recovery on an urban and industrial scale, with a special focus on effective knowledge transfer into practise. HYDROUSA actively participated in the ecoSTP-23 conference held in Girona, Spain, from 26 to 29 June 2023. In particular, a workshop entitled "Water reuse and resource recovery at decentralized level in MED area" was co-organised by HYDROUSA's partners ICRA and NTUA. In Figure 2.23, the coordinator presented the HYDROUSA project, while the solutions of the project were presented from different perspectives by ICRA, CWP, UBRUN, UNIVPM and IRIDRA. In addition, HYDROUSA participated in the conference with 6 posters from ICRA and an oral presentation from NTUA (Figure 2.23).







Figure 2.23 HYDROUSA at ecoSTP 2023

Other important events where HYDROUSA was presented are given below.

Rethinking Water Event 2021, Lisbon, Portugal (2021)

The Rethinking Water event gathered researchers, innovators, entrepreneurs, experts and policy makers with a genuine interest in water-related issues to discuss the most pressing challenges in Europe. The Coordinator of the HYDROUSA project, Dr Simos Malamis, participated in the event and presented the Greek situation regarding water reuse and the HYDROUSA project as a tangible example of the valorisation of non-conventional water resources (Figure 2.24). The Rethinking Water event took place in the framework of the second Water Reuse Day, held in Lisbon on 2 December 2021, as the result of the collaboration of the EIT Water Scarcity and the FIT4REUSE project.







Figure 2.24 Rethinking Water Event 2021

World Water Forum, Dakar, Senegal (2022)

The World Water Forum is the world's biggest water-related event, held every three years to bring together key political actors, business leaders, NGOs, donors, and international organizations to promote dialogue and facilitate access to water and sanitation. Thie2022 Forum—under the theme, *Water Security for Peace and Development*—is jointly organized by the World Water Council (WWC) and the Government of Senegal and has been the first hosted in Sub-Saharan Africa. The Forum provided a unique platform for the water community and key decision makers to collaborate and make long-term progress on global water challenges. The 9th World Water Forum focused on four priorities: 1) water security and sanitation; 2) cooperation; 3) water for rural development; 4) means and tools for implementation of reforms in water and sanitation. Additionally, the Forum convened a Summit of Heads of States and major international institutions, to advance the political agenda on water and sanitation at the midpoint of the 2030 agenda on implementing the water and sanitation targets and Sustainable Development Goals (SDGs). The HYDROUSA project was presented during the "<u>Mediterranean</u> Solutions from the 4th Mediterranean Water Forum" session during the Water Forum" (Figure 2.25). We showed the regenerative, <u>circular</u> and nature-based dimensions of the project.



Figure 2.25 HYDROUSA at the World Water Forum





New European Bauhaus, Brussels (2022)

The New European Bauhaus (NEB) is an environmental, economic, and cultural initiative that combines design, sustainability, accessibility, affordability, and investment to make the European Green Deal a reality in Europe. The HYDROUSA project was part of the New European Bauhaus Festival as one of the best-case practices of Horizon2020. The NEB Festival was a great opportunity to bring citizens together to discover the New European Bauhaus values of beauty, sustainability and togetherness, and their power to address societal challenges. The participants of the festival were from pluri-disciplinary backgrounds — from science to art, design to politics, architecture to technology.

HYDROUSA participated at the NEB Festival to demonstrate the value of innovative, regenerative and circular solutions for nature-based water management of Mediterranean coastal areas, closing water loops, nutrient management, boosting the agricultural and energy profile and local economies based on circular value chains. During the FESTIVAL representatives of the consortium NTUA & IHA, were hosting an info stand, giving information about the project (Figure 2.26).



Figure 2.26 HYDROUSA presentation EU BAUHAUS





102 Congrès Astee: Nice, France (2023).

The SEMIDE took part in the 102nd Congress organized by the French Scientific Association of Technique for Water and the Environment (ASTEE). ASTEE is the leading scientific and industrial association of professionals in the fields of water and waste. The focus of the congress was "the Metabolism of territories in a context of ecological transition", particularly suitable to the topic of HYDROUSA. Noah Peysson presented a poster summarizing the outputs and the benefits of the project; and gave a pitch during a dedicated Innovation session gathering a total of 11 solutions. HYDROUSA was ranked 2nd. He also attended the entire four-day event to network and further promote the HYDROUSA project during various panel discussions.

Networking with cluster alliances and associations (farmers, water utilities, etc):

Networking through arranging meetings at events and direct contacts (emails, phones) for cluster alliances have been targeted during promotional activities. A Liaison and clustering event with other EC projects was organised by Water Europe in Brussels with the support of NTUA and IHA to enhance the visibility of the project at EC level among policy makers and explore potential common activities and complementarities with other projects. The event was part of Water Projects Europe on 16th June 2021 and was focusing on how the participation of citizens in European projects can be fruitful for water smart management. To this end, HYDROUSA invited 6 relevant projects - and the respective POs - of which 3 funded by H2020 and 3 from different EU programs (one from Interreg, one from the Erasmus, and one from LIFE) to have different views and diversity in the contribution (Figure 2.27).



Figure 2.27 Laison workshops

Moreover, the EU-funded project, MULTISOURCE, and Water Europe co-organise a clustering event involving four EU funded NbS focused projects (MULTISOURCE, NICE, HYDROUSA, UNALAB, CONNECTING NATURE) and were invited to discuss at WPE in this public, clustering event on the achievement, challenges, pressures and opportunities perspectives from their respective experiences from the NbS projects, with the support of the POs of the EC Executive Agencies (Figure 2.28).


Figure 2.28 HYDROUSA Workshop - MULTISOURCE and Water Europe

The 17th International Conference on Wetland Systems for Water Pollution Control 2022 was part of the IWA Specialist Group "Wetland Systems for Water Pollution Control" conference series, which is a bi-annual conference series that serves as a global forum for discussion and knowledge sharing on the state of the art in scientific and practical development and implementation of natural and constructed wetlands and other Nature-based Solutions to provide improved water quality and other co-benefits and ecosystem services. Together with the HYDROUSA project and INRAE/INSA, Water Europe organized a clustering workshop, Water Projects Europe, as part of the IWA Conference to address the above-mentioned issues by opening a discussion board composed of experts bringing real-life experience from different projects and initiatives (Figure 2.29). This edition of WPE highlights initiatives and projects on NBS, as well as the participation of local government and utility representatives.







Figure 2.29 HYDROUSA Liaison Workshop - Water Europe Wetlands Lyon

Within the final HYDROUSA conference - WIC Conference (2023) two high-level workshops were taking place on clustering and networking:

1. The Water Projects Europe (WPE) workshop on Circular Water Solutions for a Water-Smart Society which was co-organized by the Water Europe with HYDROUSA (Figure 2.30). The event aim was to explore the transformative concepts of a Water-Smart Society and Water Oriented Living Labs. By discussing and sharing knowledge, the event fostered innovative water management practices aligned with the overarching goals of sustainability and circularity.







Figure 2.30 HYDROUSA Liaison Workshop - Circular Water Solutions for a Water-Smart Society

2. Workshop on the challenges that the Revision of the Urban Wastewater Treatment Directive (91/271/EEC) brings to water utilities. The workshop was co-organized by the Hellenic Association of Municipal Water and Sewerage Utilities (EDEYA), the Athens Water Supply and Sewerage Company (EYDAP), the Thessaloniki Water Supply and Sewerage Company (EYATH) and the Sanitary Engineering Laboratory of the National Technical University of Athens (NTUA). The workshop gathered high level representatives to actively share the next steps that emerge from the new directive the challenges and the opportunities that create for a more sustainable water management (Figure 2.31).



Figure 2.31 Workshop on the Revision of the Urban Wastewater Treatment Directive





The HYDROUSA project has been also affiliated to the ICT4WATER cluster, which ensures connection with other projects on ICT and Water Management. HYDROUSA events are also very important for the promotion of the project and making links with the potential customers. For example, during each general meeting (physical or online during CODVID-19 period), a stakeholders' workshop was organised, and the target audience (municipalities, water utilities, research) were invited to exchange and to make potential business opportunities (Figure 2.32). More information and details about the stakeholders' meetings that organised are given in D9.5.



Figure 2.32 Stakeholder's meetings





HYDROUSA co-creation activities, kiosks and Hackathons and final conference:

Co-created activities such as workshops, interviews and meeting have been taking place around the concept of agroforestry and fertigation, HYDROUSA's monitoring & controlling platform, precision irrigation and permaculture which increased the public awareness about the topics. A hackathon has also been organized towards the end of the project, gathering several teams of students and new formed start-ups to ideate on the topics of Natural resource conservation, Circular Economy, and NetZeroFuture. During the Hackathon 110 people participated including over 25 experts from various fields of industries (Figure 2.33).



Figure 2.33 Inspirational talk by Simos Malamis, Coordinator of HYDROUSA project (left) and Meet the Expert session (right)

Furthermore, HYDROUSA info stand (Figure 2.34) operated during summer to share information with citizens, tourists, and visitors on the cycle of water. The info stand was designed and operated by experienced hosts who were also participating at the HYDROUSA summer school/workshops. The info-stand included info sessions, leaflets, interactive games, possible projections and enabled more dissemination and potential customers. It also embedded workshops and info sessions with laser-cuts and 3D printing on the topics of water-stress and circularity. Moreover, a set of three HYDROUSA webinars/seminars have been organized for each of the partnering test sites, Tinos, Mykonos, and Lesvos (Figure 2.35).



Figure 2.34 HYDROUSA info stand







Figure 2.35 Demo site introductory seminars

Additionally, HYDROUSA final conference was an opportunity where the outcomes of HYDROUSA were widely disseminated to stakeholders (academic community, water utilities, municipalities, companies, other). The conference took place in Athens in the last month of the project. The conference provides the opportunity to bring together national and EU policy makers, regulators, and NGOs to present and discuss the outcomes of the project. The final conference is an opportunity to take stock, to review the project's achievements, pose questions that merit further exploration and attract new customers (Figure 2.36).



Figure 2.36 HYDROUSA's final conference – WICC 2023





Open Days-Notice Boards:

Open Day activity of each demo (Figure 2.37). Opening events were held at each of the demo sites, where the demo was demonstrated to local and international visitors. The open-days were designed accordingly to introduce different aspects of the established solutions, including the input and outputs, but also the outcomes and the potential impact in the transition from a linear to a more circular approach in water management. The open days also had interactive sessions, like crop planting, essential oil workshops, plant detection and analysis of the water circles.





Figure 2.37 HYDROUSA Open Days

Pitches:

A total of 13 pitches (Table 2.3) have been conducted by project partners to highlight and present the concepts behind the HYDROUSA solutions specifically to marketing-related stakeholders. Those have been excellent opportunities to receive feedback from outside stakeholders on the value proposition behind each solution developed, and further extend the network.





Table 2.3 List of pitches participated in.

Name of the event	Title	Place	Partner involved
Promoting market-ready water innovations: Investor café (2018)	Demonstration of water loops with innovative regenerative business models for the Mediterranean region	Brussels, Belgium	NTUA
A visit of Master students specialized in Anthropology of Technology and Social Innovation from the university of Nice Sophia Antipolis (2019).	HYDROUSA project	Sophia Antipolis, France	SEMIDE
H2020 Water Innovations for sustainable impacts in industries and utilities (2019)	HYDROUSA project	Venice, Italy	NTUA
Sharper. Researcher's Night (2019)	HYDROUSA project	Ancona, Italy	UNIVPM
Fermhamente (2019)	NEI REFLUILE RISORSE CHE NON VEDI	Fermo, Italy	UNIVPM
GreenTech Symposium (2019)	HYDROUSA project	Athens Greece	NTUA
Ecomondo - Water reuse in agriculture, sustainable irrigation, and nature managed water cycle in the new European framework (2019)	er reuse in Closed water loops and socio- nable economic eco-innovations in cure managed Mediterranean basin: the Rimini, Italy new Horizon2020 HYDROUSA innovation ork (2019) action.		UNIVPM
EAWAG Workshop (2020)	The Digital Transformation of the Water Sector: from Data to Circular Smart Water Systems	Dübendorf, Switzerland	UBRUN
Research Day of Brunel University London (2021)	Circular Economy & Sustainability in the Water Sector: from Data to Circular Smart Water Systems	London, United Kingdom	UBRUN
Mediterranean Climate Change Adaptation Award (2021)	HYDROUSA: Demonstration of water loops with innovative regenerative business models for the Mediterranean region	Online	NTUA





WEFE Nexus Award	HYDROUSA wins WEFE Nexus Award	Online	ΝΤΠΔ	
Nomination (2021)	of PRIMA Foundation	Online	NIUA	
Il ciclo dell'acqua tra uso e				
riuso: una soluzione da	HYDROUSA solutions	Rimini, Italy	IRIDRA	
mettere a Sistema (2023)				
Bilateral meeting with	HYDROUSA: Demonstration of water			
Fundación Universidad de la	loops with innovative regenerative	Havana, Cuba	AEDIC	
Habana (Cuba) on possibilities	business models for the	(online)	ALKIS	
of application in Cuba (2023)	Mediterranean region			

Questionnaires:

In regard to the first marketing objective "Studying further the market needs, e.g., through workshops, conferences, and dedicated surveys", two marketing related questionnaires have been produced and shared in parallel, each with their own specific purpose.

First, a **general questionnaire** was shared with the objective of collecting inputs and feedback from all types of stakeholders and potential customers to better understand the needs in terms of water and wastewater management. The survey received so far, a total of 91 responses. While the entire survey can be found in the Annexes, some of the results are analysed below.

In terms of respondents, the majority are representatives of the scientific community (36.3%), of water utilities (12.1%), the general public (9.9%), and of water users (5.5%). More marketing specific, 2.2% are agro-tourist facilities owners, 2.2% are municipalities, 12.1% are water utilities, and 1.5% are island networks. The ten most represented categories who participated in the survey are presented in Figure 2.38.



Figure 2.38 Stakeholder categories who participated in the general survey.





Out of all respondents, 27.9% are planning to implement a new water/wastewater management related project in the next three years, 45.9% might do so, while 23% do not consider it at this point.

Out of the stakeholders planning to develop a water or wastewater management project, Figure 2.39 below presents the different budget that will be allocated to it.





When asked about the top 3 priorities water challenges faced in their island/region, the survey results suggest that the highest priorities are the necessity to expand wastewater reuse (44%), and the importance to upgrade and replace ageing infrastructure (41.8%), each with over 40% of responses. It is followed by climate change adaptation and emergency preparedness (29.7%), peak water supply guarantee (29.7%), water conservation and efficiency (28.6%), and water pollution (25.3%) are the next four noteworthy challenges.

To the question about the usefulness of the HYDROUSA solutions to answer some of the water needs in their region, the vast majority (~82%) of all respondents considered the HYDROUSA solutions as either useful or very useful.

To the question of the most important values provided by the HYDROUSA project, the following three responses came on top:

- Providing decentralized wastewater treatment (61.5%)
- Providing non-conventional water resources (52.7%)
- Recovering water, nutrients, energy and salt (50.5%)

Regarding whom the respondents consider to be the most appropriate provider of HYDROUSA solutions, municipalities and water utilities came far in front with respectively 50.5% and 61.5%.

Besides this general questionnaire, a **questionnaire specific to HYDRO6** has been developed to support the market analysis study. Respondents evaluated the socio-environmental services, which allowed them to assess the reaction of visitors to that kind of solution. While a summary is below, the results of this survey can also be found in the Annexes and in D8.7, a case study developed by Ecolodge Tinos.





The results are overall very satisfying. Indeed, most of the respondents of the survey answered positively regarding the satisfaction of their stay at Tinos Ecolodge, 75% being satisfied and 25% being very satisfied. Furthermore, as we can see below, all participants answered positively regarding their willingness to pay more, with 50% being ready to pay 20€ or more.

Question: How much you are willing to pay in addition to your accommodation to benefit from the ecosystem services provided by HYDRO6.



Figure 2.40 Willingness to pay by tourists for ecosystem services provided by HYDRO6

When ranking as the <u>regulation services</u> from 1-5, the following three responses came first:

- Increasing the green spaces and improving the landscape (58% of respondents).
- Improving the biodiversity of the soil (16% of respondents).
- Reducing the carbon footprint due to use of renewable energy & low energy processes (16% of respondents).

Came second the following three elements:

- Soil erosion control (50% of respondents.)
- Reducing the carbon footprint due to use of renewable energy & low energy processes (25% of respondents.)
- Increasing the fertility of the soil (16% of respondents.)

Here, we can see that while increasing the green spaces and improving the landscape was ranked most often the highest, reducing the carbon footprint was also highly valued by the respondents, while improving the biodiversity of the soil was generally ranked low (83% ranked it 1 or 2 out of 5).

When ranking the <u>provisioning services</u> provided by HYDRO6 from 1-5, the following three responses came first:

- Surplus vegetable production deployment to local markets (58% of respondents).
- Organic food production for daily fresh inhouse consumption (16% of respondents).
- Production of nutrient rich water from treated wastewater for irrigation (16% of respondents).

Came second the following four elements:





- Collection of rainwater for domestic use (25% of respondents).
- Organic food production for daily fresh inhouse consumption (25% of respondents).
- Surplus vegetable production deployment to local markets (25% of respondents).
- Compost production (25% of respondents).

In this case, the surplus vegetable production was the element that was particularly valued (with around 85% of respondents ranking it 4-5). However, the production of nutrient rich water from treated wastewater for irrigation was ranked most often the lowest (75% ranking it 1-2), maybe due to a lack of understanding of the benefits for the agricultural system, allowing for instance to reduce the necessity on chemical fertilizers. Collection of rainwater for domestic use was ranked averagely.

HYDROUSA Serious Game:

HYDROUSA serious game (Figure 2.41) is another tool developed as part of the project with marketing and communication purposes. The HYDROUSA GAME is stylized in a world where the players must manage a water crisis of a virtual city and make the citizens happy! A game that consists of 6 different areas (one for each HYDROUSA site) with a variety of needs and specifications. Energy, food, human power, and water are the essential resources for the wellbeing of our communities. The game is designed and developed by the consortium partner AGENSO, with the support of NTUA. It is targeting the youth, the wide public, educators, sustainability professionals, local communities, and NGO's. So, while it is not necessarily directly targeting customer segments, it can still benefit the marketing activities.



Figure 2.41 Screenshot of the HYDROUSA serious game available on the website.





Replication Tool:

In order to simplify the process of analysing the suitability and receive an estimation of costs and outputs for each of the HYDRO's, a <u>replication tool</u> has been developed for interested customers, and is available on the HYDROUSA website. It allows in a straightforward and convenient way to autonomously get estimations, only by entering climate and technical parameters about the site. The tool has two types of uses, for basic users or expert users, depending on the amount of information available. The tool also has three levels, as can be see below (Figure 2.42). The first level compares and rank the suitability of each HYDRO, the second considers legislative and economic aspects while the third performs a rapid estimation of performance indicators, CAPEX, and OPEX.

	Level 1: POSSIBLE HYDROS	Tool 7	result
	Level 1: POSSIBLE HYDROS	In the second second	Front A. DADID DETID (ATION) OF DADIC NEW
	SUTTABLE TO BE REPLICATED IN THE SPECIFIC AREA	MATRIX WITH LEOISLATIVE AND ECONOMIC ASPECTS	PERFORMANCE INDICATORS KOT RELATED TO ENERGY AND LAND FOOTPRINT, AS WELL AS CAPEX AND OPEX RANGES OF THE SPECIFIC HYDROS
BASIC	x		x
EXPERT uters	x	x	x
	BASIC users EXPERT users	BASIC X users X EXPERT X users X	BASIC X usern X X weern X X

Figure 2.42 Screenshot of the replication tool on the HYDROUSA website





RESULTS AND ASSESSMENT OF MARKETING AND EXPLOITATION ACTIVITIES

3.1 Marketing activities overview

At the moment of writing this report, the total number of activities organized reaches **420**, and the estimated reach of the project is **123,321** persons. Thus, the originally set KPI of 10.000 people reached, has been by far exceeded.

To assess the marketing results, both the activities with a direct marketing purpose and the activities with an audience that included marketing relevant stakeholders have been considered. Indeed, out of all the communication activities organized, which can be found in D9.4 have only been kept the one that had in their target audience at least one of the following audiences attending:

- Business network
- Investors
- Potential end-users
- Water authorities
- Industry

Therefore, events have been excluded which only concerned the scientific community, regulators, or civil society, even though those could theoretically also be relevant as explained in the end of section 2.2. (full list provided in D9.4).

Activity type	Number of events / occurrences	Total reach
Trade fairs	28	46,050
International Conferences	185	50,686
Press releases	112	222,683
Media briefings	34	646,131
Seminars/Workshops	136	15,920
Questionnaires (related to	2	103
marketing)		
Stakeholder meetings	55	5202
Publications	17	5000
Pitch	13	1,463

Table 3.1 Marketing related activities summary

Digital online media have also been used to support marketing activities such as news and posts on HYDROUSA website, partners' website and association social media and the newsletter (see D9.4 for details). Printed and electronic promotional materials such as factsheets for HYDRO solutions and key technologies (provided in annex), posters and leaflets have developed and used during events and bilateral meetings with stakeholders, potential customers and investors.





3.2 Exploitation results

This section is summarizing the exploitation of HYDROUSA results by partners. In order to gather information from the partners, an internal survey (see questionnaire in annex) collecting results related to exploitation activities has been developed during the last semester of the project. In a first section, the survey was investigating the market availability of the technologies & services offered part of the HYDROUSA project, as well as all sales already recorded by each of the partner which indirectly related to the project. Secondly, it gathered all the projects that have been started in which some of the HYDROUSA components have been applied, retrofitted, upgraded. Finally, it looked at the various policy recommendations that have been made as part of the HYDROUSA project. The results of it are summarized in Table 3.2 below. For more information, see the Annexes.

Performance indicator	Measurement
Indirect revenues generated based on HYDROUSA results.	>800.000€
Number of technologies developed and ready for the market.	10
Number of replication sites.	26
Number of new projects started.	19
Number of EU policy recommendation.	3

Table 3.2: Exploitation results summary

Since some of the HYDROUSA partners have already been commercializing the technologies that they have developed as part of the project, over 800.000€ can be estimated as revenues indirectly linked to the project.

Around 500.000€ have been generated by AERIS, with approximately 2/3 of that corresponding to biofilters for odour treatments, and around 1/3 to desulfurization systems. Those have been primarily sold to public administrations such as wastewater treatment plants (75%) and industrial customers (25%). Those sales are distributed between Spain (75%), the rest of Europe (20%), and the rest of the world (5%).

So far, more than 500 Precision Irrigation Systems with low-cost sensors by AGENSO have generated over 100.000€. They have been sold to farmers, cooperatives, research institutes, universities, water management utilities, municipalities.

Planet, responsible of commercializing the mangrove still technology has already received a framework agreement with a first client. It guarantees the installation of a pilot of 20-25 desalination units in Malta for an Energy and Water Utility (as a result of replication study carried out during HYDROUSA project). More are also in discussion.

IRIDRA has achieved 221,793.19€ indirect revenues, separated into the following:





- Detailed design and construction supervision of a wetland for treatment and reuse of wastewater from the Gorgona island: 29,493.19 €.
- (ii) Basic and detailed design plus construction supervision of two wetlands plant for treatment and reuse of wastewater from Al Jazer (4000 PE) and Mahout (4000 PE) Omani towns: 147,300.00 €.
- (iii) Development of Project Document for Nature-Based Solutions for Wastewater Treatment in the Drin River Basin (feasibility study on NBS and Food-Water-Energy nexus): 45,000.00 €.

DELAROS (DEL) has developed one rooftop rainwater collection system in Greece, Peloponnese, Galatas, for 3000€. All the above, are revenues which are indirectly linked with the HYDROUSA project. The SMEs had the opportunity to develop and test their solutions within the HYDROUSA project. Then, through their own actions, outside of the project they were able to attract private and public funds related to services and products they provide.

Technology	Technology provider
Ardeusi Precision Irrigation System	AGENSO, Greece
Constructed Wetlands	IRIDRA, Spain
UASB technology	NTUA, Greece, AERIS, Spain
Biogas desulfurization	AERIS, Spain
Biofilter for odour and pollutant control	ALCN, Austria
Stone channel irrigation technology	ALCN, Austria, NTUA, Greece
Rainwater harvesting with aquifer storage	Delaros, Greece
Rainwater harvesting with sub-surface storage	Delaros, Greece
Water flower: atmospheric water harvesting device	ALCN, Austria
Mangrove Still System	Planet, Italy

Table 3.3 Individual technologies ready for exploitation by partners.

Replication sites:

As already mentioned earlier, the HYDROUSA project has a total of 26 replication sites globally. Those are sites selected by the project partners, which showed an initial interest in the HYDROUSA solutions. They have been particularly useful for the promotion of the HYDROUSA project since they are all located in either Mediterranean countries or other water scarce areas, specifically targeted by the HYDROUSA project.

Figure 3.1 (drawn from an article prepared for the final HYDROUSA Conference in Athens) presents the results of an economic and regulatory feasibility assessment for the various Euro-Mediterranean replication sites.







Figure 3.1 Feasibility breakdown of the replication sites

Despite the significant technical feasibility of the implemented HYDROs in the Euromed sites (most of the technical scores are above 60% according to Table 3.4 below), the economic feasibility is in many cases the concerning element, although crucial to ensure the sustainability of HYDROUSA solutions.

Country	ISO	Site	Selected		Feasil	bility scores	
			HYDROs	Legislative	Social	Economic	Technical
Cyprus	СҮР	Choletria	HYDRO2	82	83	80	100
		Community					
Spain	ESP	Mallorca	HYDRO1&2	81	77	77	76
Spain	ESP	Cabrera	HYDRO 4	86	96	77	57
			HYDRO1&2	86	96	50	45
Spain	ESP	Formentera	HYDRO6	84	89	63	85
France	FRA	Saint-Honorat	HYDRO1&2	71	78	50	65
Croatia	HRV	Zlarin Island	HYDRO3	71	78	69	100
Israel	ISR	Nattoufa	HYDRO1	54	53	100	70
Italy	ITA	Gorgona Island	HYDRO1&2	80	98	88	61
Italy	ITA	Capraia	HYDRO3	85	92	0	100
Malta	MLT	Pwales Valley	HYDRO4&5	78	69	0	62
Oman	OMN	South AlBtinah	HYDRO5	76	72	60	75
West Bank	PSE	Misilya	HYDRO2	79	74	0	90
and Gaza							
Tunisia	TUN	Kerkennah	HYDRO3	71	72	80	90
Turkey	TUR	Gökçeada	HYDRO1&2	74	81	30	60
Turkey	TUR	Kaleköy	HYDRO6	73	81	81	67
Portugal	PRT	Santa-Maria	HYDRO3	80	95	68	90
Portugal	PRT	Culatra Island	HYDRO4	64	92	30	83

Table 3.4 Feasibility scores of the Mediterranean replication sites





			HYDRO5	64	92	81	24
Egypt	EGY	El-Wahat	HYDRO1+2	83	73	20	60
		Bahariya					

New projects started:

- PRIMA-SAFE

Standing for "Sustainable water reuse practices improving safety in agriculture, food and environment", the PRIMA-SAFE project is a three-year EU-funded project that brings 12 partners, amongst which ICRA, together from 2022 to 2025. The objective is to optimize the proposed water reuse strategies, ensuring their safety both for environment and human health. Engineering strategies developed will increase sustainability, decrease water stress, and fulfil farms necessities. These strategies will boost the local economy of agricultural regions.

- Horizon Europe REMEDIES

Remedies for the future of our oceans through deploying plastic litter valorisation and prevention pathways. The overall objective of the REMEDIES project is to attract public interest for deploying remedies of our seas. The efforts to monitor and collect plastic litter, as well as to prevent the generation of litter in the first place, should become mainstream and an everyday part of our lives. REMEDIES is thus aiming to create a trend of plastic prevention by exploitation of traditional and modern channels and with the help of citizen's science fostering co-creation of participatory processes building a more plastic-conscious society. With 23 partners, Impact Hub Athens is a WP leader.

- Horizon2020 DIVAGRI

Lasting from June 2021 until May 2025, and with ALCN as one of the partners, the DIVAGRI project addresses limitations of smallholder agricultural systems, where farmers lack the means to invest in improving productivity. The project will test seven bio-based technologies and business solutions targeting farming inputs, farming practices, processing and access to markets, adapted to rural African contexts.

- PRIMA MED-WET

This project- Improving Mediterranean irrigation and Water supply for smallholder farmers by providing Efficient, low-cost and nature-based Technologies and practices (MED-WET)- was developed to ultimately improve the irrigation efficiency of small farmers in the Mediterranean region especially through the optimal use of scarce water resources for lasting food and water security. Partners from Malta, Germany, Egypt, Morocco, and Portugal have joined for this 3-year project. Project MED-WET is 100% funded by the Malta Council for Science and Technology through the PRIMA initiative of Member States, Associated Countries and Participating Countries. The PRIMA Programme is supported by the European Union.





- LIFE⁺ BIODAPH₂O

Funded within the LIFE⁺ program, it will have a duration of 42 months, ending in January 2026 and has a budget of € 2.1M. Two pilot tests will be carried out with different configurations of the BIODAPH treatment system at Quart WWTP (Girona, Catalonia) and at Antissa WWTP (Lesbos, Greece). The project is coordinated by the University of Girona (UdG) and the partners are ACSA (Sorigué Group), Institute of Environmental Assessment and Water Research (IDAEA-CSIC), MINAVRA Techniki, National Technical University of Athens (NTUA), BETA Technological Centre (UVic-UCC) and Catalan Water Partnership (CWP).

- Horizon2020 AccelWater

AccelWater is coordinated by AGENSO and consists of 17 partners amongst which NTUA. AccelWater's project main objective is to optimize freshwater water consumption in the food and beverage industry under a water-waste-energy nexus by introducing beyond state-of-the-art water reclaiming, reusing and Artificial Intelligence enabled monitoring and control technologies that will permit the use of reclaimed water in the manufacturing processes of food and beverages. On the same time, it will allow waste and energy reclamation, optimization and management, and consequently will result to environmental sustainability, cost savings and the development of added value products and value chains through material recovery.

- <u>CIRC4FOOD National Funds</u>

The aim of the CIRC4FooD project is to study and develop of agri-food systems inspired by the Circular Economy, which combine composting and harvesting rainwater, and which reduce the environmental footprint, and demonstrating them through carefully designed pilot tests in the city of Trikala. The project has 4 partners, amongst which NTUA and AGENSO and is funded by Greek National Funds.

- PRIMA FIT4REUSE

Part of the PRIMA Programme, supported under Horizon 2020 European Union's Framework Programme for Research and Innovation, the project FIT4REUSE will provide safe, sustainable, and accepted ways of water supply for the Mediterranean basin by exploiting non-conventional water resources. Treated wastewater and desalinated water can contribute to compensate the gap between agricultural water demand and supply and provide consistently high-quality water throughout the year. FIT4REUSE will focus on innovative, sustainable and safe treatment technologies, and on the use of treated wastewater and desalinated water in agriculture and for aquifer recharge. Also, specific methodological and assessment tools will be created to meet the project objectives. NTUA and UNIVPM are two of the 9 partners involved in this project.

- UKWIR Tender National Funds

UKWIR Tender - What does a circular economy water industry look like? Jacobs, Brunel, Allied Waters; 2020-21 2. UKWIR Tender - Where is the greatest sustainable economic benefit for resource recovery in the water cycle? HYDROUSA Partners: UBRUN, Total budget: 240.000 £, Activities related to HYDROUSA: Implementation of HYDROUSA's MSWCA (Multi-Sectoral Water Circularity Assessment) tool to identify and calculate the





circularity potential of the UK water utilities (indicators and CE framework). The MSWCA indicates the most sustainable economic benefit and establishes indicators that report against the water utilities strategic goals (ODIs).

- PRIMA SURENEXUS

An EU-Prima funded project, it has the objective to ensure fair NEXUS transition for climate change adaptation and sustainable development implementation based on coupled nature-based systems and bioeconomy. It gathers 17 partners of 8 Mediterranean countries, of which Planet, NTUA, UNIVPM, and AGENSO are involved.

- Horizon2020 WATER-MINING

The project, gathering 38 partners from 12 countries, for a project duration of 4 years, aims to ensure access to clean water and sanitation by exploring alternative water sources and developing innovative solutions for sustainable water management, including tapping into urban and industrial wastewater and seawater desalination. It is under funding from the EU Horizon2020 programme. NTUA, Brunel University and Water Europe are project partners.

<u>ReDIrri National Funds</u>

The purpose of ReDIrri is to create an integrated, energy-independent and affordable automated drip irrigation system, which, using rainwater, will cover the water needs of plants under deficit irrigation conditions, offering a short-term irrigation program with a 5-day plan. The pilot tests of the system will take place in Mykonos, in the pilot areas HYDRO 3 & 4 of the European H2020 program called HYDROUSA (https://www.hydrousa.org/demo-sites/), in which the company AGENSO participates. The pilot tests will be carried out in collaboration with the company DELAROS O.E., (partner in HYDROUSA) which will have the role of subcontractor. More specifically, DELAROS O.E. will grant the pilot lands and be responsible for the operation, maintenance and evaluation of the ReDIrri systems.

- PRIMA AGREEMed

It is a PRIMA project funded for a period of 3 years. The project started in June 2022, and it is composed of a multidisciplinary team of ten partners from seven countries: Morocco (UMP6, UIZ), Spain (OBREAL/GLOBAL), Germany (TUB, DELTA), France (IAMM, SEMIDE), Tunisia (CERTE), Jordan (GJU), Italy (IRIDRA). AGREEMed aims to improve the capacities of water actors in developing integrated aquifer management plans and demonstrating such development in strategic pilot areas (watersheds) in the Mediterranean region: Souss-Massa in Morocco, Hammamet in Tunisia, and Jordan Valley in Jordan.

- Horizon Europe P2GreeN

P2GreeN is a four-year EU project which will develop, test and adapt the use of human sanitary waste to produce safe, bio-based fertilizers for agriculture. The consortium of 32 European partners scored well with the Horizon Europe program and we have been awarded the contract to implement this unprecedented project. Vast amounts of wastewater with a high nutrient content disappear daily into the sewers of large





cities. On the other hand, agriculture, using conventional fertilizers, struggles to produce good yields in the fields to feed the growing world population. What some have too much of, others have too little of. There must be a solution to this. IRIDRA and ALCN are involved in the project, in which feasibility studies will be conducted in 4 follower regions (Italy, Greece, France and Hungary) where NBS for wastewater treatment and reuse in agriculture is one of the possibilities to recover nutrients from wastewater and reuse in agriculture, reducing the use of conventional industrialized fertilizers.

- Horizon Europe CARDIMED

This is a Horizon Europe project that will start in the last semester of 2023. 51 partners coordinated by NTUA. CARDIMED will introduce a framework to build Climate Resilience in the Mediterranean biogeographical region, efficiently unifying individual efforts of regions and communities across different countries and continents. This will be achieved by deploying the digital infrastructure to harmonise the data collection and evaluation processes, providing open data to all the actors involved in the NBS value chain and integrating crucial functions for Climate Resilience. Among these functions, smart digital tools for citizen participation and capacity building will supplement an ambitious multi-stakeholder engagement strategy, focused on knowledge translation and impact pathways. Furthermore, holistic modelling tools introducing the Water-Energy-Food-Ecosystems (WEFE) Nexus approach will provide comprehensive knowledge on the complex NBS interfaces, that will decisively contribute to addressing socio-ecological challenges, along with issues of valuation and low-investment rate in NBS. These actions will be implemented across 9 demonstration sites, composed of 10 regions, 20 locations and 28 communities and comprising 47 NBS that directly relate to over 80 interventions and supporting units that tackle climate change and circularity challenges. The consolidation of the demonstrating regions and communities will establish the CARDIMED Regional Alliance, that will function as the vehicle for expanding the network via upscaling the existing sites and adding new ones. The project includes 5 transferability cases, as well as an additional 10 that will be defined during the implementation. Through these actions, the CARDIMED alliance will achieve at least 28 regions and 70 communities by 2030, will create 8000 jobs especially in the NBS sector, and will leverage over 450M€ in climate investment.

- ENI CBC MED Decost

DECOST is a ENI CBC Mediterranean Sea Basin Program 2014-2020 that started in September 2019 and ended in August 2023. The main objective of the project was to develop a new WM framework by building a closed-loop organic waste recovery system, incorporating decentralized home & Community Composting systems with Urban Agriculture. UNIVPM participated in the DECOST project as a project partner.

- Mediterranean Substaminale Islands (Iles Durables Méditerranéennes)

The Region Sud (France) supported the implementation of results of replication studies in France (St Honorat) and Tunisia (Kerkennah) as well as the integration of HYDROUSA into a practical guidance document for small islands sanitation coordinated by SMILO network (available in French and English). In Kerkennah a full rain catchment solution was implemented (adaptation of HYDRO 3 and 4). In ST Honorat, a tank was rehabilitated, and sensors installed, as a first step towards full scale implementation of HYDRO1.





- Horizon Europe BIORECER

This is a HORIZON Europe project that started in September 2022 with a duration of 36 months. BIORECER aims to ensure the environmental performance and traceability of the biological feedstock used by the biobased industries, deploying guidelines to strengthen the current certification schemes. Within this approach, the added value, the use, as well as social acceptance of bioproducts will be increased. To fulfill this goal, BIORECER is structured in three main technological pillars: 1) to develop a multidimensional assessment framework for an aggregated analysis on the biological feedstocks and their associated supply chains; 2) to create a BIORECER Innovation ecosystem living-lab with a multi-agent approach, testing the framework in 4 bio-based systems supply chain cases of study, and 3) to use all this knowledge to complement current certification schemes including new criteria for certifying biological resources' sustainability, origin, and traceability, and ensure applicability at EU and global scale. The project proposes first to design and develop a multidimensional framework to analyse and define the assessment of the circularity and environmental performance of biological resources and traceability that will be subsequently validated in 4 full bio-based systems and applicable to a wide range of bio-based value chains. The methodology developed in HYDROUSA will form the basis for the circularity measurement and assessment of the bio-based feedstock and the selection of appropriate indicators.

- Horizon Europe R3VOLUTION

This is a HORIZON Europe project that will start in January 2024 with a duration of 48 months. R3VOLUTION (R3V) project will revolutionize industrial water management in the EU, providing key innovations that can enable economically, environmentally and operationally water reclamation projects (by addressing solutes and energy recovery challenges), and generate significant impact for the EU in the next decade. In this project, sustainability and circularity measurement and assessment will be performed, following and adapting the circularity assessment methodology developed in the HYDROUSA project.

Policy recommendations:

At this point, three policy recommendations have been written as part of the HYDROUSA project. They have been sent to the European Commission to support certain policy evolution, also based on the experienced gathered throughout the HYDROUSA project. While more information can be found on them in D7.1, D7.3, D7.5, a summary of each of them can be found in the paragraphs bellow.

Sectoral policy brief published on the consultation of the Urban Wastewater Treatment Directive - the UWWTD 91/272/EEC (January 2020)

Following extensive discussion within the consortium a 1.5-page document was developed as the "HYDROUSA position" which was sent to the EC to support the consultation procedure of the Directive. The "HYDROUSA position" focused on the Individual and Appropriate Systems (IAS) within the EU member states and the urgent need to framing or specifically defining the application of IAS, implementing technical standards for eligible IAS technologies, setting minimum requirements for their design, structure, and performance. The recent





report which was published by the EC shows that a significant load of organics and nutrients which can be avoided is attributed to IAS and to small agglomerations with a population equivalent lower than 2000.



Figure 3.2 Summary of HYDROUSA policy brief regarding the revision of the Urban Waste Water Treatment Directive available on the website

Policy brief on NBS (D8.5): Barriers of wider NBS adoption for closing water loops (2020)

This policy brief describes the diverse applicability and benefits of choosing NBS as a wastewater treatment and recovery option, as well as major barriers experienced by practitioners, and possible ways to overcome them. The following barriers are covered: Infrastructure and system lock-ins, regulatory frameworks and standards, economic and financing barriers, knowledge barriers, social barriers, and public procurement barriers.



Figure 3.3 HYDROUSA policy brief on NBS





The HYDROUSA demonstration sites featured at the policy brief developed by the Institute for European Environmental Policy (IEEP) on Nature-based solutions and their socio-economic benefits for Europe's recovery: Enhancing the uptake of nature-based solutions across EU policies. On page 6 of this report, all the case studies of HYDROUSA are briefly described.

Policy brief on HYDROUSA support to the European Green Deal and the battle against the COVID-19 pandemic (Oct. 2021)

A seven-page document has been developed and is available online. It is aiming to present the position of the HYDROUSA consortium regarding elements that the Green Deal should be considered more extensively. The HYDROUSA project:

- (i) Supports the just and inclusive transition through smart water management.
- (ii) Promotes climate neutral systems within the water value chain.
- (iii) Supports the farm to fork principle with the onsite treatment of water and valorization of resources.
- (iv) Contributes to decarbonizing the water systems.
- (v) Promotes the concept of producing and consuming locally.



Figure 3.4 HYDROUSA policy brief regarding the European Green Deal and the battle against the COVID-19 pandemic





4 MARKETING AND EXPLOITATION ACTIVITIES AFTER THE TERMINATION OF HYDROUSA

Online visibility of HYDROUSA will be maintained after the end of the project. The website will remain online for five years after the termination of the project. This decision will ensure visibility beyond the termination of the project, as all communication and marketing materials developed will still be accessible to all interested stakeholders. Being one of the most important channels developed, maintaining it for some time will hopefully support further the promotion of the HYDROUSA project and channel visitors and potential customers to the exploitation partners.

4.1 Branding names

The branding names selected by partners for each solution have been checked against any IPR at the EU level thanks to <u>EU Intellectual Property Office data base</u>, looking at trades marks, design, organisation names. The selected branding names are not protected, but HYDROp3 (HYDRO3), Raincatch (HYDRO 4) and Mangrove (HYDRO 5) are sub-part of existing trademarks and organisations. This will not stop branding name protection.

In order to define branding names for the future exploitation of 6 HYDROUSA solutions, a survey was carried out after the last consortium meeting in London (March 2023). For this exercise, the online decision process tool "<u>acceptify</u> (digital decision tool)" was used. Partners were called to suggest names for each solution and then reach a consensus by evaluating the minimum level of resistance to each name. The final decision is reported in the Table 4.1 below:

ID	Name selected	Level of acceptance	Existing IPR (2023-05-09)	
1	Circleflow	75%	None	
2	HYDRO-Crop	81%	None	
3	HYDROp3	Agreed prior to the survey	178 trademarks containing "hydrop" and 29 companies	
4	Raincatch	86%	Trademark: RAINCATCHER (2020-2029) Organisation : RAINCATCHER Plus (Kyrgyzstan)	
5	MANGROVE Still*	Agreed prior to the survey	 Trademark: Mangrove (Colbert Innovation, HK 2010-2030, logo for clothing) Mangrove (Applied biomimetic, DK 2021-2030, water filtration) Mangrove shrimps Organisations: Mangrove Global (UK) 	

Table 4.1 Brand names and IPR





			• Mangrove GmbH (DE)
			 Mangrove System (US)
			 Mangrove green (IRL)
			 Mangrove consulting (UK)
6	HYDROLODGE	87%	None

* HYDROSALT (74% of acceptance) was also suggested through the consultation process, but in agreement with the solution owner, it was decided to keep the commercial name of the key technology in HYDRO5.



Finally, a logo has been designed together with the branding name for HYDRO3: hydrop3 - human harmony environment.

4.2 Memorandum of Understanding for commercialising HYDROUSA solutions

In order to give a structured frame to the activities beyond the official end of the project, a Memorandum of Understanding (MoU) for the Commercialisation of HYDROUSA solutions has been developed and agreed by the partners. Indeed, it felt necessary to encourage the partners to continue promoting the project and the developed solutions further, in order to guarantee its successful market uptake. However, it was also necessary to define the way the brand would be use. Thus, the purpose of this document is to set the rules for fostering the commercialization of HYDROUSA solutions and define the use HYDROUSA brand (logo and name) by the Partners after the end of the project (30/06/2023). This MoU defined the minimum set of technologies necessary to use HYDROUSA solutions naming and the partners in charge of the commercialization of each solution.

ID	Name	Minimum technologies	Exploitation owners
1	Circleflow	UASB + CW	AERIS and IRIDRA
2	HYDRO-Crop	Agroforestry	ALCN, AGENSO
3	HYDROp3	Rainwater harvesting and storage (for different uses)	DELAROS
4	Raincatch	Rainwater harvesting, aquifer storage and recovery for domestic use or irrigation	DELAROS
5	MANGROVE Still	Mangrove Still for domestic use or irrigation	PLANET
6	HYDROLODGE	CW, RWH & agroecology	ELT





Regarding marketing incentives, all partners will be encouraged to promote the solutions by taking part in commercial talks and getting ad-hoc business agreements with exploitation owners.

Such agreement will be applied for implementing the solutions designed in the framework of the replication studies (MoU provided in D8.10- Business Plan for Exploitation -confidential).





5 CONCLUSION

This document summarizes the marketing and exploitation activities implemented over the entire length of the project. It highlights that regardless of difficulties faced halfway with the Covid-19 crisis, the consortium successfully managed to reach the desired target audiences and achieve its objectives.

Indeed, the KPIs set as part of the marketing strategy have by far been exceeded. Over **420** promotional and marketing activities have been organized or attended by the different HYDROUSA partners during those four years. Those activities have been estimated to reach over **123,321 persons**, with the broad range of activities implemented ensuring both an online and a physical presence and recognition in the European water sector.

To guarantee that the promotion and recognition of HYDROUSA as a trusted consortium of partners continues beyond the official end of the project, the required efforts will be put into place by all members for promotion, a MoU for commercialisation by business partners, and new transnational projects building on HYDROUSA achievements.





6 **ANNEXES**

6.1 General Survey Questionnaire

HYDROUSA Survey: Water Challenges & Our Solutions

Dear Madame/Sir,

We thank you so much in advance for taking the time to complete this HYDROUSA survey.

The survey is expected to be completed in 10 minutes. It consists of two main sections:

- Section A: WATER CHALLENGES AND HYDROUSA SOLUTIONS, that serves to identify the water challenges faced in your island/region as well as studying the potential to implement HYDROUSA solutions to respond to these challenges.
- Section B : GENERAL INFORMATION, that serves to gather basic personal data about the profile of the respondents

All personal data collected of the present survey will be treated in accordance with Regulation (EU) 2018/1725 and the modalities of the privacy statement, which we invite you to read here: <u>https://www.hydrousa.org/privacy-policy/</u>. Moreover, the final report will present only aggregated data (not individual results) and interviewees' personal and sensitive data will remain confidential.





Section A: WATER CHALLENGES AND HYDROUSA SOLUTIONS

1) According to you, what are the top 3 priorities to face water challenges in your * island/region?

Upgrading and replacing the aging water infrastructure
Absence of some water infrastructure
Water conservation and efficiency
Expanding wastewater reuse
Groundwater management (including salinity management and GW recharge)
Water supply especially during peak periods (summer)
Climate change adaptation & emergency preparedness (floods/droughts)
Water pollution
Compliance with current and future regulations
Autre :





3) According to your understanding of HYDROUSA project (<u>www.hydrousa.org</u>), could the solutions answer to some of the water needs in your region?

	1	2	3	4	5	
Not useful solution	0	0	0	0	0	Very useful solution

2) Which HYDROUSA solutions (HYDROs) do you think are the most suitable to be * implemented in your region? (you may also read the full descriptions here: <u>https://www.hydrousa.org/demo-sites/</u>)

Wastewater management system and Resource Recovery (HYDRO1)

Design and irrigation of agroforestry	// agricultural plots using reclaimed water
(HYDRO2)	

Rainwater harvesting from houses & roads) &/or aquifer recharge (HYDRO4)

Seawater and brine desalination used for irriga	ation (HYDRO5)
---	----------------

Closing water loops within eco and agri-tourist facilities (HYDRO6)

Г





4) What is the most important value brought by HYDROUSA solutions according to you?

Í		Providing	decentralised	wastewater	treatment	system
---	--	-----------	---------------	------------	-----------	--------

- Providing non-conventional water resources
- Recovering water, nutrients, energy and salt
- Producing Mediterranean crops
- Producing tropical crops
- Offering agro-tourism activities
- Lowering environmental impacts
- Offering societal benefits
- Offering an adaptive economic model
- Autre :

5) Where do you think that the proposed solutions are needed the most? *

Mediterranean Islands
Households with local wastewater Treatment
Rural communities (semi-collective wastewater treatment)
Seasonal accommodation within Protected areas (e.g. National Parks)
Coastal areas relying on groundwater
Small or isolated tourist facilities
Additional water supply for agriculture activities
Autre :





7) V solu	Vhat could be some barriers standing from implementing HYDROUSA utions in your island/region?	
	Environmental (e.g. restrictions due to sensitive areas, protected areas, environmental risks or hazard etc.)	

Social (e.g. public engagement, social acceptance of the reuse of the recovered resources, etc.)

] Legislative (e.g. bans or restrictions for the reuse of some recovered resources)

Economic (e.g. lack of financing measures/funding programmes for implementing the HYDROUSA solutions)

Autre :

6) Who should provide HYDROUSA solution in your region from your point of * view?

	Water	utilities
--	-------	-----------



] Local authorities



Businesses

Associations

Autre :



•

.

.

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 776643



8) Which financing measures/funding programmes would you suggest for financing HYDROUSA solutions in your island/region?

9) What could be some obstacles standing from implementing HYDROUSA solutions in your island/region?

Section B: GENERAL INFORMATION

10) Where are you located? (country, island (if applicable))





- 11) Please select the type of stakeholder you represent: *
- Agroforestry or Protected areas/natural parks manager
- Farmer, Farmers Cooperative
- Agro-tourist facilities owner
- Municipalities
- O Water utility
- Water user (Household)
- Local partners (Groceries, restaurants, local markets, pharmaceutical companies)
- O Investor / Banker
- O Donor & Funding body
- Islands network
- O Media
- Scientific Community
- Environmental NGOs
- EU-funded project (H2020, LIFE, etc.)
- O Policy-maker
- General public
- Autre :

12) Are you planning in the next 3 years to implement a project related to water / wastewater management?

Yes (if yes, can you please describe it within the 'other' option)
No
Maybe
Autre :



This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 776643



13) If you are planning to implment a project on water or waste water management, what would be the dedicated budget to it?

less than 100,000 euros
between 100k-500k euros
between 500k-1 million euros
Above 1 million euros
14) Full name: *
2
15) Email: *
<u>.</u>
16) Your organisation / representative body: *
This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 776643,

www.hydrousa.org





6.2 Exploitation Survey questionnaire

This survey aims to collect information from the different HYDROUSA partners about exploitation results in order for SEMIDE to create *Deliverable 8.4 Report on Marketing Activities*, which is a report covering marketing and exploitation activities and results.

Please, feel free to share with us links or external documents for sales, projects or recommendations that have been made.

As part of which organisation are you answering? Answer:

Section1: Technology & service providers

Question

Are you providing this technology... Is it already in the market?

Agro-forestry design		
Mangrove Still Technology		
UASB Technology		
Biogas Upgrade Technology (fro	•	
Biofilter for odour and pollutant r		
Stone channel irrigation Technolo		
Rainwater Harvesting with Aquife		
Rainwater Harvesting (sub-surfac		
Other		





24 manual langua		
Reponse longue		
Q6: What is your total generated revenue from the sales o	f your tee	chnologies/services? (if
several, please speeny the number of units per technolog	y/ Sci vice	.).
Réponse longue		
27: If you want to, you can provide here a link / further inf	ormation	1?
Réponse longue		
22: If <u>you choose other</u> , <u>please specify here which techno</u>	ology/ser	vice.
Réponse longue		
Q3: How many of your technologies/services have been s of units per technology/service).	old? (if s	everal, please specify the number
Réponse longue		
***		=
Q4: Where has it been sold? (if several, please specify the number of units per technology/service).		Paragraphe •





Section 2: New projects

Q8: Has HYDROUSA project led your organisation to be part of new projects?*

O Yes

🔿 No

Q9: Which component of HYDROUSA has been part of your new project(s)?

Réponse longue

Q10: Please, elaborate briefly on each of them (funding, project name, time it started, partners...) or provide a link/project if available?

Réponse longue

Section 3: Policy and regulation recommendation

Q11: Has your organisation contributed to HYDROUSA's policy / regulation recommendations (e.g. policy briefs, policy reviews, policy dialogues...)

O Yes

O No

Q12: Which policy(ies) or recommendation(s)?

Réponse longue

Q13: Could you please briefly elaborate on them or provide a link?

Réponse longue





6.3 HYDRO 6 Survey Questionnaire

HYDROUSA Survey: Your Insights on Water Management in Tourist Facilities Case study: Ecolodge Tinos

Dear Madame/Sir,

We thank you so much in advance for taking the time to complete this survey.

We are evaluating the impact of **HYDROUSA**, an EU-funded project under Horizon 2020 programme, which is promoting **non-conventional sources of water** as well as **resource recovery** through closing water loops to tackle the issue of water scarcity in the Mediterranean islands as well as other water-scarce regions in Europe and worldwide.

There are 6 different solutions (or exploitation scenarios) that the project is implementing and are referred to as **HYDROs**. In this survey, we are focusing on *closing water loops within eco-tourist facilities* (HYDRO6) which is implemented in **Ecolodge Tinos**.

The survey is expected to be completed in **10 minutes**. It consists of two main sections:

-Section A: GENERAL INFORMATION, which serves to gather basic personal data about the profile of the respondents

-Section B: Evaluation of ecosystem services provided by HYDRO6 based on the respondents' answers.

All personal data collected of the present survey will be treated in accordance with Regulation (EU) 2018/1725 and the final report will present only aggregated data (not individual results) and respondents' personal and sensitive data will remain confidential. Your inputs are very valuable for our evaluation, and we are very grateful for them.

Section 1: General Information

1) Where do you o	1) Where do you come from? (Current residence) (country, island / city)			
2) How old are yo	u?			
Younger than 18 More than 50	18-25 years old	26-35 years old	36-50 years old	
3) What is your ge	ender?			
Male	Female	Prefer not to say		
4) What is your monthly income level?				
< 713€ (minimum wage in Greece) 1500€ – 3000€		Between 713€ and >3000€	1500€	





5) Please select the type of stakeholder	you represent:
 Tourist (citizens, Media) Groceries, restaurants, local markets Environmental NGOs Other, please specify 	 Agroforestry or Protected areas/natural parks manager Farmer, farmers cooperative Agro-tourist facilities owner
6) Are you familiar with the concept of	circular economy?
Yes	No
7) Are you familiar with the concept of	ecosystem services?
Yes	No
8) Do you know about HYDROUSA and	its solutions including HYDRO6?
 Yes, I know about it (I have been in a site v Yes, I know about it (I heard about the pro No, I don't know about it. 	with HYDROUSA solutions) oject, but I haven't visited any site)
9) If the answer is Yes, how did you get	the information about HYDROUSA?
 Social Media / website Newspaper Coincidently as you are a guest at the Ecolodge 	 Radio / TV Word of mouth Other, please specify
10) If the answer is No, which means of (communication will be the most interesting for you?
 Social Media / website Newspaper Other, please specify 	Radio / TV Word of mouth
Section 2: Presentation and evaluation of the	e ecosystem services of HYDRO6
A-Presentation of HYDRO 6: HYDRO6, which uses an agro-ecotourism app address organic food production, regenerat production in one holistic design. It intends t sectors, and it can be replicated to other lodg	proach, aims to close water loops within tourist facilities and to tive water management with nutrient extraction and energy to support a sustainable evolution for the tourism and farming es and B&B with an availability of a land.
The technologies/services used in HYDRO6 in	clude:

- Innovative concept of agro-ecotourism facility (with several services incl. selection of crops, essential oil production, compost etc.)
- Constructed wetland and fertigation system
- Rainwater harvesting and storage
- Precision irrigation System
- Water condensation







B-Evaluation of ecosystem services:

- 11) According to you, how would you rank the following provisioning services provided by HYDRO6 (from 1 to 5 where 1 is the most important):
 - Production of nutrient rich water from treated wastewater for irrigation. **Rank:**
 - Collection of rainwater for domestic use. **Rank:**
 - Organic food production for daily fresh inhouse consumption (vegetables, fruits & herbs). Rank:
 - Surplus vegetable production deployment to local market. **Rank:**
 - Compost production. Rank:
- 12) According to you, how would you rank the following regulation services provided by HYDRO6 (from 1 to 5 where 1 is the most important):
 - Soil erosion¹ control. Rank:
 - Improving the biodiversity of soil. Rank:
 - Reducing the carbon footprint due to the use of renewable energy & low energy processes.
 Rank:
 - Increasing the green spaces and improving the landscape. Rank:
 - Increasing the fertility of soil (compost, permaculture, fertigation). Rank:

¹ Erosion is the wearing away of the land by forces such as water or wind. It's a problem as it removes valuable top soil which is the most fertile part for agriculture.





13) /	According to you, how would you rank the following socio-cultural services provided by HYDRO6
	from 1 to 3 where 1 is the most important):

- Creation or maintenance of employment. Rank:
- Training seminars on permaculture, technical visits of the installations. **Rank:**
- Community engagement and awareness nature (workshops, volunteering and public events). **Rank:**
- **14)** Based on the above 3 answers of Q11-Q13, how would you rank the importance of the ecosystem services categories (from 1 to 4 where 1 is the most important)?
 - Provisioning services. Rank:
 - Regulation services. Rank:
 - Socio-cultural services. Rank:
 - The combination of all these services. Rank:
- 15) how much you are willing to pay in addition to your accommodation to benefit from the ecosystem services provided by HYDRO6:

less than 10€	_ 10€	20€	More than 20€	
C-Feedback on your stay 16) How can you eva Very satisfied	at the Ecolodge aluate your stay	e Tinos: ?		
Nether satisfied or no	ot satisfied	Not satisfied		
17) Will you recommend this experience to your network of friends or family? Ses, why :				
No, why not:				

Optional: Is there any comments / recommendations would you like to share with HYDROUSA team to amplify the impact of its solutions?





6.4 HYDROUSA technologies and solutions factsheets

HYDROUSA's technologies and solutions factsheets are provided togeter with this deliverable, in a separate document.



7

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 776643



WEBOGRAPHY

- Hydrousa Website : <u>https://www.hydrousa.org</u>
- Twitter : https://twitter.com/hydrousaproject
- Facebook : <u>https://www.facebook.com/Hydrousa/</u>
- LinkedIn : https://www.linkedin.com/company/hydrousa/
- YouTube : <u>https://www.youtube.com/@hydrousa7903</u>
- replication tool : https://hydrousa.org/Hydrousa_website/page0.html
- Hydrousa Privacy Policy : https://www.hydrousa.org/privacy-policy/
- PRIMA-SAFE project : <u>https://anr.fr/Projet-ANR-22-PRIM-0002</u>
- REMEDIES: <u>https://athens.impacthub.net/news/remedies-for-the-future-of-our-oceans-</u> <u>through-deploying-plastic-litter-valorisation-and-prevention-pathways/?lang=en</u>
- DIVAGRI: https://divagri.org/category/divagri-project/
- MED-WET: https://eco-gozo.com/project/prima-med-wet-project/
- BIODAPH₂O: <u>https://www.hydrousa.org/life-biodaph20-project-the-use-of-an-eco-efficient-daphnia-based-treatment-to-produce-reclaimed-water-in-antissa-site/</u>
- Accelwater H2020: <u>https://www.accelwater.eu/</u>
- CIRC4FOOD: <u>https://www.circ4food.eu/en/home-en/</u>
- FIT4REUSE: <u>https://fit4reuse.org/</u>
- SURENEXUS : https://mel.cgiar.org/projects/1729
- WATER-MINING : <u>https://watermining.eu/</u>
- ReDIrri: https://www.redirri.gr/
- AGREEMed: https://agreemed.eu/
- P2GreeN: <u>https://p2green.eu/</u>
- EU Intellectual Property Office data base: <u>https://euipo.europa.eu/eSearch/#basic</u>
- acceptify: <u>https://acceptify.at/en/start</u>