water mining
value for society

Deliverable 11.5

Explanatory videos. First project video.

Date: 24 January 2022

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 869474.

Deliverable 1.1	Project management guidelines
Related Work Package	WP 11 - Dissemination and communication activities
Deliverable lead	REVOLVE
Author(s)	Josep Crous-Duran (REVOLVE) Lara Barange (REVOLVE) Patricia Carbonell (REVOLVE)
Contact	josep@revolve.media
Reviewer	Nicole Heine (DECHEMA) WP11 - Dissemination and communication activities leader
Grant Agreement Number	869474
Instrument	Horizon 2020 Framework Programme
Start date	1st September 2020
Duration	48 months
Type of Delivery (R, DEM, DEC, Other)[1]	DEC
Dissemination Level (PU, CO, CI)[2]	PU
Date last update	24 January 2022
Website	www.watermining.eu

[1] **R**=Document, report; **DEM**=Demonstrator, pilot, prototype; **DEC**=website, patent fillings, videos, etc.; **OTHER**=other

[2] **PU**=Public, **CO**=Confidential, only for members of the consortium (including the Commission Services), **CI**=Classified

Revision no	Date	Description	Author(s)
0.1	19/01/2022	First draft	Josep Crous-Duran (REVOLVE)
0.2	23/01/2022	First Revision	Patricia Carbonell (REVOLVE) Lara Barange (REVOLVE)
0.3	25/01/2022	Second Revision	Nicole Heine (DECHEMA)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 869474.

Table of Contents

1. Executive summary

This document describes the development process and content of the first WATER-MINING project video, corresponding to Deliverable D11.5 of the Grant Agreement 869474.

This video was developed by REVOLVE, with the supervision and approval of the WP11 leader and the rest of the project partners.

The objective of this video is to provide an overview of the project and its objectives, and to present the challenges faced by the project's three focus areas: the improvement of water management from sea-mining, urban-mining and industrial-mining.

The deadline of D11.5 was month 12 (August 2021); the first version of the video was presented to WP11 partners on the 6th September, and to all project partners on the 29th October 2021, at the project's 2nd General Assembly in Barcelona (Spain). During this event it was decided to slightly modify some of the images presented in the video, and a second version was approved and made public via the project's YouTube channel on the 20th January 2022.

2. Video development

2.1. Introduction

This deliverable D11.5 describes the process and content of the first of three videos in the series titled 'Explanatory Videos', developed by WATER-MINING project in months 12, 24 and 36. These three videos will have different emphases and will address:

(a) the general objectives and aims of the project,

b) the innovations and challenges in the three categories of water treatment (desalination/sea-mining, urban-mining and industrial-mining), and

(c) dissemination/exploitation perspectives.

It was agreed that this first video would be a general presentation of the project: its objectives, the innovative solutions to be developed, and the expected outcomes.

2.2. Style and audiences

The style chosen for this video was to be simultaneously educational, entertaining, and emotive, thus bridging the gap between the project's scientific/technical approach, and the less technical approach of the video's target audiences: local, regional and national water managers, the water treatment industry, the policymakers involved in ensuring access to drinkable water, and general public, whilst maintaining the project's scientific accuracy.

The video is made up of a series of pre-recorded images from stock footage, combined with video clips sent by the partners of the project's six case studies, and images from the project's first General Assembly, held online. Animated diagrams were also added to visualise the water treatment processes.

3. Video structure

WATER-MINING is a complex project with a total budget of roughly 17 million euros; therefore, it was agreed that the video would be longer than in previous projects (7-10 minutes), to cover all of the project's key activities. In addition to an emotive introduction and conclusion, the idea was to introduce each of the three water management approaches included in the project: sea-mining, urban-mining, and industrial mining, with 1:30 minutes allocated to each. The script underwent several revisions, and the universally agreed final version has a total length of 7:04 minutes. Table 1 presents the final script.

Table1. Script of the first video of the WATER-MINING project

	Narration	Animation
Time	Introduction	
0:00		Logo and intro of a music track on a black screen
		No voiceover, the video starts showing a certain action sequence, visualised with stock footage.
	Year 2030: The global agenda for climate change action and Sustainable Development Goals is being evaluated.	Black background
		Stock footage/images of running water
	Global water demand is two times the sustainable water supply.	Black background
		Stock footage/images of running water
	We are approaching a tipping point in the water crisis	Black background
		Stock footage/images of running water
	But we can overcome these challenges	Black background
		Stock footage/images of running water
	By managing existing resources more efficiently	Black background
		Stock footage/images of clean water
	And using innovative methods to extract water from sustainable alternative sources such as:	Black background
		Show on screen:
		"Seawater"
		"Urban wastewater"
		"Industrial processes"
		Stock footage/human movement image with
		"These methods have been implemented since 2020 thanks to an EU-funded research project called

		WATER-MINING", and the WM logo
1:17		Black screen
		Sea-mining
	Producing drinking water from sea water - known as desalination - is expected to become essential in securing water resources for a growing population, especially in water-stressed regions.	Stock footage related to seawater (timelapse of water motion), shots related to the source
	But for this to come true, we need to find solutions. Currently, desalination faces two main challenges: high energy use and its resulting financial costs, as well as the environmental impacts, due to the pollutant gas emissions and the brine effluent produced	Stock footage; on screen: "High energy use" "Financial costs" "Environmental impacts"
	To address these challenges, WATER-MINING works with two large-scale exhibition sites: one in Lampedusa, Italy (CS1), and one in Almeria, Spain (CS2).	Sea mining footage from WM cases; on screen: "CS1 Lampedusa (Italy)" "CS2 Almeria (Spain)"
	In both sites, while creating high-quality water, the brine effluent is eliminated and valuable minerals and salts are extracted to be used in other sectors, thus offsetting part of the treatment costs.	Mix of project footage and stock footage; CS1 diagram on screen
	Furthermore, the site in Spain runs its facilities on solar renewable energy, and the site in Italy, on the recovery of waste heat, thus reducing the energy and financial costs of desalination.	CS2 diagram on screen
2:40		Black screen
		Urban-mining
	In recent decades, a growing population, urban expansion, and higher living standards have increased urban water use.	Images of urbanisation: roads, buildings…
	However, water use also depends on the local climate, the efficiency of public supply services, the residents' consumption habits and the technology used.	Images of water consumption: hygiene/showers, cooking, gardening, street cleaning, or run-off to the sewer; on screen: "Local Climate", "Public Supply Service" and "Consumption habits"
	Through innovative technologies, urban wastewater can be treated and reused, returning it to the water supply system, creating a circular water use process. Combined with the recovery of valuable raw materials from the treatment, we can increase water supply whilst minimising waste and treatment costs.	Images from CS and water treatment plants showing a water cycle movement from use to treatment

	To implement these solutions, three large-scale exhibition sites have been established within the WATER-MINING project: in Portugal (CS3), Cyprus (CS4) and Spain (CS5).	Images of aerial location/images of the 3 CS; on screen: "CS3 Faro (Portugal)", "CS4 Larnaca (Cyprus)" and "CS5 La Llagosta (Spain)"
	These case studies promote water use efficiency and water reuse, whilst focusing on energy production such as solar power and biogas, and the recovery of raw material such as phosphates, salts, and bio-based polymers.	Images from CS and diagrams for CS3, CS4 and CS5
4:00		Black screen
		Industrial mining
	Of the total water use in the EU, only 10% is consumed in urban areas. The other 90% is used for industrial purposes.	Percentages appear on the screen: 10% urban consumption 90% industry
	Given the prominence of industrial water use, the development of innovative technologies to reuse water from these sectors is key.	Images of water use for industrial purposes
	Taking advantage of the low water quality needed by some industrial processes, WATER-MINING will test what is called: Zero Liquid Discharge process. The aim is to link wastewater producers with consumers in industrial areas to reduce water needs and waste water discharge, and create pollution-free brine effluent.	On screen: "Zero Liquid Discharge process"
	A large-scale WATER-MINING case study at the port of Rotterdam in the Netherlands, is a good example of this process. Currently, industrial wastewater from the production of EPOXY resins is sent to a biotreatment plant before discharge, and the salt is discarded. However, WATER-MINING will apply innovative technology to purify the wastewater from the EPOXY resin industry, creating quality brine to be used by the chemical production company NOBIAN. Like that it recycles water and salt that are used for the production of chlorine and caustic important base chemicals needed for EPOXY resin production, thus closing the loop of industrial wastewater management and ensuring circularity in water and salt consumption.	Aerial image of the CS6 Port of Rotterdam with "CS6 Port of Rotterdam (The Netherlands) on screen. CS6 diagram
5:35		Black screen

	Sound of running water	Images of running water
	Year 2020	Over black background
	WATER-MINING has been created to face our current water challenges and ensure access to clean water and sanitation for all. It opens a new path to achieve the water and consumption Sustainable Development Goals.	Black background Icons for SDG 6, 8 and 14
	The WATER_MINING project opens a new path that follows a circular economy approach, uses cutting-edge technology,	
	and promotes social engagement through the so-called Communities of Practices. There, relevant actors gather together, enabling a rich interaction focused on the case-studies, and citizens can experience the newly created water technologies in the Living Labs.	Images of the Floating Farm (Living Lab 1) and Plataforma Solar de Almeria (Living Lab 2)
7:05	Ensuring a water-secure 2030	Black background

4. Video location and dissemination

The final version of the video was uploaded to the project's YouTube channel:
https://youtu.be/zhe2flkcIB8

A 'Project Videos' page has been added to the project website, which will be disseminated through the project's social media channels. The video was included in the project's first newsletter (M12), and posted on the project's Twitter (@watermining) and LinkedIn (@WATER-MINING H2020) channels. The intention is to present this video at several events with WATER-MINING representation.