Transferring methods to Ukraine

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Location: Hanse Office, Av. Palmerston 20, 1000 Brussels

Transferring methods to Ukraine

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Objective and tasks WP7

1) monitoring water quality in riverbank filtration (RBF) used for drinking water production;

2) using monitoring results for risk-based planning of future interventions;

3) identifying regulatory and real-life gaps between Ukrainian and European drinking water quality guideline values;

4) implementing risk-based management through developing Water Safety Plans;

5) adapting hydraulic models and establishing soft sensors for conditions with limited data availability;

6) evaluating the status quo of drinking water treatment in Ukraine; and

7) providing a roadmap for the establishment of a Centre for Excellence in Water Management at NUWEE.

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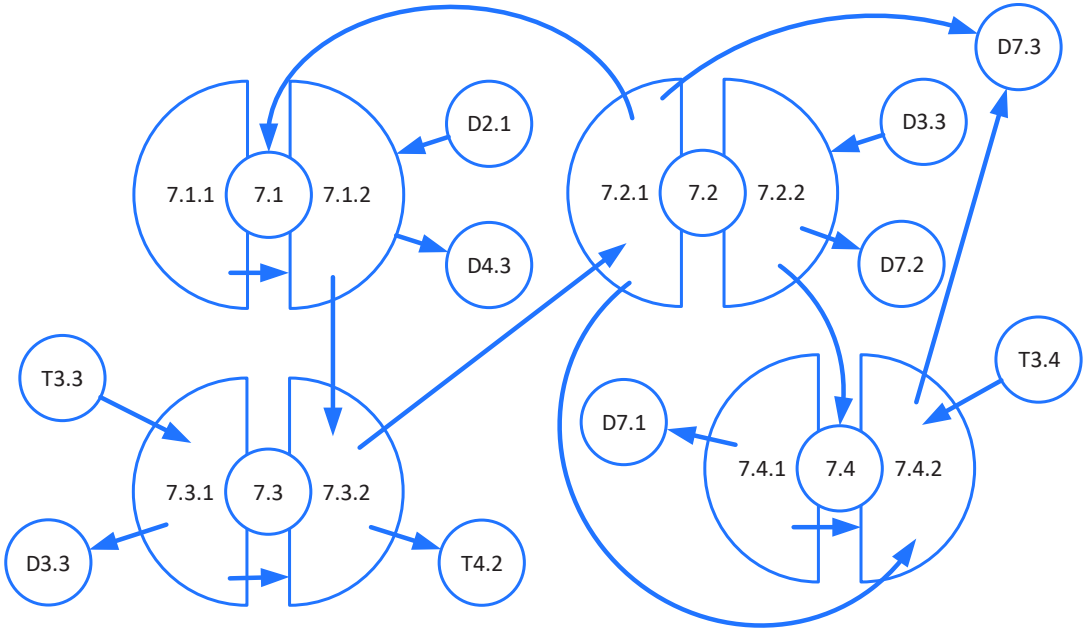
GANTT chart - Illustration of SafeCREW schedule of tasks within WP7.

		2024								2025												2026			
		5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4
		Q3			Q4			Q1		Q2				Q3			Q4			Q1		Q2			
		19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
7	**Transferring SafeCREW methods to Western Ukrainian DWSS**																								
7.1	Monitoring and risk assessment of microbial and chemical loads in riverbank filtration												**D7.1**												
7.2	Applying the risk-based management tool to bdige gaps between UA and EU water quality standards												**D7.1**						**D7.2**						
7.3	Adapting models for DWDN and upgrading monitoring in DWSS																								
7.4	Defining the scope of the Centre of Excellence in Water Management (CEWM)												**D7.1**												**D7.3**



Deliverable D7.1 - State of DW production in western Ukraine & future outlook
Deliverable D7.2 - Water Safety Plans for small DWSS: public summary
Deliverable D7.3 - CEWM roadmap: public summary

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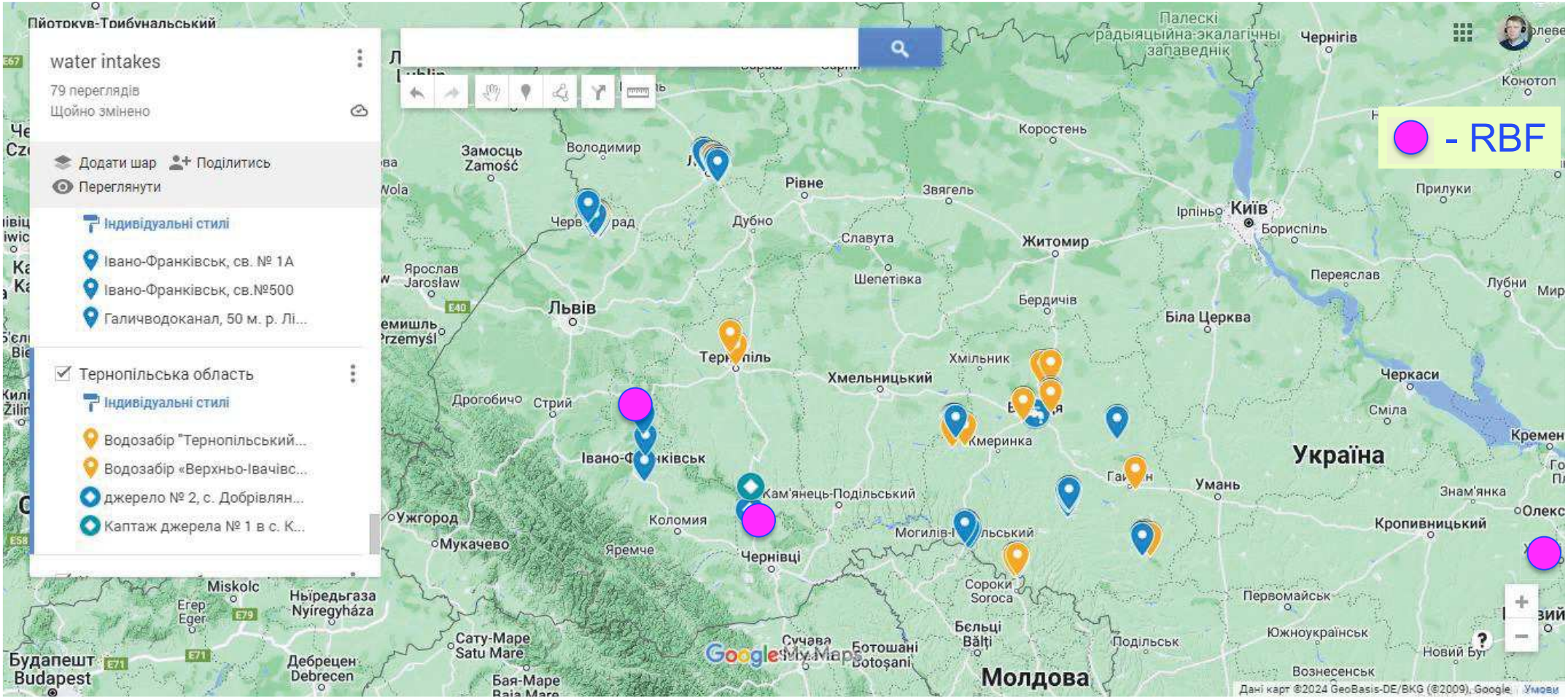
Task 7.1: Monitoring and risk assessment of microbial and chemical loads in riverbank filtration



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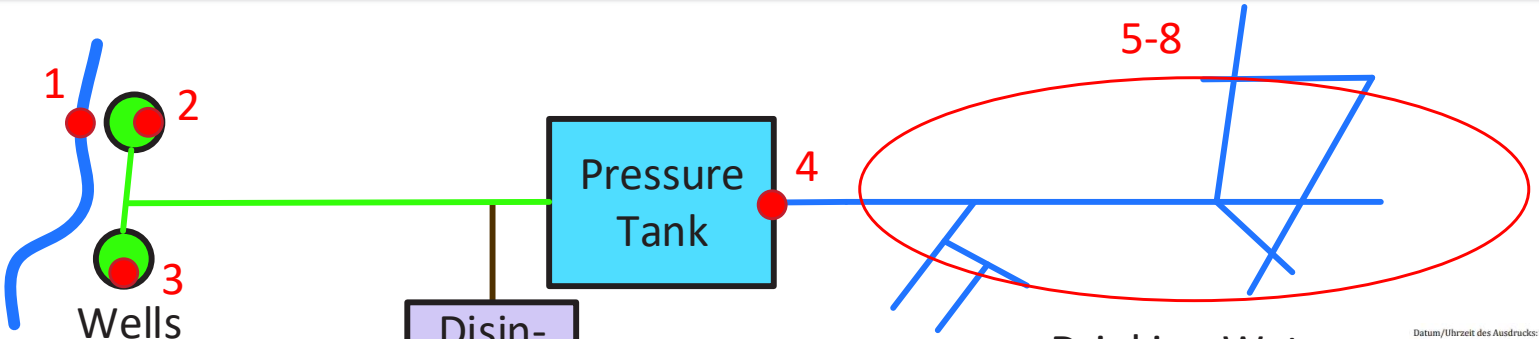
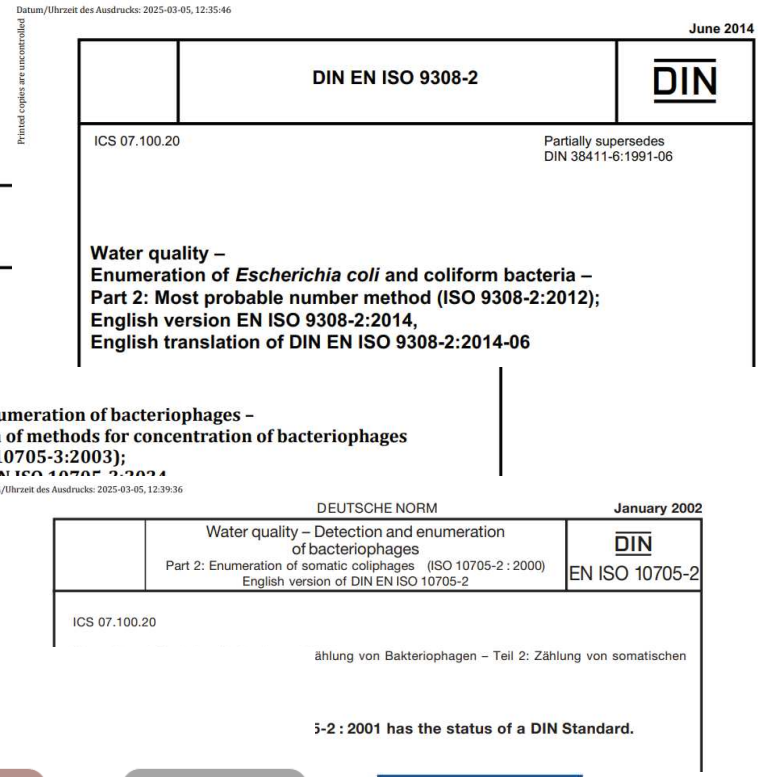
Task 7.1: Monitoring and risk assessment of microbial and chemical loads in riverbank filtration





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June 2014

DIN EN ISO 9308-2

DIN

ICS 07.100.20

Partially supersedes
DIN 38411-6:1991-06

Water quality –
Enumeration of *Escherichia coli* and coliform bacteria –
Part 2: Most probable number method (ISO 9308-2:2012);
English version EN ISO 9308-2:2014,
English translation of DIN EN ISO 9308-2:2014-06

Datum/Uhrzeit des Ausdrucks: 2025-03-05, 12:40:03

ICS 07.100.20

Water quality –
Detection and enumeration of bacteriophages –
Part 3: Validation of methods for concentration of bacteriophages
from water (ISO 10705-3:2003);
English versic
English transl

Datum/Uhrzeit des Ausdrucks: 2025-03-05, 12:39:36

DEUTSCHE NORM

January 2002

Water quality – Detection and enumeration of bacteriophages
Part 2: Enumeration of somatic coliphages (ISO 10705-2 : 2000)
English version of DIN EN ISO 10705-2

DIN
EN ISO 10705-2

ICS 07.100.20

ählung von Bakteriophagen – Teil 2: Zählung von somatischen

5-2 : 2001 has the status of a DIN Standard.

Microbial risk assessment

Quantitative Microbial Risk Assessment (QMRA) tool algorithm

Define simulated pathogens and the stochastic parameters → Define inflow data and generate the random sample → Apply log-reduction for each treatment process (e.g. primary, aquifer passage) → Determine the infection risk for the end-user due to exposed volume → Assess the health risk

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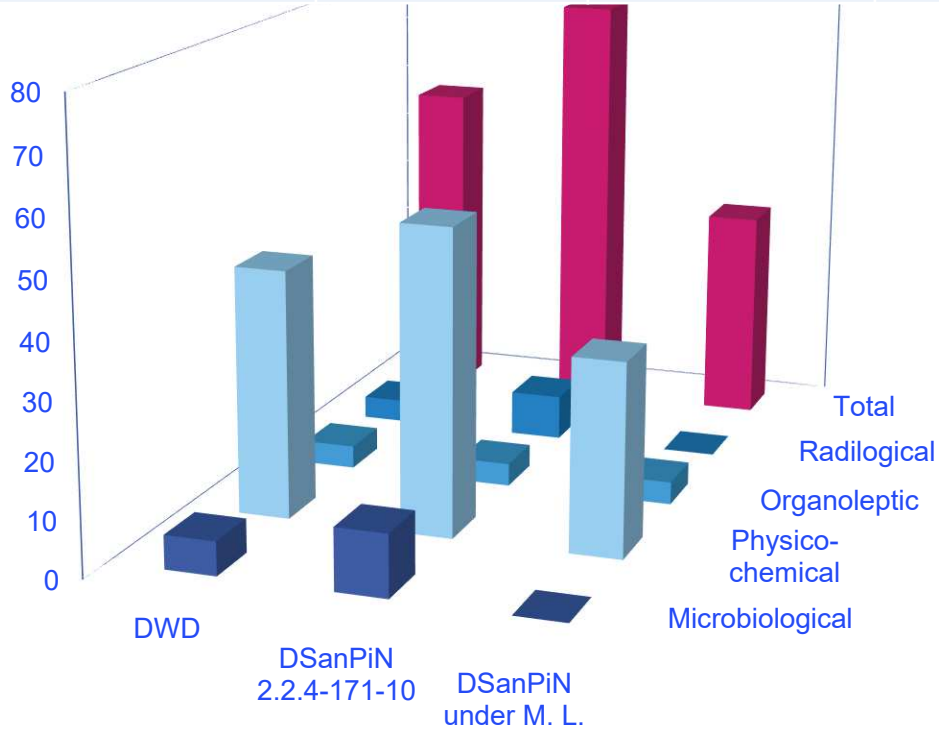
Task 7.2: Applying the risk-based management tool to bridge gaps between UA and EU water quality standards

safe CREW

#	Group of parameters	DWD EU	DSanPiN 2.2.4-171-10	DSanPiN under M. L.	Common for (3) and (4)	Common for (3) and (5)	Comm on for all
1	2	3	4	5	6	7	8
1	Microbiological	6	11	-//-	4	-//-	4
2	Physical and chemical	44	54	34	33	31	30
3	Organoleptic	4	4	4	4	4	4
4	Radiological	4	8	0	2	0	0
5	Total	58	77	38			



МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ

НАКАЗ

12.05.2010 № 400

Зареєстровано в Міністерстві юстиції України
01 липня 2010 р.
за № 452/17747

Про затвердження Державних санітарних норм та правил "Гігієнічні вимоги до води питної, призначеної для споживання людиною"

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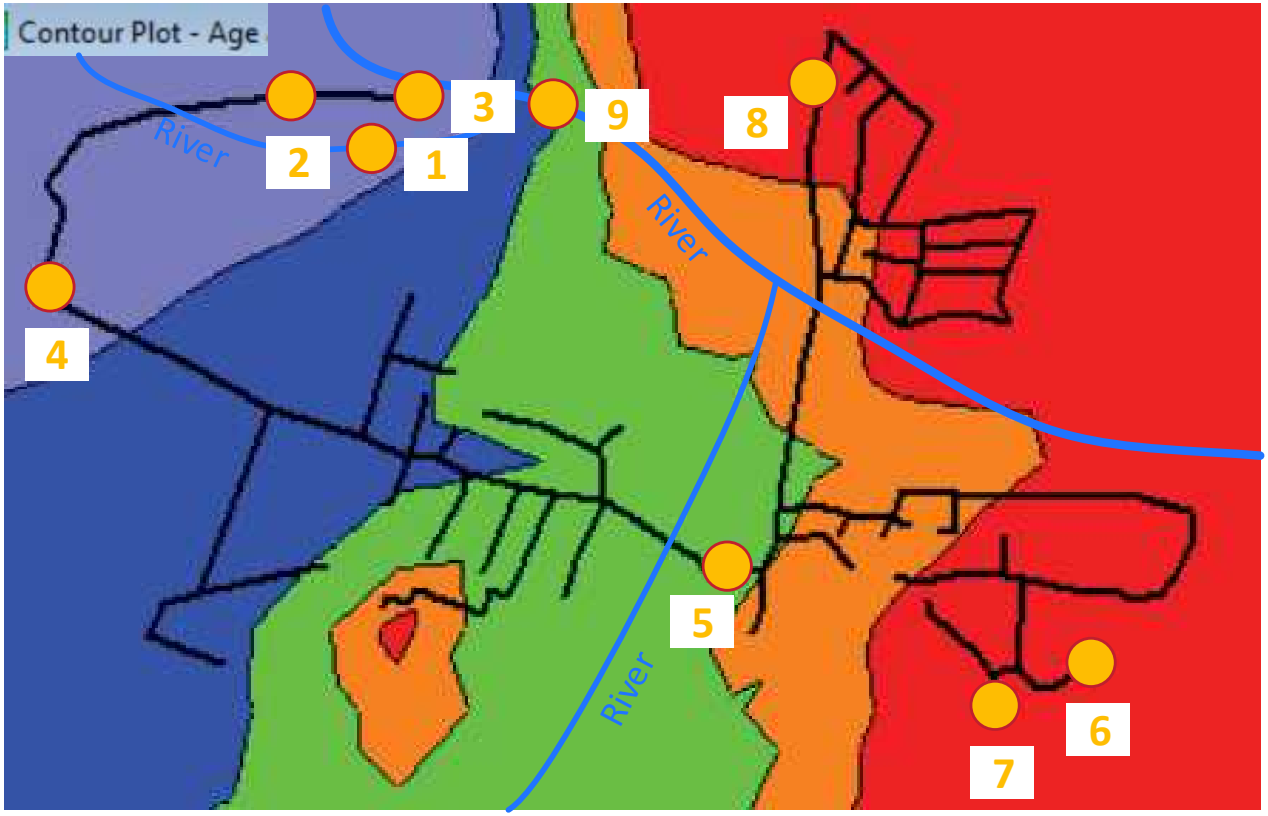
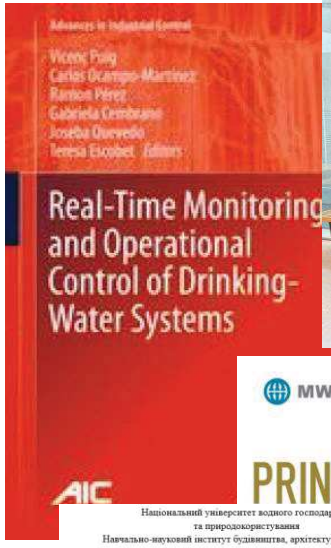
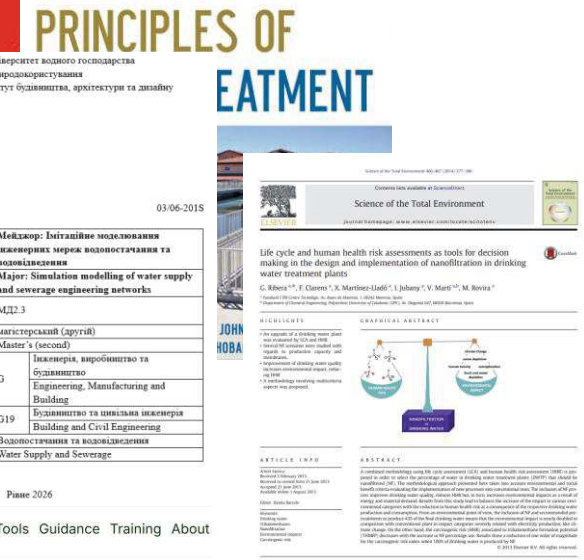
Task 7.3: Adapting models for DWDN and upgrading monitoring in DWSS

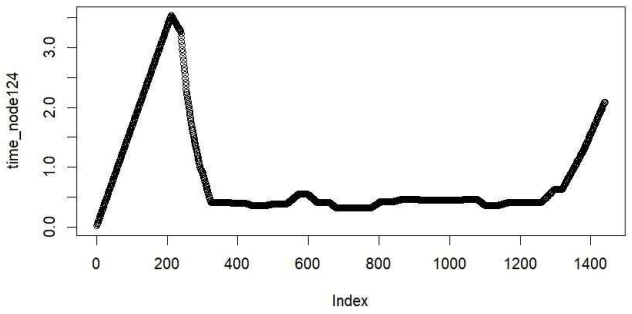


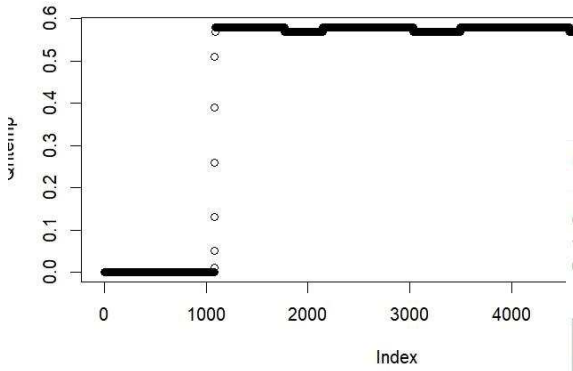




СИЛАБУС	Мейджор: Імітаційне моделювання інженерних мереж водопостачання та водовідведення
SYLLABUS	Major: Simulation modelling of water supply and sewerage engineering networks
Шифр за ОПП	МД2.3
Code in Degree Programme	
Освітній рівень	магістерський (другий)
Level of Education	Master's (second)
Галузь знань	G Інженерія, виробництво та будівництво
Field of Knowledge	G Engineering, Manufacturing and Building
Спеціальність	G19 Будівництво та цивільна інженерія
Field of Study	G19 Building and Civil Engineering
Освітня програма	Водопостачання та водовідведення
Degree Programme	Water Supply and Sewerage

Рівне 2026





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Laboratories

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DWTP

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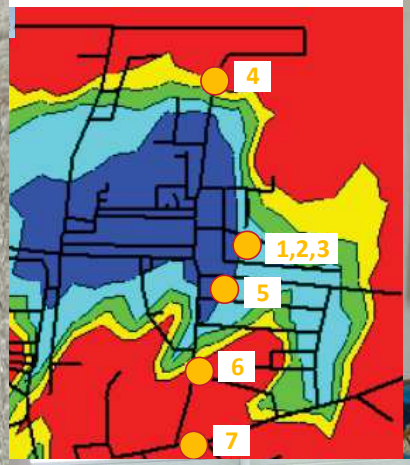
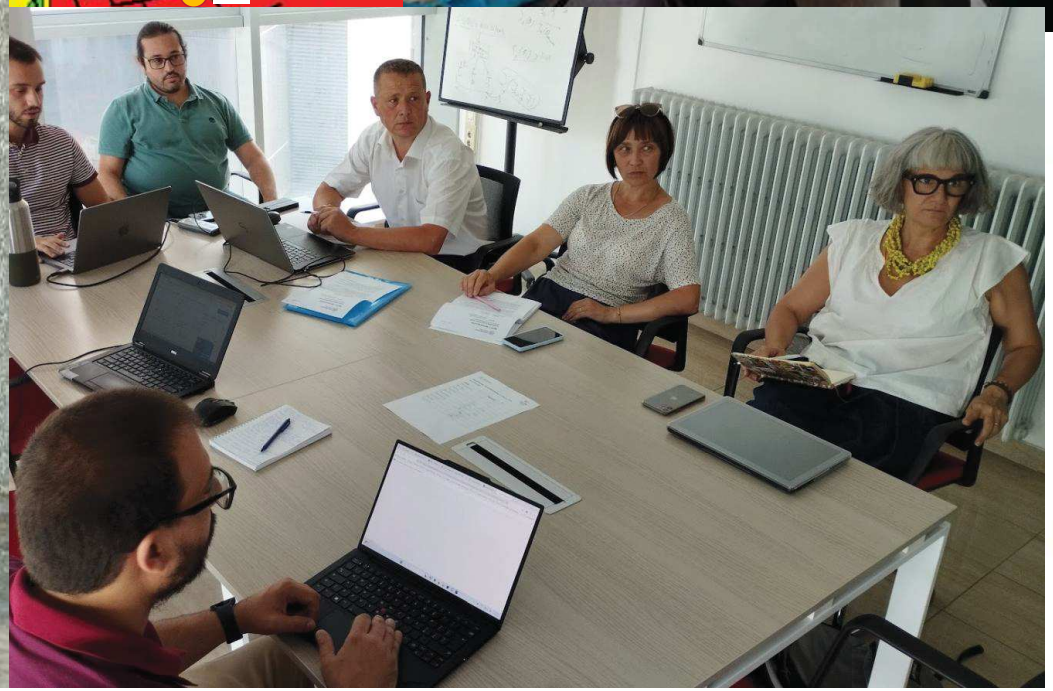
Task 7.3: Adapting models for DWDN and upgrading monitoring in DWSS





Safety Plans for small DWSS: public summary 1

Water Safety Plans for small DWSS: public summary

Deliverable D7.2, WP7

Project Number	**101081980**
Project Title	Climate-resilient management for safe disinfected and non-disinfected water supply systems
Project Acronym	SafeCREW
Project Duration	1 November 2022 – 30 April 2026
Call identifier	HORIZON-CL6-2022-ZEROPOLLUTION-01
Due date of Deliverable	Month 36, 31.10.2025
Final version date	Month 36, 30.10.2025
Dissemination Level	PU (Public)
Deliverable No.	D7.2
Work Package	WP7
Task	T7.2
Lead Beneficiary	NUWEE
Contributing Beneficiaries	KWB, POLIMI, DVGW-TUHH, EUT
Report Author	NUWEE: S. Martynov, S. Klimov, A. Kucherova, S. Kunytskiy, L. Kupchyk, V. Besediuk, S. Kohut
Reviewed by	NUWEE: V. Moshynskyi, M. Khlapuk DVGW-TUHH: M. Ernst
Approved by	DVGW-TUHH: A. Grieb

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101081980.

Funded by the European Union

Task 7.4: Defining the scope of the Centre of Excellence in Water Management

State of DW production in the west of Ukraine & future outlook

Deliverable D7.1, WP7

Project Number	**101081980**
Project Title	Climate-resilient management for safe disinfected and non-disinfected water supply systems
Project Acronym	SafeCREW
Project Duration	1 November 2022 – 30 April 2026
Call identifier	HORIZON-CL6-2022-ZEROPOLLUTION-01
Due date of Deliverable	Month 30, 30.04.2025
Final version date	Month 30, 30.04.2025
Dissemination Level	PU (Public)
Deliverable No.	D7.1
Work Package	WP7
Task	T7.1, T7.2, T7.4
Lead Beneficiary	NUWEE
Contributing Beneficiaries	NUWEE
Report Author	S. Martynov, S. Klimov, S. Kunytskiy, V. Besediuk, A. Kucherova, L. Kupchyk
Reviewed by	Mathias Ernst (DVGW-TUHH)
Approved by	Anissa Grieb (DVGW-TUHH)

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Table of contents

Abbreviations

DWSS	Drinking water supply system
DSanPiN	National sanitary rules and standards
DSTU	State standard of Ukraine
DWI	Drinking water intake
EC	European Commission
EQS	Environmental quality standards (for priority substances determined by the Ministry of Ecology and Natural Resources of Ukraine dated January 14, 2019)
EU	European Union
GOST	Gosudarstvennyy Standart = national state standard
WU	Western Ukraine

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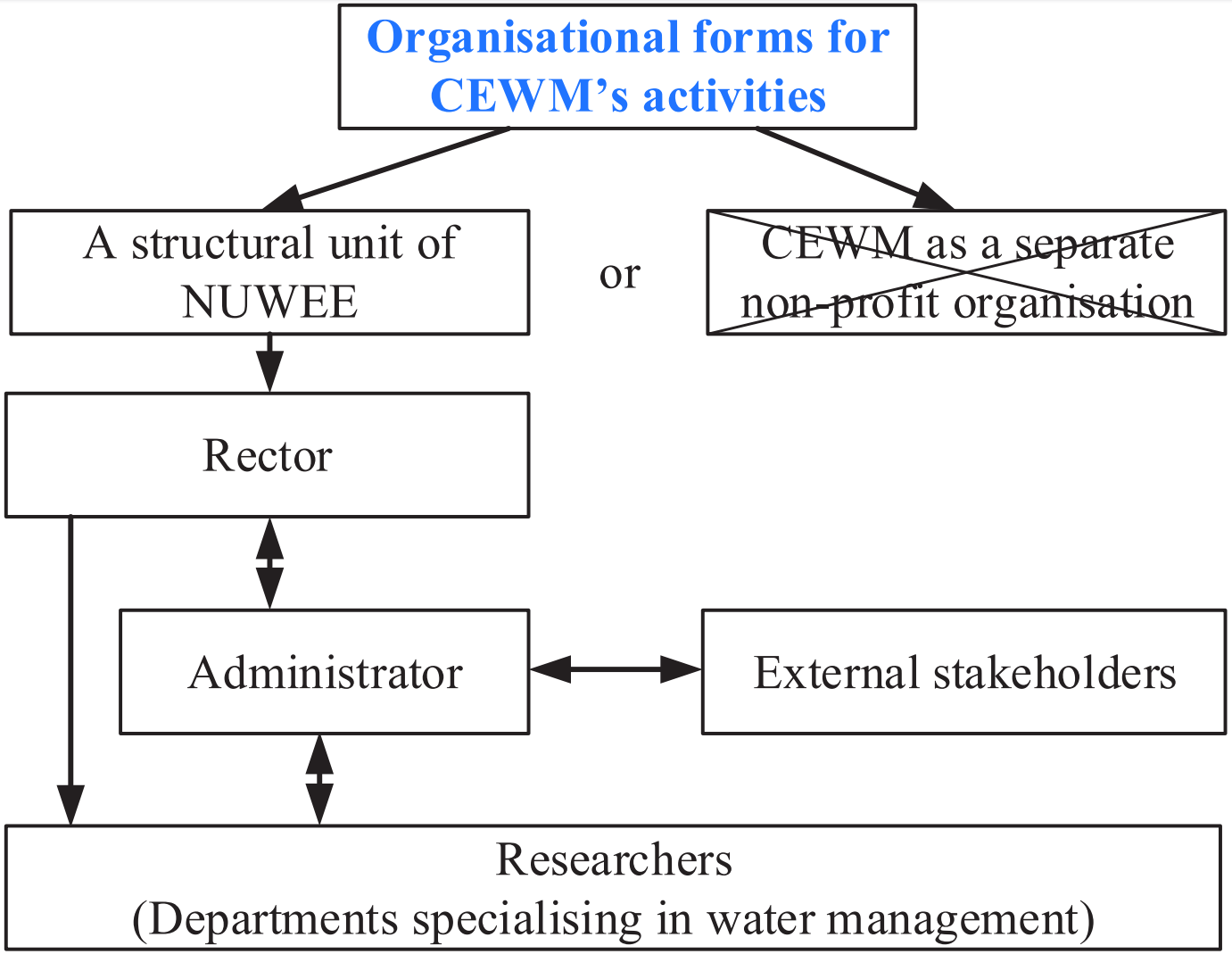
Task 7.4: Defining the scope of the Centre of Excellence in Water Management



1. Project DIGISKILLS / Strengthening digital skills in the water sector higher education, Erasmus+ Programme.
2. Project WaterWise Hub / The Waterwise Hub: An Excellence Hub On Water In The Circular Economy, Horizon Europe Programme.

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