



National University of Life and
Environmental Sciences of Ukraine

Path4Med Horizon EU project
(101156867)



The kick-off
regularity meeting

Ukrainian team part of
the Path4Med



Co-funded by
the European Union

26.02.2025





Agenda



- 1. Water sampling (14-16 February, 2025)**
- 2. Progress of Stakeholders mapping (T2.2, T5.1)**
- 3. Updates of the water and agricultural datasets (T2.4, T3.1, 3.4, 3.5)**
- 4. Discussion - needs**
- 5. Next step**
- 6. Next scheduled meeting**





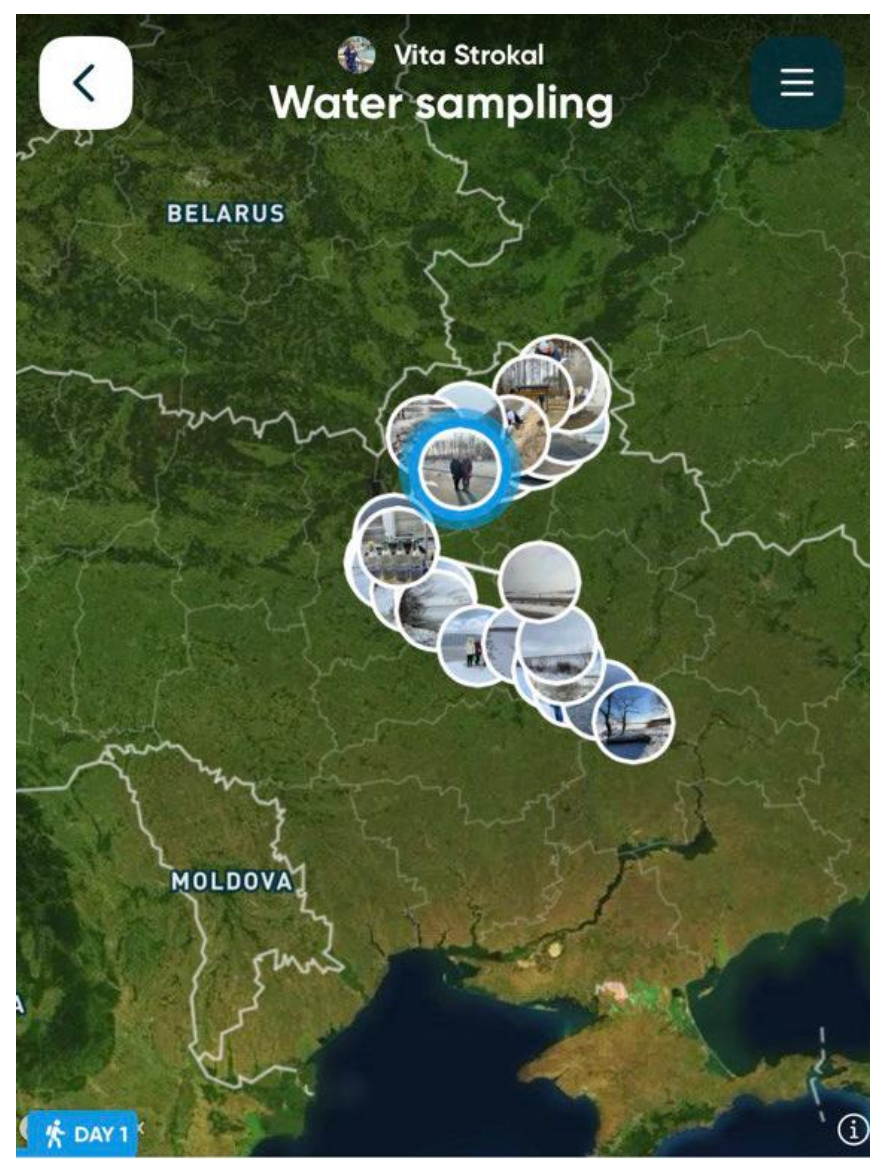
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Water sampling

Third water sampling trip



14-16 February, 2025



1st day, 14 February – Desna River Subbasin

Conditions on this day:

- Air Temperature: from -4 to 0 °C
- Precipitation: in the morning – absent; after midday – 50%
- Cloudy
- Humidity: 84%

2nd & 3rd days, 15-16 February – Middle Subbasin

Conditions on this day:

- Air Temperature: from -12°C to -6°C
- Precipitation: 50%
- Cloudy and sunny
- Humidity: 72-85%



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1st day

Location 1: 1-3 samplings

Chernihiv Region,

Novhorod-Siverskyi city

Conditions on this day:

- Air Temperature: from -4 to 0 °C
- Precipitation: in the morning – absent; after midday – 50%
- Cloudy
- Humidity: 84%

A lot of plastic waste

Spillage of water
from the river bank
up to 5 meters



Water sampling

Third water sampling trip



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1st day

Location 2: 4-6 samplings
Chernihiv Region,
Velyke Ustya village in the
Sosnytsia settlement community

Conditions on this day:

- Air Temperature: from -4 to 0 °C
- Precipitation: in the morning – absent; after midday – 50%
- Cloudy
- Humidity: 84%

Ice depth up to 12 cm

The level of water – up to 2 meters

Manures



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Water sampling

Third water sampling trip





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1st day

Location 3: 7-9 samplings

Chernihiv city,
near the entree to the city from
the road “Kyiv-Chernihiv”, near
the bridge)

Conditions on this day:

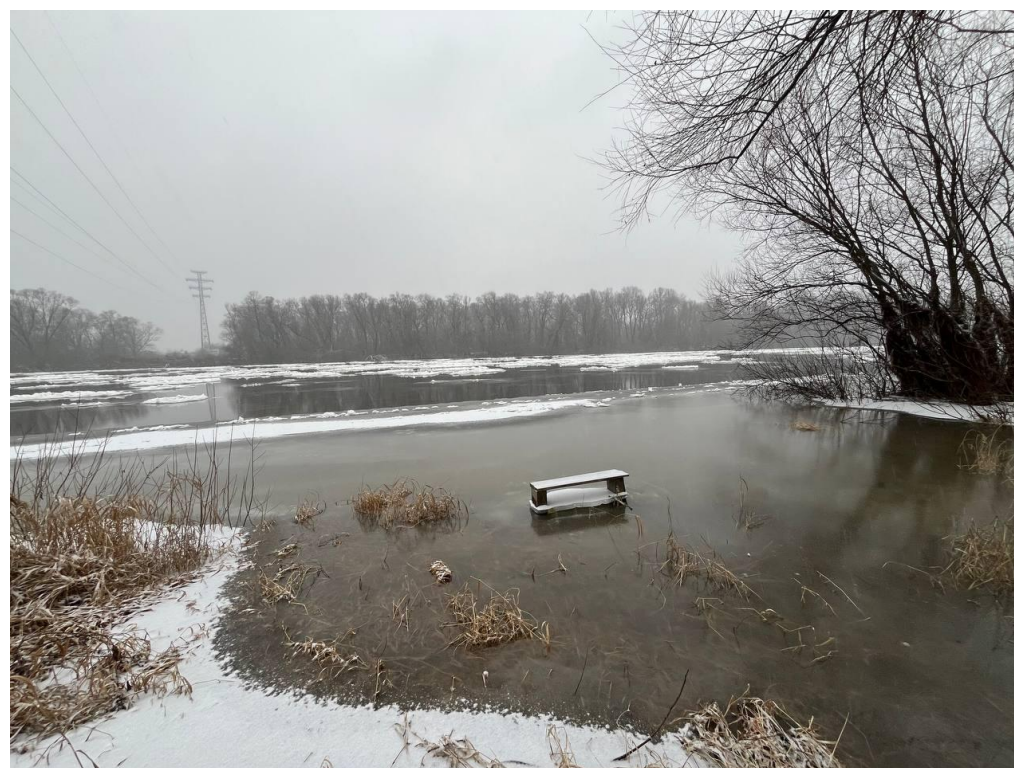
- Air Temperature: from -4 to 0 °C
- Precipitation: in the morning – absent; after midday – 50%
- Snowing
- Humidity: 84%

Fragile ice

Spillage of water from the
river bank up to 5 meters

Water sampling

Third water sampling trip



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1st day

Location 4: 10-12 samplings

Kyiv city,
Municipal beach (public)

Conditions on this day:

- Air Temperature: from -4 to 0 °C
- Precipitation: in the morning – absent; after midday – 50%
- Snowing
- Humidity: 82%

Ice depth up to 12 cm

**Spillage of water from the
river bank up to 2-3 meters**

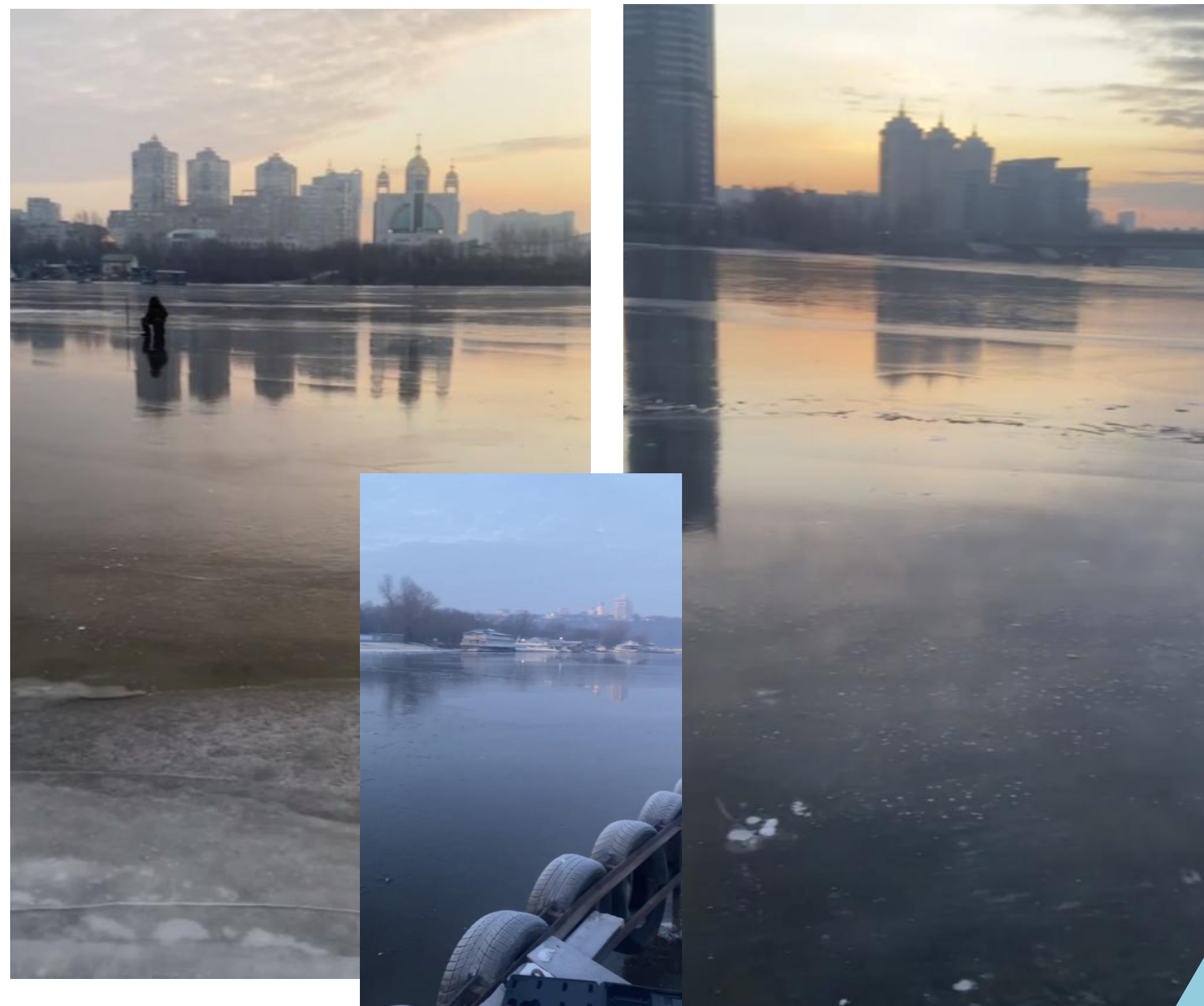
Fishing



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Water sampling

Third water sampling trip





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2nd day

Location **5**: 13 sampling

Kyiv Region,

Kozyn city

Conditions on this day:

- Air Temperature: from -6 °C
- Precipitation: 0% (the night before was snowing)
- Humidity: 80%

Ice depth up to 6-10 cm

The level of water
didn't change

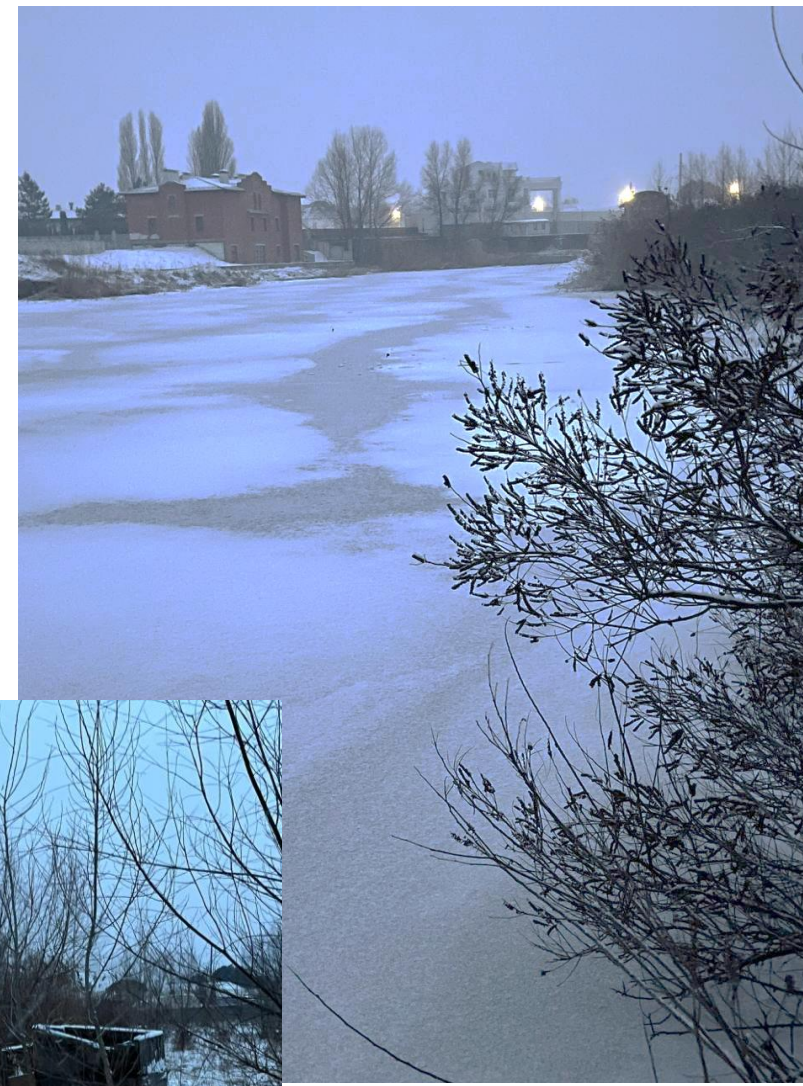
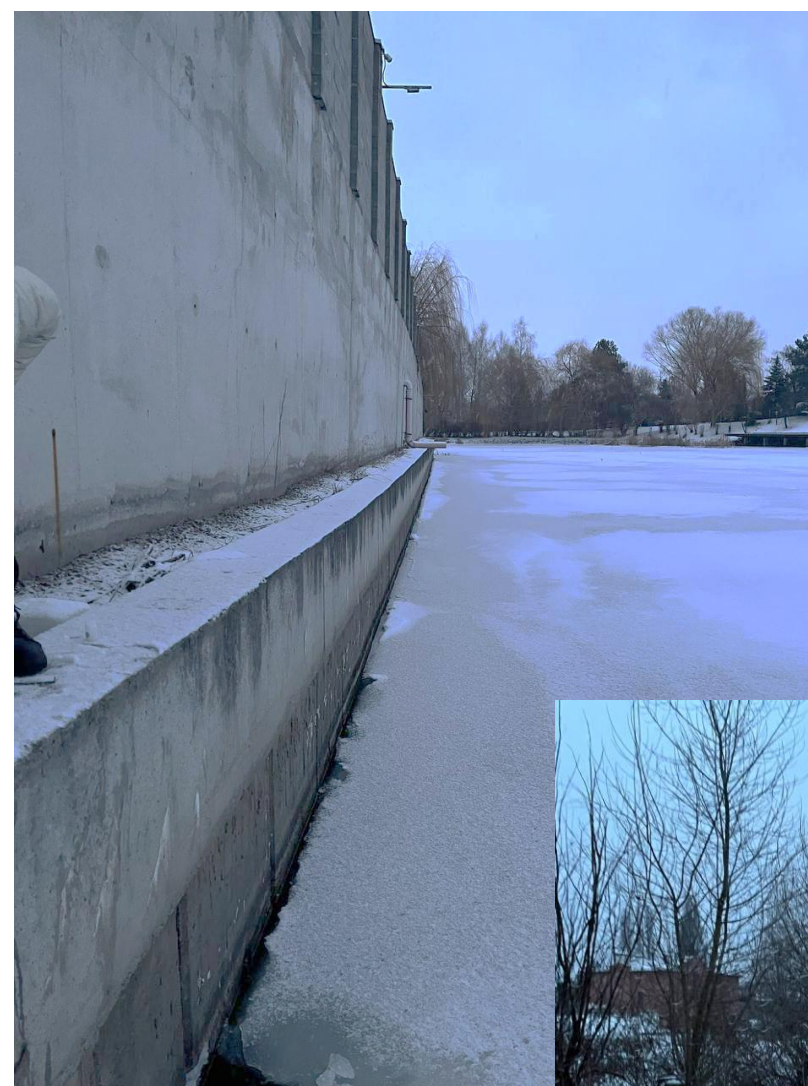
Solid waste



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Water sampling

Third water sampling trip





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2nd day

Location 5: 14 sampling

Kyiv Region,

Kozyn city (4 km from 13 sampling)

Conditions on this day:

- Air Temperature: from -7 °C
- Precipitation: 0% (the night before was snowing)
- Humidity: 80%

Ice depth up to 8-12 cm

The level of water
didn't change

Fishing



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Water sampling

Third water sampling trip





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2nd day

Location 5: 15 sampling

Kyiv Region,
Kozyn city (8 km from 13 sampling,
4 km from 14 sampling)

Conditions on this day:

- Air Temperature: from -7 °C
- Precipitation: 0% (the night before was snowing)
- Humidity: 86%

Ice depth up to 10-15 cm

The level of water
didn't change

Fishing



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Water sampling

Third water sampling trip





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2nd day

Location 6: 16 sampling

Kyiv Region,
Rzhyschiv city,
Municipal beach (public)
The upper part of the Kaniv
Reservoir

Conditions on this day:

- Air Temperature: from -6 °C
- Precipitation: 60% (snowing)
- Humidity: 86%

Ice depth up to 6-8 cm

The level of water
didn't change

Fishing



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Water sampling

Third water sampling trip





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2nd day

Location 6: 17 sampling

Kyiv Region,
Rzhyschivs'ka,
The middle part of the Kaniv
Reservoir

Conditions on this day:

- Air Temperature: from -6 °C
- Precipitation: 60% (snowing)
- Humidity: 86%

Ice depth up to 10-12 cm

The level of water
didn't change

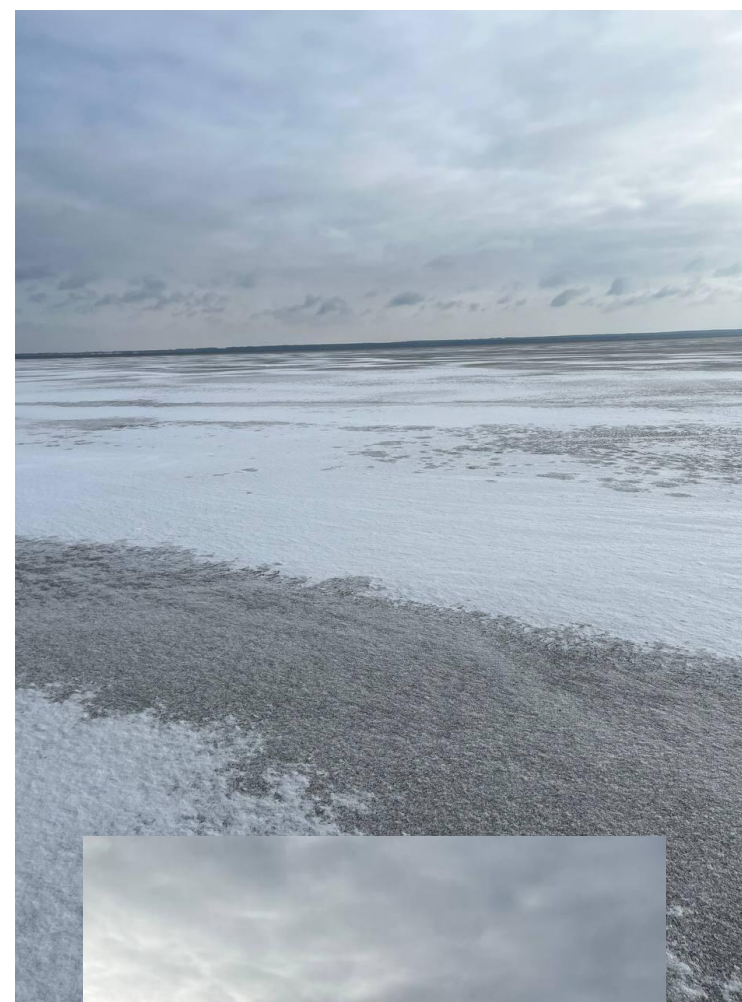
Fishing



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Water sampling

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2nd day

Location 6: 18 sampling

Cherkasy Region,
Bobrytsya village

The lower part of the Kaniv
Reservoir

Conditions on this day:

- Air Temperature: from -6 °C
- Precipitation: 60% (snowing)
- Humidity: 86%

Ice depth up – 0

The level of water
didn't change

Plastic and solid waste

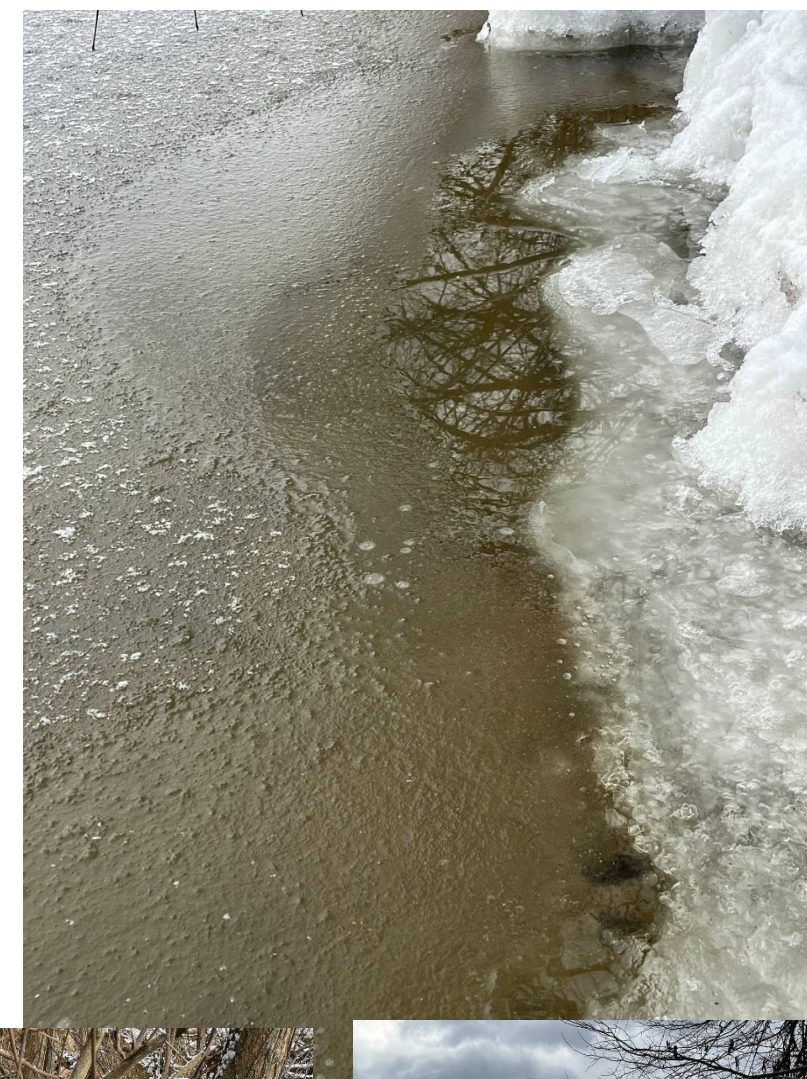
Color of water – yellowish!!!



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Water sampling

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2nd day

Location 7: 19 sampling

Cherkasy city,
Municipal beach (public)
The upper part of the
Kremenchuk Reservoir

Conditions on this day:

- Air Temperature: from -7 °C
- Precipitation: 60% (snowing)
- Humidity: 86%

Ice depth up – 8-10 cm

The level of water
didn't change



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Water sampling

Third water sampling trip





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2nd day

Location 7: 20 sampling

Cherkasy Region,
Zolotonosha,
The Sulyn dam
The middle part of the
Kremenchuk Reservoir

Conditions on this day:

- Air Temperature: from -7 °C
- Precipitation: 60% (snowing)
- Humidity: 86%

Fragile ice

The level of water
didn't change

**Color of water – transparent
lemon color!!!**



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Water sampling

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2nd day

Location 7: 21 sampling

Poltava Region,
Hradyzk village,
Municipal beach (public)
The lower part of the
Kremenchuk Reservoir

Conditions on this day:

- Air Temperature: from -7 °C
- Precipitation: 60% (snowing)
- Humidity: 86%

Fragile ice

The level of water
didn't change

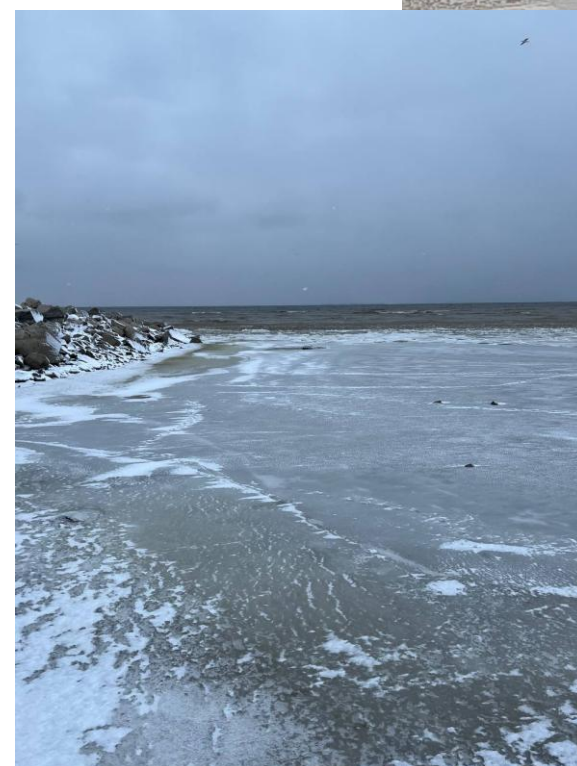
Plastic and solid waste



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Water sampling

Third water sampling trip





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2nd day

Water sampling

Third water sampling trip



Location 8: 22 sampling

Poltava Region,
Kremenchuk city,
Municipal beach (public)
The upper part of the
Kamianske Reservoir

Conditions on this day:

- Air Temperature: from -7 °C
- Precipitation: 60% (snowing)
- Humidity: 86%

Without ice

The level of water
didn't change



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3rd day

Location 8: 23 sampling

Kirovohrad Oblast,
Deriivka village,
The middle part of the
Kamianske Reservoir

Conditions on this day:

- Air Temperature: from -10 °C
- Precipitation: 0%
- Humidity: 82%

Fragile ice

The level of water
didn't change

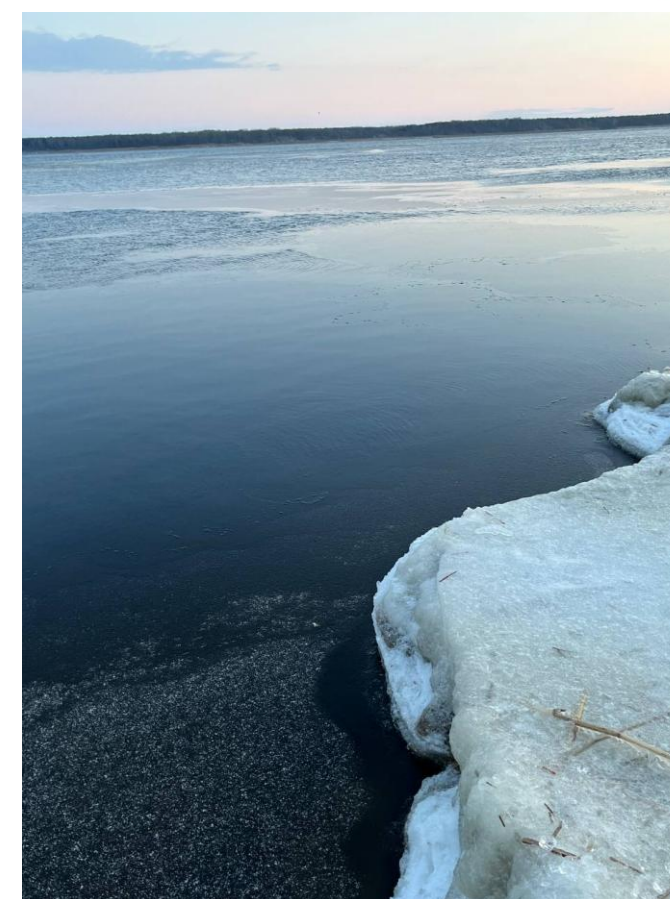
Plastic and solid waste



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Water sampling

Third water sampling trip



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3rd day

Location **8**: 24 sampling

Dnipropetrovsk Oblast,
Domotkan village,
The lower part of the
Kamianske Reservoir

Conditions on this day:

- Air Temperature: from -10 °C
- Precipitation: 0%
- Humidity: 82%

Ice depth up – 15-20 cm

The level of water
didn't change

Plastic and solid waste



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Water sampling

Third water sampling trip





Stakeholders mapping

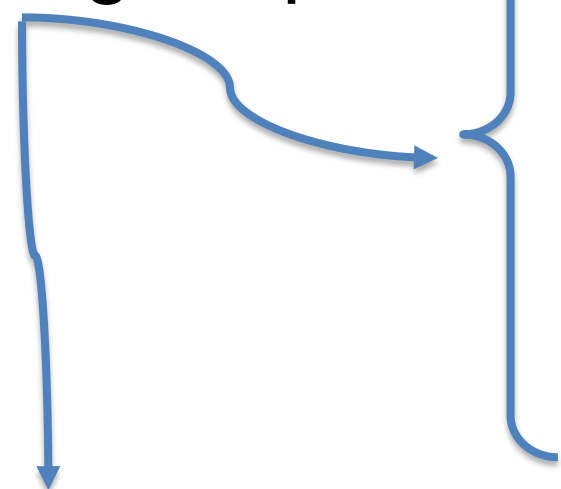


PIM: Policies, Institutions and Markets

Progress of Stakeholders mapping (T2.2, T5.1)

Responsible: Vita Strokal, Oleksandr Labenko

Stakeholder
Mapping Steps:



**1. Identify
Stakeholders**

The list of stakeholders has to involve the relevant stakeholders in the context of water & soil pollution

**2. Analyze
Stakeholders**

Selected and categorized them. Figure out how relevant they are to the DG3(Ukraine), as well as what technologies they can implement

**3. Map
Stakeholders**

Create stakeholder matrix and divide it into Knowledge and Influence Levels

**4. Prioritize
technologies**

Prioritize innovative technologies that each stakeholders can or possibly can implement into solving water & soil pollution

**5. Develop Stakeholder
Engagement Strategies**

These stakeholders can be categorized and prioritized to develop specific engagement strategies for agricultural development





Stakeholders mapping



PIM: Policies, Institutions and Markets

Progress of Stakeholders mapping (T2.2, T5.1)

1. Identify Stakeholders

Selected and categorized stakeholders relevant in the context of **water pollution**

- 1 Ministry of Environmental Protection and Natural Resources of Ukraine
- 2 The State Agency of Water Resources of Ukraine
- 3 The state emergency service of Ukraine "Boris Sresnevsky Central Geophysi
- 4 Basin Management Councils of Dnipro Sub-Basins
- 5 Hydropower Energy producers
- 6 Water supply services (in urban areas)
- 7 Wastewater treatment plants
- 8 Industries
- 9 Landfill solid waste managers
- 10 Local municipalities (cities)
- 11 Famers: chicken production
- 12 Farmers: other livestock production
- 13 Farmers: crop production (mainly cereals, maize, potatoes)
- 14 Research & innovation institutes
- 15 Universities
- 16 NGOs
- 17 Villages (recreations, local animal farming, low sanitation facilities)

Categorize of stakeholders						
Number	Stakeholders	Geographical coverage	Sectors	Action/ Jurisdiction	Organization Type	
1	Ministry of Environmental Protection and Natural Resources of Ukraine	National	Public	National	Policies	
2	The State Agency of Water Resources of Ukraine	National	Public	National	Policies	
3	The state emergency service of Ukraine "Boris Sresnevsky central geophysical observatory"	National	Public	National	Policies	
4	Basin Management Councils of Dnipro Sub-Basins	National	Public	National	Policies	
5	Hydropower Energy producers	Provincial	Private	Regional	Association	
6	Water supply services	Municipal	Private	Local	Association	
7	Wastewater treatment plants	Municipal	Private	Local	Association	
8	Industries	Provincial	Private	Regional	Association	
9	Landfill solid waste managers	Provincial	Private	Regional	Association	
10	Local municipalities (cities)	Municipal	Public	Local	Policies	





Stakeholders mapping



PIM: Policies, Institutions and Markets
Progress of Stakeholders mapping (T2.2, T5.1)

2. Analyze Stakeholders

Identified **water** implementation potential innovative technologies

Technologies						Monitoring and Assessment Technologies				Water Conservation and Management Technologies			Pollution Reduction and Control Technologies		Sustainable Infrastructure Technologies	Climate Adaptation and Resilience-Building Technologies
Number	Stakeholders	Geographical coverage	Sectors	Action/Jurisdiction	Organization Type	1 GIS/RS	2 AI water sensors	3 AI-UAVs (Drones)	4 Stable isotopes techniques	5 Drip Irrigation Technology	6 Irrigation Management Mobile Apps	7 Systems Design and Construction Techniques (Rainwater Catchment Systems)	8 Nanotechnology / (AgNp)-coated filters	9 Reverse Osmosis (RO) Technology	10 Greening of Water Infrastructure	11 GIS and RS (as part of Monitoring and Assessment)
1	Ministry of Environmental Protection and Natural Resources of Ukraine	National	Public	National	Policies											
2	Monitoring and Assessment Technologies															
3																
4						1	2	3	4							
5																
6						GIS/RS	AI-water sensors	AI-UAVs (Drones)	Stable isotopes techniques							
7																
8																
9	Landfill															
10	Local m															
11	Farmers															
12	Farmers															
13	Farmers cereals,															
14	Research															
15	Universities	National	Academy/research	National												
16	NGOs	National	Non-governmental	National												
17	Villages (recreations, local animal farming, low sanitation facilities)	Municipal	Private	Local												

Are working on ...





Stakeholders mapping



PIM: Policies, Institutions and Markets

Progress of Stakeholders mapping (T2.2, T5.1)

1. Identify Stakeholders

Selected and categorized stakeholders relevant in the context of soil pollution

- 1 Ministry of Environmental Protection and Natural Resources of Ukraine
- 2 Ministry of Agrarian Policy and Food of Ukraine
- 3 The State Service of Ukraine for Geodesy, Cartography and Cadastre
- 4 The State Service of Ukraine on Food Safety and Consumer Protection
- 5 Landfill solid waste managers/companies
- 6 Irrigation companies or/and services / Irrigation Equipment Producers
- 7 Local municipalities (cities)
8. Famers: chicken production
9. Farmers: other livestock production
10. Farmers: crop production (mainly cereals, maize, potatoes)
11. Farmer's market for agricultural production
12. Famer's market for equipment
13. *Famer's producers of equipment*
14. Farmer's market for buying fertilizer & pesticides
15. *Fertilizer & pesticide producers*
16. Research & innovation institutes
17. Universities
18. NGOs
19. Villages (recreations, local animal farming, low sanitation facilities)

Number	Stakeholders	Geographical coverage	Sectors	Action/ Jurisdiction	Organization Type
1	Ministry of Environmental Protection and Natural Resources of Ukraine	National	Public	National	Policies
2	Ministry of Agrarian Policy and Food of Ukraine	National	Public	National	Policies
3	The State Service of Ukraine for Geodesy, Cartography and Cadastre	National	Public	National	Policies
4	The State Service of Ukraine on Food Safety and Consumer Protection	National	Public	National	Policies
5	Landfill solid waste managers / companies	Provincial	Private	Regional	Association
6	Irrigation companies or/and services / Irrigation Equipment Producers	Provincial	Private	Regional	Association
7	Local municipalities (cities)	Municipal	Public	Local	Policies





Stakeholders mapping



PIM: Policies, Institutions and Markets

Progress of Stakeholders mapping (T2.2, T5.1)

2. Analyze Stakeholders

Identified **soil** implementation potential innovative technologies

Technologies						Monitoring and Assessment Technologies		Water Conservation and Management Technologies		Pollution Reduction and Control Technologies	Sustainable Infrastructure Technologies	Climate Adaptation and Resilience-Building Technologies	Soil monitoring methods using precision agriculture technologies				
Categorize of stakeholders						1	2	3	4	5	6	7	8	9	10	11	12
Number	Stakeholders	Geographical coverage	Sectors	Action/Jurisdiction	Organization Type	GIS/RS	AI-soil sensors	Drip Irrigation Technology	Irrigation Management Mobile Apps	Reverse Osmosis (RO) Technology	Greening of Water Infrastructure	GIS and RS (as part of Monitoring and Assessment)	On-the-go soil sensors	Electrical and electromagnetic sensors	Optical and radiometric sensors	UAVs or drones	IoT-based systems and wireless sensor networks (WSNs)
1	Ministry of Environmental Protection and Natural Resources of Ukraine	National	Public	National	Policies												
2	Ministry of Agrarian Policy and Food of Ukraine	National	Public	National	Policies												

Monitoring and Assessment Technologies		Water Conservation and Management Technologies		Pollution Reduction and Control Technologies	Sustainable Infrastructure Technologies	Are working on ...				
1	2	3	4	5	6					
GIS/RS	AI-soil sensors	Drip Irrigation Technology	Irrigation Management Mobile Apps	Reverse Osmosis (RO) Technology	Greening of Water Infrastructure					
10	Farmers: crop production (mainly cereals, maize, potatoes)	Provincial	Private	Reg						
11	Farmer's market for agricultural production	Provincial	Private	Reg						
Climate Adaptation and Resilience-Building Technologies					Soil monitoring methods using precision agriculture technologies					
7	8	9	10	11	12					
GIS and RS (as part of Monitoring and Assessment)	On-the-go soil sensors	Electrical and electromagnetic sensors	Optical and radiometric sensors	UAVs or drones	IoT-based systems and wireless sensor networks (WSNs)					





Stakeholders mapping

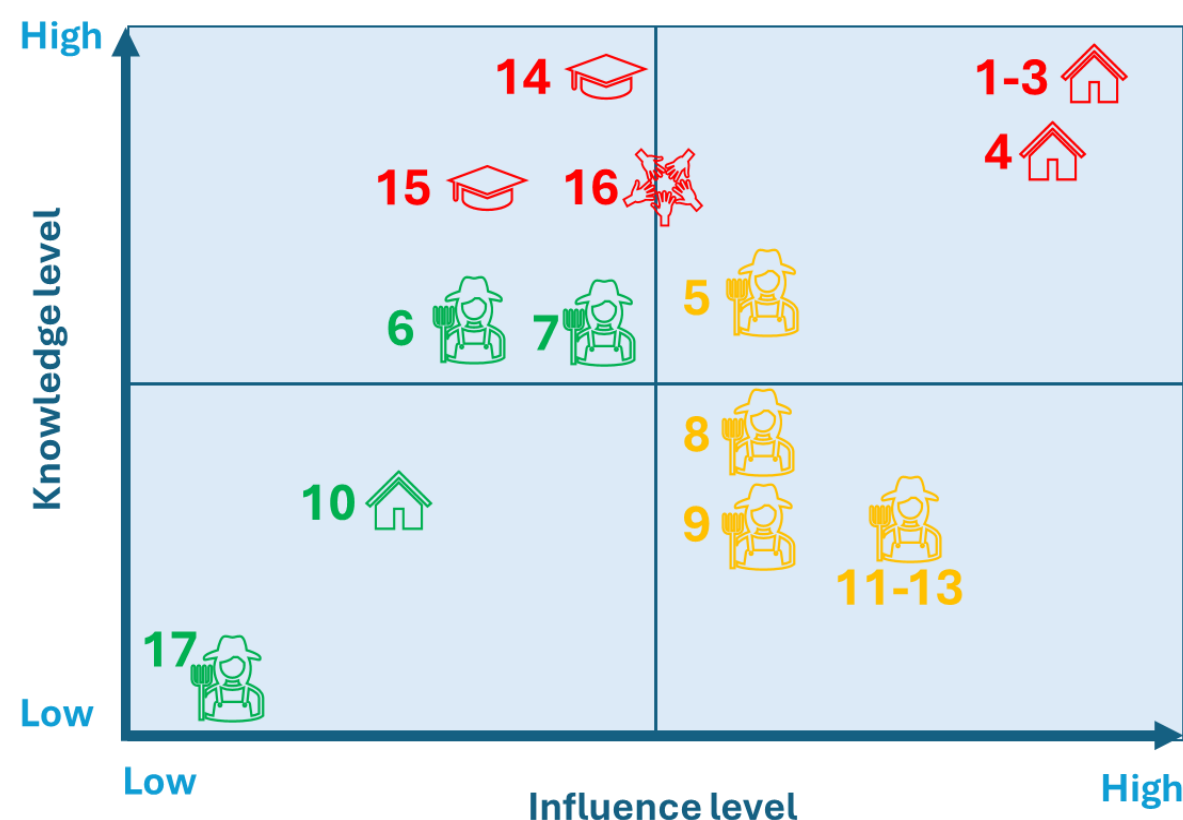


PIM: Policies, Institutions and Markets
Progress of Stakeholders mapping (T2.2, T5.1)

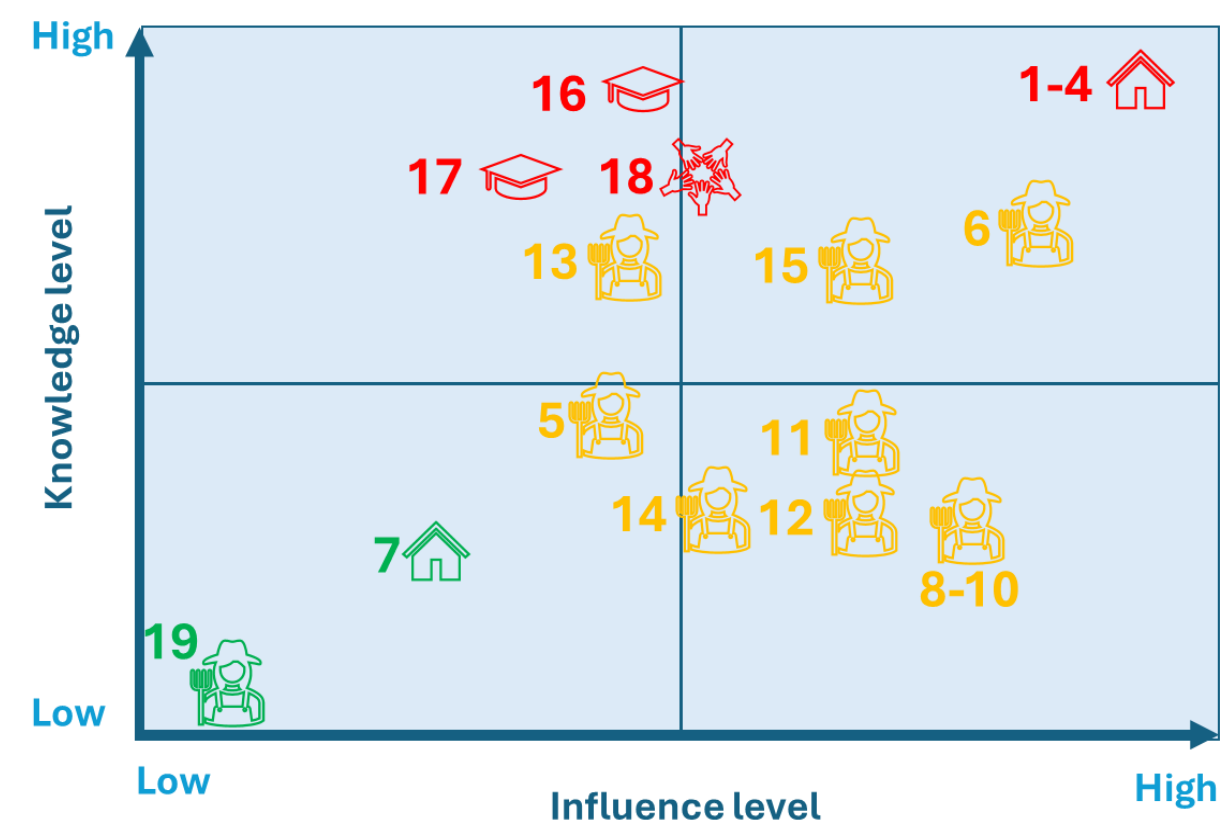
3. Map Stakeholders

Identified knowledge and influence levels

Water pollution for the Dnipro Basin



Soil pollution for the Dnipro Basin



Geographical coverage:

- Municipal stakeholders
- Provincial stakeholders
- National stakeholders

Sectors:



Academy/research



Public



Private



Non-governmental



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Stakeholders mapping



PIM: Policies, Institutions and Markets
Progress of Stakeholders mapping (T2.2, T5.1)

Ongoing to fill in Excel files:

T.2.2 PIM_map

T5.1 Stakeholder

Copy of T2.2 - PIM Map .XLSX

A	B	C	D	E	F	G	H	I
3	AGTIV	Y						
5				Cyprus		2023	Incentives for establishing short supply chains	Y
4	AGTIV	Y	National		Common Agricultural Policy (CAP) Strategic Plan 2023-2027			
6	5 NUBiP of	Associate part	National	Ukraine	Agricultural Development Strat	2024		N
7	6 NUBiP of	Associate part	National	Ukraine	Food Security Strategy by 202	2024		N
8	7 NUBiP of	Associate part	National	Ukraine	Water Strategy by 2050	2022		N
9	8 NUBiP of	Associate part	National	Ukraine	Irrigation Strategy by 2030	2019		Maybe

Copy of T5.1 - Stakeholder_example .XLSX

A	B	C	D	E	F
44	The State Service of Ukraine for Geodesy, Cartograph	Governmental	Policies		National
45	The State Service of Ukraine on Food Safety and Con	Governmental	Policies		National
45	The State Agency of Water Resources of Ukraine	Governmental	Policies		National
46	The state emergency service of Ukraine "Boris Sresne	Governmental	Policies		National
47	Basin Management Councils of Dnipro Sub-Basins	Governmental	Policies		National
48	Agro-Oven Corporation	Association	Farmers Associations		Regional
49	Private Joint-Stock Company "Myronivska poultry fact	Association	Farmers Associations		Regional
50	Agro-Industrial Group «Dniprovsk»	Association	Farmers Associations		Regional
51	APK-INVEST	Association	Farmers Associations		Regional
52	UkrLandFarming Group	Association	Farmers Associations		Regional
53	Art-Agro (Apt-Arpo)	Association	Farmers Associations		Regional
54	IMC "Smart Green Company"	Association	Farmers Associations		Regional
55	The Ukrainian Company "BioNorma"	Association	Bussines		Regional
56	Branch of the Swiss company "Syngenta" in Ukraine	Association	Bussines		Regional
57	The National Scientific Center "Institute of Aariculture	Association/Public	Research & innovation institute		National





Updates of the water and agricultural datasets (T2.4, T3.1, 3.4, 3.5)

Shares of provinces in the sub-basins of the Dnipro Basin (% of the areas)

Table Y. Shares of provinces in the sub-basins of the Dnipro Basin (% of the areas)

	Number of provinces	Province names in the sub-basins	Shares of the provinces in the sub-basins (%)
Sub-basin 1: Desna River & Upper subbasin	3	Province 1: Kyiv Province 2: Chernihiv Province 3: Sumy	Province 1: 2 Province 2: 68 Province 3: 30 Total: 100%
Sub-basin 2: Pripyat Subbasin	8	Province 1: Rivne Province 2: Volyn Province 3: Zhytomyr Province 4: Khmelnytskyi Province 5: Ternopil Province 6: Lviv Province 7: Kyiv Province 8: Vinnytsia	Province 1: 29.32 Province 2: 23.58 Province 3: 24.04 Province 4: 12.20 Province 5: 3.88 Province 6: 2.87 Province 7: 4.07 Province 8: 0.04 Total: 100%
Sub-basin 3: Middle Subbasin	10	Province 1: Zhytomyr Province 2: Kyiv Province 3: Chernihiv Province 4: Poltava Province 5: Kropyvnytskyi Province 6: Sumy Province 7: Kharkiv Province 8: Vinnytsia Province 9: Cherkasy Province 10: Dnipropetrovsk	Province 1: 12 Province 2: 22 Province 3: 7 Province 4: 25 Province 5: 3 Province 6: 12 Province 7: 3 Province 8: 2 Province 9: 12 Province 10: 2 Total: 100%
Sub-basin 4: Down Subbasin	8	Province 1: Dnipropetrovsk Province 2: Donetsk Province 3: Zaporizhzhia Province 4: Kropyvnytskyi Province 5: Mykolaiv Province 6: Poltava Province 7: Kharkiv Province 8: Kherson	Province 1: 37 Province 2: 9 Province 3: 15 Province 4: 7 Province 5: 8 Province 6: 2 Province 7: 8 Province 8: 14 Total: 100%

Overview of the indicators for integrated analysis for the sub-basins of the Dnipro Basin covering the two periods of 2020-2021 and 2022-2023

Indicator classes	Indicators	Impact
Water quality (Table 1)	<ul style="list-style-type: none">NO3NO2NH4PO4DOBOD	<ul style="list-style-type: none">Aquatic ecosystems (eutrophication)Human health (drinking & bathing) Water quality
Agriculture (Table 2)	<ul style="list-style-type: none">Land useChemical fertilizersOrganic fertilizerCrop yieldIrrigationPesticides	<ul style="list-style-type: none">Food securityFood safety (pesticides) Agriculture
Urbanization (Table 3)	<ul style="list-style-type: none">Urban populationRural populationUrban population with sewage connectionsRural population with sewage connectionsGDP (gross domestic products)Primary, secondary, and tertiary wastewater treatment and no treatment	<ul style="list-style-type: none">Economic development Urbanization
Hydrology / climate (Table 4)	<ul style="list-style-type: none">PrecipitationTemperature	<ul style="list-style-type: none">Climate change Climate





Updates of the water and agricultural datasets (T2.4, T3.1, 3.4, 3.5)

Agricultural datasets

Indicators	Units (original data)	Spatial resolution (original data)	Temporal resolution (original data)	Number of provinces (n) in the sub-basins (Table Y for their shares)	1. Prepare units
Urban population	1000 people	Province	Annual	n=.... in sub-basin 1 n=... in sub-basin 2 n=....in sub-basin 3 n=... in sub-basin 4	Convert to people; Convert to people/km ²
Rural population	1000 people	Province	Annual		
Urban sewage connections	% of urban people	Province	Annual		Original unit
Rural sewage connections**	% of rural people	Province	Annual		Original unit
GDP (gross domestic product)*	10 ⁶ UA currency	Province	Annual		Convert steps: 1. Convert to UA curre 2. Convert to UA curre divide by total peop 3. Convert to US\$/per and 2023 (ask Oleks 4. Convert to the cons for 2020, 2021, 202 inflation rates, ask C
Primary, secondary, and tertiary wastewater treatment	% of the total treated wastewater (total should be 100%)	Province	Annual		Original unit

Responsible scientists:

Olena Naumovska

Vagaliuk Luidmyla

Oleksandr Labenko

Olena Naumovska

Vagaliuk Luidmyla





Updates of the water and agricultural datasets (T2.4, T3.1, 3.4, 3.5)

Climate datasets

Maryna Ladyka

Indicators	Units (original data)	Spatial resolution (original data)	Temporal resolution (original data)	Number of stations (n) in the sub-basins	1. Prepare units	2. Prepare spatial resolution: sub-basins
Precipitation	mm	Monitoring stations	Monthly, 2020-2023	n=.... in sub-basin 1 n=... in sub-basin 2 n=....in sub-basin 3 n=... in sub-basin 4	Original data	Average value of the stations that belong to sub-basins
Air temperature	°C	Monitoring stations	Monthly, 2020-2023	n=.... in sub-basin 1 n=... in sub-basin 2 n=....in sub-basin 3 n=... in sub-basin 4	Original data	Outcome: each basin has one month for each indicator

Water datasets

Larysa Voitenko

Indicators	Units (original data)	Spatial resolution (original data)	Temporal resolution (original data)	Number of stations (n) in the sub-basins	1. Prepare units	2. Prepare spatial resolution: sub-basins
NO3	mgNO3/L	Monitoring stations	Monthly, 2019-2022	n=.... in sub-basin 1 n=... in sub-basin 2 n=....in sub-basin 3 n=... in sub-basin 4	Convert to mgN/L	Average values of the stations that belong to sub-basins <i>Середні значення станцій, які належать до суб-басейнів</i>
NO2	mgNO2/L	Monitoring stations	Monthly, 2019-2022	n=.... in sub-basin 1 n=... in sub-basin 2 n=....in sub-basin 3 n=... in sub-basin 4	Convert to mgN/L	Outcome: each basin has one value per month for each quality indicator
NH4	mgNH4/L	Monitoring stations	Monthly, 2019-2022	n=.... in sub-basin 1 n=... in sub-basin 2 n=....in sub-basin 3 n=... in sub-basin 4	Convert to mgN/L	
PO4	mgPO4/L	Monitoring stations	Monthly, 2019-2022	n=.... in sub-basin 1 n=... in sub-basin 2 n=....in sub-basin 3 n=... in sub-basin 4	Convert to mgP/L	
DO	mgO2/L	Monitoring stations	Monthly, 2019-2022	n=.... in sub-basin 1 n=... in sub-basin 2 n=....in sub-basin 3 n=... in sub-basin 4	Original unit	
BOD5	mgO2/L	Monitoring stations	Monthly, 2019-2022	n=.... in sub-basin 1 n=... in sub-basin 2 n=....in sub-basin 3 n=... in sub-basin 4	Original unit	





1 Continue working on dataset collection

Deadline:

25.03.2025

Work in only
Excel files

Indicator classes	Indicators	Impact
Water quality	<ul style="list-style-type: none">NO3NO2NH4PO4DOBOD <p>Larysa Voitenko</p> <p>Vita Strokai</p>	<ul style="list-style-type: none">Aquatic ecosystems (eutrophication)Human health (drinking & bathing)
Agriculture	<ul style="list-style-type: none">Land useChemical fertilizersOrganic fertilizerCrop yieldIrrigationPesticides <p>Olena Naumovska</p> <p>Svitlana Palamarchuk</p> <p>Liudmyla Vagaliuk</p>	<ul style="list-style-type: none">Food securityFood safety (pesticides)
Urbanization	<ul style="list-style-type: none">Urban populationRural populationUrban population with sewage connectionsRural population with sewage connectionsGDP (gross domestic products)Primary, secondary, and tertiary wastewater treatment and no treatment <p>Olena Naumovska</p> <p>Liudmyla Vagaliuk</p> <p>Oleksandr Labenko</p>	<ul style="list-style-type: none">Economic development
Hydrology / climate	<ul style="list-style-type: none">PrecipitationTemperature <p>Maryna Ladyka</p> <p>Vita Strokai</p>	<ul style="list-style-type: none">Climate





Discussion - needs



- 2 Continue working on stakeholder mapping** Vita Strokai, Oleksandr Labenko
- 3 Continue working on making the shapefiles of the Dnipro River Basin**
Vita Strokai, Maryna Ladyka
- 4 Continue working on figuring out the economic costs and benefits of different strategies to address water scarcity on the farm scale**
Vita Strokai, Oleksandr Labenko
- 5 Start to implement Geographic Information Systems (GIS) and Remote Sensing (RS) for Reservoirs of the Dnipro Cascades**
Maryna Ladyka, Vita Strokai

Any suggestions, recommendations, remarks ...





Next meetings



The next kick-off meeting – 26.03.2025 – 14:30-15:30

Data	Time	Important aspects	Tasks that we need to achieve
26.03.2025	14:30	Water monitoring analyses. Prepare for soil sampling. Tender – soil sampling. Working with stakeholders and datasets	T.2.2, T5.1, T3.1-3.4
30.04.2025	14:30	Water sampling. Integration of agricultural influences (T6.1)	T6.1
28.05.2025	14:30	Soil sampling. Water monitoring analyses.	T3.1, T3.4
25.06.2025	14:30	Prepare the first draft of the report. Soil and water analyses. Overview of what we need. Make the water protocols. Deliverables!!!	Draft report (for the second project meeting)





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