EU4Environment in Eastern Partner Countries:
Water Resources and Environmental Data (ENI/2021/425-550)

GROUNDWATER SURVEY REPORT 2022

MOLDOVA

Funded by
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ABOUT THIS REPORT

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ABOUT EU4ENVIRONMENT – WATER RESOURCES AND ENVIRONMENTAL DATA

This Programme aims at improving people's wellbeing in EU's Eastern Partner Countries and enabling their green transformation in line with the European Green Deal and the Sustainable Development Goals (SDGs). The programme's activities are clustered around two specific objectives: 1) support a more sustainable use of water resources and 2) improve the use of sound environmental data and their availability for policy-makers and citizens. It ensures continuity of the Shared Environmental Information System Phase II and the EU Water Initiative Plus for Eastern Partnership programmes.

The Programme is implemented by five Partner organisations: Environment Agency Austria (UBA), Austrian Development Agency (ADA), International Office for Water (OiEau) (France), Organisation for Economic Co-operation and Development (OECD), United Nations Economic Commission for Europe (UNECE). The action is co-funded by the European Union, the Austrian Development Cooperation and the French Artois-Picardie Water Agency based on a budget of EUR 12,75 million (EUR 12 million EU contribution). The implementation period is 2021-2024.

https://eu4waterdata.eu

CONTENTS

List of abbreviations

ADA ..... Austrian Development Agency
BQE ..... Biological Quality Elements
DoA ..... Description of Action
DG NEAR ..... Directorate-General for Neighbourhood and Enlargement Negotiations of the European Commission
EaP ..... Eastern Partners
EC ..... European Commission
EECCA ..... Eastern Europe, the Caucasus and Central Asia
EMBLAS ..... Environmental Monitoring in the Black Sea
EPIRB ..... Environmental Protection of International River Basins
ESCS ..... Ecological Status Classification Systems
EU ..... European Union
EUWI+ ..... European Union Water Initiative Plus
GEF ..... Global Environmental Fund
ICPDR ..... International Commission for the Protection of the Danube River
INBO ..... International Network of Basin Organisations
IOW/OIEau ..... International Office for Water, France
IWRM ..... Integrated Water Resources Management
NESB ..... National Executive Steering Board
NFP ..... National Focal Point
NGOs ..... Non-Governmental Organisations
NPD ..... National Policy Dialogue
OECD ..... Organisation for Economic Cooperation and Development
RBD ..... River Basin District
RBMP ..... River Basin Management Plan
Reps ..... Representatives (the local project staff in each country)
ROM ..... Result Oriented Monitoring
ToR ..... Terms of References
UBA ..... Umweltbundesamt GmbH, Environment Agency Austria
UNDP ..... United Nations Development Programme
UNECE ..... United Nations Economic Commission for Europe
WFD ..... Water Framework Directive

Country Specific Abbreviations Moldova

AAM ..... Agency “Apele Moldovei”

AGMR..... Agency for Geology and Mineral Resources

AMAC..... Association of Apacanals

ANRE ..... National Agency for Economic Regulation of the Energy Sector (also regulates WSS)

EAM ..... Environment Agency Moldova

EHGeoM ..... State Enterprise Hydrogeological Expedition from Moldova

MoAgri..... Ministry of Agriculture (of the Republic of Moldova)

MoENV..... Ministry of Environment (of the Republic of Moldova)

Moldova..... Republic of Moldova

SHS..... State Hydrometeorological Service

Executive Summary

This groundwater chemical survey focused at the Danube-Prut and Black Sea River Basin District (RBD) of Moldova and aimed at gathering additional monitoring data, in particular on additional substances, which are not subject to routine scope of the national monitoring.

In total 41 monitoring sites from 10 groundwater bodies were sampled and analysed on 29 different indicators and substances.

The development of the industry, the increase of the need to use the groundwater for the drinking water supply in Moldova, determines the need to improve the methods of control and monitoring of the groundwater. This survey had the purpose to assess the condition of groundwater, modification of their chemical and physical components under the influence of natural and anthropogenic factors for the elaboration and realization of activities for the rational use of groundwater and their protection from exhaustion and pollution in the territory of Moldova.

The monitoring data gathered under this activity will be used for the validation of the delineated groundwater bodies, the validation of the monitoring design, the validation of the pressure and impact assessment and the upcoming status and trend assessment.

Groundwater is widely acknowledged as important source of drinking water in rural regions, and it, therefore, plays a critical role in the realization of the human right to good quality water. The population form Moldova uses groundwater for drinking, being captured from springs, shallow wells, and deep wells. However, the proportion of households using good quality groundwater is very small. Understanding the prevalence of groundwater reliance for drinking is critical for those involved in water services planning and management, so they can better monitor and advocate the management of water resources that supports important services for households.

Although groundwater is generally considered “cleaner” than surface water, because it is not directly exposed to surface contaminants, groundwater does accumulate anthropogenic and naturally occurring substances from its surroundings that, if left untreated, could be harmful to human health.

1. Summary of the survey 2022

The survey took place from 18–28 October 2022, and water samples were taken from 41 monitoring sites (Table 1 and Table 2). The field planning and preparation for groundwater sampling is a matter of quality assurance. It saves time, helps reducing the number of problems - which commonly occur during fieldwork and significantly contributes to raising the quality and reliability of the analysed data.

Thorough preparation in the office and laboratory prior to sample collection is important. The contracted laboratory provided field measuring devices, sampling containers, required filtration units and acids for stabilisation. The groundwater survey has to take 2 sets of groundwater samples because the samples are analysed by 2 different laboratories with different analytical scope. The hydrologists have prepared a protocol for delivery and handover of samples (including: date and time of sampling, name of sampler, sample number, number and type of containers per each sample number).

During the fieldwork, the hydrologists have met all conditions described in the survey manual on the correctness of sample taking and the use of the field measurement equipment. At the beginning of a sampling campaign, the on-site field measurement devices were calibrated.

In practice, the remote location of sampling points from laboratories makes difficult to deliver the samples daily to the laboratory. Therefore, samples were kept in coolers and transported to the lab every second day.

It has taken into account that requirements on transport and storage of the samples were followed. This ensured that sample conditions remain mostly unaltered and suitable for laboratory analysis.

At the end of the survey, the sampling team handed the samples over to the responsible laboratories. This hand-over was duly confirmed with the hand-over protocol included in the survey manual.

Table 1: Sampling team

Date	Name	Organisation
18-21 October 2022 24-28 October 2022	Mr Vasile Ceban	EHGeoM
18-21 October 2022	Mr. Denis Rotari	EHGeoM
24-28 October 2022	Mr. Nicolai Popov	EHGeoM

1.1. Characteristics of the investigated groundwater bodies

In Moldova about 40% of the population (rural) is supplied with water from the underground layers with hydrostatic pressure and from the first groundwater aquifer (without pressure). The phreatic waters and deep water layer have a special value for Moldova. In this report the chemical status of the groundwater bodies (GWBs) in Danube-Prut- Black Sea River Basin in the Republic of Moldova was analyzed. The investigated groundwater bodies are:

- MDDBSGWQ120, Alluvial water body (a,adQ3), Holocene, aquifer rocks – sand with gravel;
- MDPRTGWQ130, Alluvial water body (a,adQ3), Holocene, aquifer rocks – sand with gravel;
- MDDBSGWQ220, Pliocene-Pleistocene (aN2-aQ1+2) water body, aquifer rocks – sand with gravel;
- MDPRTGWQ230, Pliocene-Pleistocene (aN2-aQ1+2) water body, aquifer rocks – sand with gravel;

- MDDBSGWD310, Pontian water body (N2p), aquifer rocks – sand intercalations;
- MDPRTGWD320, Pontian water body (N2p), aquifer rocks – sand intercalations;
- MDPRTGWQ510, Middle Middle Sarmatian water body (N1s2), aquifer rocks – sand intercalations;
- MDDPBGWD620, Middle Middle Sarmatian water body (N1s2), aquifer rocks – sand intercalations;
- MDPRTGWD740, Badenian-Sarmatian water body (N1b-s1), aquifer rocks – limestone;
- MDPRTGWD820, Silurian – Cretaceous (K-S) water body, aquifer rocks - limestone, sandstones.

GWB **MDDBSGWQ120**, alluvial-deluvial water body (a,adQ3), Holocene, aquifer rocks – sand with gravel (Danube-Black Sea basin). The groundwater from the alluvial-deluvial water body is spread in the river meadows of the Danube - Black Sea hydrographic basin. The largest rivers of this hydrographic basin are Ialpug, Cahul, and Cogâlnic. In the meadow of these rivers, the groundwater is stored in the alluvial-deluvial deposits represented by clayey sands, sandy clays with gravel intercalations and sands of various grain sizes. The thickness of the aquifer is up to 5.0 m from the total thickness 15.0 m of alluvial deposits. The flow of exploitation wells varies from 0.003 to 0.3 l/s, of springs from 0.01 to 0.2 l/s.

The water body's supply region corresponds to the spreading area. The supply takes place from the account of atmospheric precipitation. The water regime is closely related to the atmospheric regime. The direction of the flow depends on the morphological conditions of the land.

GWB **MDPRTGWQ130**, alluvial-deluvial water body (a,adQ3), Holocene, aquifer rocks – sand with gravel (Prut Rivier basin). The Holocene deposits completely cover the surface of the Prut river basin, but are more widely distributed in the valley of the Prut River and its affluents. These deposits contain groundwater and their water storage capacity depends on grain size, lithology, hydraulic conductivity, effective thickness, permeability coefficient and chemical composition as well as on the characteristics of overlying layers. This water body within the limits of the Prut river basin is spread in the river valleys, including flood zones and on all the terraces of the Prut River (I-IX terraces) and its affluents. Groundwater in this water body, in general, from a lithological and granulometric point of view, is heterogeneous, and is stored in gravel deposits and sands mixed with sandy clays. The thickness of the alluvial layer stored with water is 5 m, sometimes 10-30 m. The depth to the water body varies from 2-3 m to 15-20 m. The groundwater level is set at the depth of 0.0-15.0 m, while the annual fluctuation of the groundwater level varies from 0.1 to 3.0 m. This water body is widely used to supply the population with domestic water. The alluvial-deluvial water body, Holocene, is widely used by rural population for the individual households. This body of water is the most vulnerable in terms of anthropogenic impact.

GWBs **MDDBSGWQ220** and **MDPRTGWQ230**, Pliocene-Pleistocene water body (aQ1+2 - aN22+3) (Danube-Black Sea and Prut Rivier basin) includes groundwater from the alluvial deposits of the Eopleistocene - Pleistocene, and upper - middle Pliocene deposits. The water body is spread on the slopes of the large rivers and is constituted by the water-bearing layers from terraces I - X of the river from Prut-Danube-Black Sea basin. Groundwater is stored in clayey sands, sands with gravel. The thick-ness of the water-bearing layers varies between 0.5 - 15.0 m. The opening depth of the aquifer varies between 0.0 m to 27.0 m, more often between 5.0 - 10.0 m. The abundance of water in the terraces varies depending on the lithological composition, the degree of permeability of the terraces deposits. The flow of springs does not exceed 0.1 l/s, the flow of wells 0.05 l/s, the flow of wells 0.001-0.1 l/s.

The alimentation region of the water body corresponds to the spreading area. Most of the alimentation takes place from atmospheric precipitation and surface water during floods. The direction of water flow

is from the upper terraces to the lower ones and along the valleys to the base of the terraces. The water regime is closely related to the atmospheric regime. In the case of abundant precipitation, the level and degree of saturation of the aquifer increases and the groundwater becomes sweeter, in the case of drought, mineralization increases and the aquifer level decreases. These groundwaters have a great practical importance, being of a satisfactory quality, and the small opening depth makes them widely exploited and used in the decentralized supply of drinking water as well as for household purposes. This aquifer is not covered by waterproof layer as usual and is sensitive to the anthropogenic and natural impact.

GWBs **MDDBSGWD310** and **MDPRTGWD320**, Pontian water body (N2p) (Danube-Black Sea and Prut Rivier basin). The Pontian deposits are widely represented in the west and northeast of the Danube-Black Sea basin, and in the southern part of the Prut River basin. The Pontian deposits are represented by the littoral facies. In the lower part of the Pontian section it consists of thin layers of blue-grey clay, alternating with blue-grey fine-grained sands and yellowish-brown shelly limestones rich in marine fauna remains with thin intercalations of clays gray-green colour. In the upper part of the Pontian section, it is constituted by microgranular, grey-yellowish sands, sometimes clay and limestone inclusions are found. These sands, unlike those in the lower part, are more clayey and therefore less saturated with water. The thickness of the aquifer layer is varies within quite large limits 7.0 m - 40.0 m. The alimentation of the water body takes place due to the infiltration of atmospheric precipitation, the infiltration of groundwater from the overlying aquifers layers on the Pontian water body and by the absorption of groundwater of the upper Sarmatian - Meotian water body. Water discharge occurs through springs, infiltration of groundwater into bodies of water located below the aquifer bed, and by capturing groundwater through shallow wells or artesian wells, also by draining it into the network of ravines that is highly devel-oped in the region. The waters have a direction of flow towards the river valleys or along the base of the ravines. The depth to the Pontian aquifer varies depending on the relief from 2 m to 125 m. The flow rate of the exploitation wells varies from 1.1 to 2.3 l/s, increasing in the southern part to 3.7 -7.6 l/s. Near the village Taraclia there are several springs with a flow rate of 8 - 9 l/s. Groundwater is used for drinking and technical water supply in the southern part of the republic.

Among the negative factors that prevent the wide use of these waters, the high hardness, high mineralization, sulfate content that does not meet the standard norms, nitrate pollution, and in the southern part of the distribution area of the water body, it is located at relatively great depths.

GWB **MDPRTGWQ510** is associated with Middle Sarmatia clay-sand terrigenous formation (Codru formation (N1s2 kd1-2)). Groundwater is stored in fine-grained sands with intercalations of clays, sand-stones and limestones. The thickness of the water-soaked deposits varies from 5-15 m to 40-50 m with an average value of 20-30 m. The depth of the aquifer varies depending on the relief and varies from 1.5 m to 100 m. The flow rate of wells operation varies from 0,1 to 5 l/s. Groundwater with a chemical com-position dominated by hydrocarbon - sulfate - chlorinated anions has a mineralization of less than 1.5 g/l, and groundwater with a chemical composition dominated by chloride-hydrocarbon and sodium ions, the total mineralization exceeds 2 g/l. This GWB in most cases is unconfined and shallow. Waters from this aquifer are used for drinking The Middle Sarmatian water body is used for centralized water supply in the central and southern part of the Republic of Moldova.

GWB - MDDPBGWD620, Middle Sarmatian water body (N1s2), is widespread within the Danube – Black Sea hydrographic basin. The depth to the overlying bed of the water body increases in the direction from north to south, in the northern part the absolute elevations of the aquifer overlying bed vary between 0.0 m to 20.0 m, in the southern part it varies from -60.0 m at -80.0 m. Groundwater is stored in the fine-grained sand intercalations of the Middle Sarmatian clay formation. The sand intercalations differ both in spreading area and in thickness ranging from 2.0 m to 20.0 m. Impermeable layers, in the overling bed

and underlayer of the aquifer, are presented by gray clays and greenish clays. The flow rate of of this water body varies between 0.1-10 l/s. The alimentation of the water body takes place in the northern and central part of the Republic of Moldova, where these deposits surface, another way of supply is the infil-tration of water from the aquifers located on the overling bed of the middle Sarmatian water body. The discharge of the water body takes place in the Badenian - Sarmatian aquifer complex. Groundwater is widely used for water supply to the population as well as its use as technical water.

GWB **MDPRTGWD740**, Badenian-Sarmatian water body (N1b-s1), is spread in the central part of the Prut river basin and is represented by calcareous rocks with intercalations of fine-grained sands, sometimes clays, marls and gypsum. The thickness of the water body reaches up to 50 m, in some regions up to 90 m, with an average thickness of 25 m. Groundwater discharges in the valley of the Prut River and its affluents. In the southern part, the Badenian - Sarmatian aquifer deepens and in the Goteşti village region it was detected by drilling at a depth of 572 m. The flow rate of the exploitation wells varies in the range of 0.09 - 8.0 l/s.

When the rocks stored with water are composed by limestone, they contain fresh or slightly saline waters, of the calcium-sodium hydrocarbonate type, with mineralization below 1.0 g/l. However, such areas are quite few and the basin is dominated by groundwater with mineralization above 1.0 g/l. In this body of water the mineralization is high (2.0 – 3.0 g / l) because gypsum is present, which is quite common in the water-bearing rocks of the Badenian- Sarmatian aquifer.

GWB **MDPRTGWD820**, Silurian – Cretaceous (K-S) water body, is spread over the entire territory of the Prut river basin, but it is used for centralized water supply only in the northern part of the Prut basin (Lipcani, Briceni, Edinet, Riscani). Groundwater is stored in limestone, sandstone, with intercalations of marl and argillite with a total thickness varying from 50-60 m to 100-120 m.

The Silurian - Cretaceous water body is hydraulically connected to the Badenian - Sarmatian water body. Two aquifers in the Silurian - Cretaceous water body have been outlined. Groundwater from both aquifers is widely used for centralized and local water supply.

The chemical composition of groundwater in the Silurian-Cretaceous water body is heterogeneous. In the northern part of the Prut river basin, fresh waters with mineralization below 1.0 g/l are detected and hydrocarbon, sulfate, calcium and magnesium ions predominate. In the southern part of the basin, the chemical composition of the groundwater changes and ions of hydrocarbons, sulfates, sodium or hydrocarbons, sodium predominate, and the dry residue value increases up to 2-10 mg/l.

1.2. Monitoring sites

Groundwater monitoring aims to conduct a general study on seasonal changes in its quality and quantity. The points that have been studied are situated in groundwater bodies that are vulnerable to pollution, as well as points near water intakes that supply cities with drinking water (Table 2 and Figure 1).

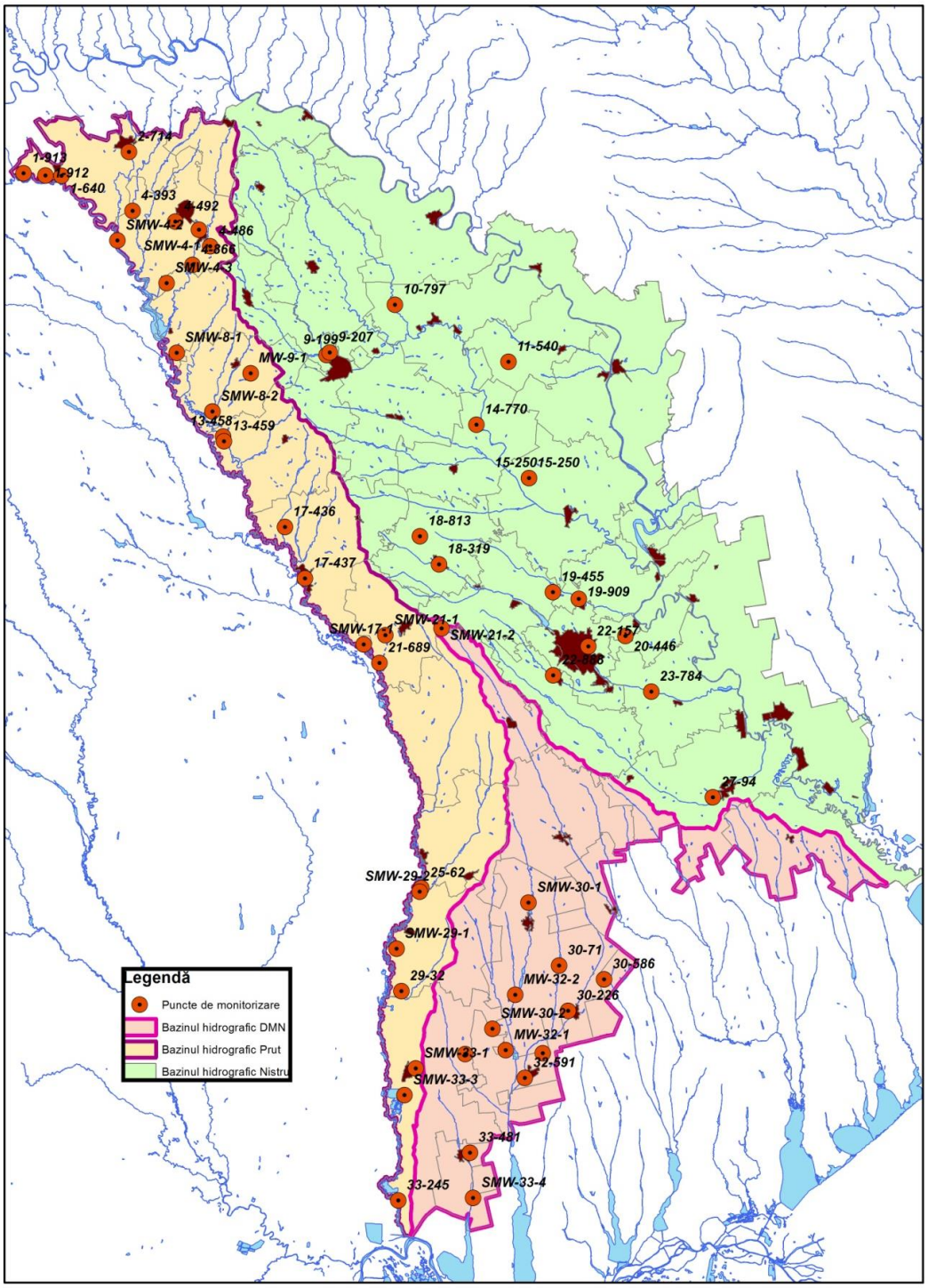

Figure 1: Location of the monitoring sites

Table 2: Monitored sites

No. of	Site ID	Type of site	Discharge, l/s	Location	GWB code	GWB environment (water-bearing rocks and geological index according to the map)	X coord	Y coord	altitude
Prut River basin district									
1	1-640	artesian well	0,1	village Lipcani, district Briceni	MDPRTGWQ130	Alluvial water body (a,adQ3), Holocene, aquifer rocks – sand with gravel	82525	348585	166,8
2	4-486	artesian well	0,1	village Bratuseni, district Edinet	MDPRTGWQ130	Alluvial water body (a,adQ3), Holocene, aquifer rocks – sand with gravel	126255	327876	168,8
3	17-437	artesian well	0,1	city Ungheni, str. Musatov 1	MDPRTGWQ130	Alluvial water body (a,adQ3), Holocene, aquifer rocks – sand with gravel	154074	230285	61,00
4	21-689	artesian well	0,10	village Grozesti, district Nisporeni	MDPRTGWQ130	Alluvial water body (a,adQ3), Holocene, aquifer rocks – sand with gravel	175990	205372	27,32
5	25-62	artesian well	0,10	village Nicolaevca, district Leova	MDPRTGWQ130	Alluvial water body (a,adQ3), Holocene, aquifer rocks – sand with gravel	188307	139263	17,38
6	29-32	artesian well	0,10	village Gotesti, district Cantemir	MDPRTGWQ130	Alluvial water body (a,adQ3), Holocene, aquifer rocks – sand with gravel	182417	108920	9,94
7	SMW-29-1	spring	0,1	village Tiganca, district Cantemir	MDPRTGWQ130	Alluvial water body (a,adQ3), Holocene, aquifer rocks – sand with gravel	181021	121363	18,5
8	SMW -29-2	spring	0,003	village Vilcele, district Cantemir	MDPRTGWQ230	Pliocene-Pleistocene aN2-aQ1+2 water body, aquifer rocks – sand with gravel	187812	138158	69,8
9	SMW-21-2	spring	0,24	village Bursuc, district Nisporeni	MDPRTGWQ230	Pliocene-Pleistocene aN2-aQ1+2 water body, aquifer rocks – sand with gravel	194247	215566	300,5
10	SMW-17-1	spring	0,016	village Frasinesti, district Ungeni	MDPRTGWQ230	Pliocene-Pleistocene aN2-aQ1+2 water body, aquifer rocks – sand with gravel	171339	210884	80
11	SMW - 8-1	spring	0,158	village Braniste, district Riscani	MDPRTGWQ230	Pliocene-Pleistocene aN2-aQ1+2 water body, aquifer rocks – sand with gravel	116400	296614	161
12	SMW-21-1	spring	0,047	village Faisenberg, district Nisporeni	MDPRTGWQ230	Pliocene-Pleistocene aN2-aQ1+2 water body, aquifer rocks – sand with gravel	177740	213542	77,5
13	SMW-33-3	spring	0,295	village Crihana Veche, municipality Cahul	MDPRTGWQ230	Pliocene-Pleistocene aN2-aQ1+2 water body, aquifer rocks – sand with gravel	183362	78381	11,5
14	33-245	artesian well	2,00	village Slobozia Mare, municipality Cahul	MDDPBGWD320	Pontian water body (N2p), aquifer rocks – sand intercalations	181519	47374	6,28

No. of	Site ID	Type of site	Discharge, l/s	Location	GWB code	GWB environment (water-bearing rocks and geological index according to the map)	X coord	Y coord	altitude
15	SMW-33-1	spring	8	*city Cahul, municipality Cahul*	MDPRTGWD320	Pontian water body (N2p), aquifer rocks – sand intercalations	186629	86234	57
16	*SMW - 4-1*	spring	0,068	*city Cupcini, district Edinet*	MDPRTGWQ510	Middle Sarmatian water body (N1s2), aquifer rocks – sand intercalations	122942	332747	176
17	*SMW - 8-2*	spring	0,29	*Mos Ion, district Glodeni*	MDPRTGWQ510	Middle Sarmatian water body (N1s2), aquifer rocks – sand intercalations	126928	279280	72
18	SMW-4-2	spring	0,429	*village Viișoara, district Edinet*	MDPRTGWQ510	Middle Sarmatian water body (N1s2), aquifer rocks – sand intercalations	99022	329631	116,5
19	SMW-4-3	spring	0,096	*villageSipot, district Edinet*	MDPRTGWQ510	Middle Sarmatian water body (N1s2), aquifer rocks – sand intercalations	113469	317020	164
20	MW- 9-1	artesian well	0,2	village Petrunea, district Glodeni	MDPRTGWQ510	Middle Sarmatian water body (N1s2), aquifer rocks – sand intercalations	138126	290557	172
21	4-393	artesian well	2,00	village Fetesti, district Edinet	MDPRTGWD740	Badenian-Sarmatian water body (N1b-s1), aquifer rocks - limestone.	103434	338304	135,4
22	2-714	artesian well	2,00	village Tabani, district Briceni	MDPRTGWD740	Badenian-Sarmatian water body (N1b-s1), aquifer rocks - limestone.	102382	355623	196,2
23	13-459	artesian well	2	village Calinesti, district Glodeni	MDPRTGWD740	Badenian-Sarmatian water body (N1b-s1), aquifer rocks - limestone.	130326	270590	50,5
24	17-436	artesian well	2	village Petresti, district Ungheni	MDPRTGWD740	Badenian-Sarmatian water body (N1b-s1), aquifer rocks - limestone.	148199	245392	172
25	1-912	artesian well	1,50	village Drepcauti, district Briceni	MDPRTGWD820	Silurian – Cretaceous (K-S) water body, aquifer rocks - limestone, sandstones.	77845	348678	110
26	1-913	artesian well	1,50	village Criva, district Briceni	MDPRTGWD820	Silurian – Cretaceous (K-S) water body, aquifer rocks - limestone, sandstones.	71404	349335	115,3
27	4-866	artesian well	1,50	village Stolniceni, district Edinet	MDPRTGWD820	Silurian – Cretaceous (K-S) water body, aquifer rocks - limestone, sandstones.	121040	322448	119,7
28	13-458	artesian well	1,50	village Calinesti, district Falesti	MDPRTGWD820	Silurian – Cretaceous (K-S) water body, aquifer rocks - limestone, sandstones.	130047	271987	51
29	4-492	artesian well	1,5	village Alexandreni, district Edinet	MDPRTGWD820	Silurian – Cretaceous (K-S) water body, aquifer rocks - limestone, sandstones.	116038	335141	168,5

No. of	Site ID	Type of site	Discharge, l/s	Location	GWB code	GWB environment (water-bearing rocks and geological index according to the map)	X coord	Y coord	altitude
Danube and Black Sea river basin district									
30	30-71	artesian well	0,10	village Tomai, municipality Comrat	MDDBSGWQ120	Alluvial water body (a,adQ3), Holocene, aquifer rocks – sand with gravel	228738	116485	58
31	30-586	artesian well	0,10	city Tvardita, district Taraclia	MDDBSGWQ120	Alluvial water body (a,adQ3), Holocene, aquifer rocks – sand with gravel	241978	112387	182,9
32	32-591	artesian well	0,10	city Taraclia, district Taraclia	MDDBSGWQ120	Alluvial water body (a,adQ3), Holocene, aquifer rocks – sand with gravel	218685	83424	19,1
33	MW- 32-1	artesian well	0,1	village Balabanu, municipality Comrat	MDDBSGWQ120	Alluvial water body (a,adQ3), Holocene, aquifer rocks – sand with gravel	213017	91583	70
34	MW- 32-2	artesian well	0,1	village Congaz, municipality Comrat	MDDBSGWQ120	Alluvial water body (a,adQ3), Holocene, aquifer rocks – sand with gravel	215887	107846	35
35	*SMW-33-2*	*spring*	*0,581*	*village Lopatica, municipality Cahul*	*MDDBSGWQ220*	*Pliocene-Pleistocene aN2-aQ1+2 water body, aquifer rocks – sand with gravel*	*201155*	*90435*	*92,5*
36	*SMW-30-2*	*spring*	*0,098*	*village Svetlii, municipality Comrat*	*MDDBSGWQ220*	*Pliocene-Pleistocene aN2-aQ1+2 water body, aquifer rocks – sand with gravel*	*209191*	*97897*	*166*
37	*SMW-33-4*	*spring*	*0,156*	*village Alexandru Ion Cuza, municipality Cahul*	*MDDBSGWQ220*	*Pliocene-Pleistocene aN2-aQ1+2 water body, aquifer rocks – sand with gravel*	*203451*	*48152*	*27*
38	SMW-30-1	*spring*	*0,006*	*village Bugeac, municipality Comrat*	MDDBSGWD310	Pontian water body (N2p), aquifer rocks – sand intercalations	219777	134960	*84,5*
39	SMW-32-1	*spring*	*9,53*	*city Taraclia, district Taraclia*	MDDBSGWD310	Pontian water body (N2p), aquifer rocks – sand intercalations	223916,6	90665,1	*120*
40	33-481	artesian well	0,45	city Vulcanesti, municipality Comrat	MDDBSGWD310	Pontian water body (N2p), aquifer rocks – sand intercalations	202603	61439	*50,4*
41	30-226	artesian well	0,45	city Ceadir-Lunga, municipality Comrat	MDDPBGWD620	Middle Sarmatian water body (N1s2), aquifer rocks – sand intercalations	231422	103141	*95*

1.3. Survey results

Table 3: The characteristic of the studied sites

	Site ID	Type of site	Location	DW level, m	Discharge, l/s	pH-value	Water temp (°C)	Dissolved oxygen (mg/l)	Electrical conductivity (µS/cm)
Prut River basin district									
1	1-640	artesian well	village Lipcani, district Briceni	12,46	-	7,6	13,2	1,91	910,00
2	4-486	artesian well	village Bratuseni, district Edinet	7,96	-	8,2	13,5	2,07	420,00
3	17-437	artesian well	city Ungheni, str. Musatov 1	18,12	-	8,4	14,6	2,06	840,00
4	21-689	artesian well	village Grozesti, district Nisporeni	6,35	-	7,5	13,3	2,22	240,00
5	25-62	artesian well	village Nicolaevca, district Leova	5,02	-	8,3	13,2	2,14	770,00
6	29-32	artesian well	village Gotesti, district Cantemir	4,61	-	8,4	14,7	2,22	590,00
7	*SMW-29-1*	*spring*	*village Tiganca, district Cantemir*	*-*	*0,102*	*6,9*	*15,1*		*1050,0*
8	*SMW - 29-2*	spring	*village Vilcele, district Cantemir*	-	dry	-	-	-	-
9	*SMW-21-2*	spring	*village Bursuc, district Nisporeni*	*0,502*	-	*6,8*	12,2	8,90	4530,00
10	*SMW-17-1*	spring	*village Frasinesti, district Ungeni*	*0,061*	-	*7,3*	13,5	8,22	950,00
11	*SMW - 8-1*	spring	*village Braniste, district Riscani*	*0,104*	-	*7,6*	11,5	8,62	920,00
12	*SMW-21-1*	*spring*	*village Faisenberg, district Nisporeni*	*-*	*0,03*	*7,2*	*14,0*	*2,24*	*2030,00*
13	*SMW-33-3*	*spring*	*village Crihana Veche, municipality Cahul*	*-*	*0,285*	*7,4*	*14,2*	*9,22*	*2070,00*
14	33-245	artesian well	village Slobozia Mare, municipality Cahul	self-pouring	-	7,8	16,7	2,54	570,00
15	SMW-33-1	spring	*city Cahul, municipality Cahul*	-	*0,948*	*6,88*	12,8	2,45	1080,00
16	*SMW - 4-1*	spring	*city Cupcini, district Edinet*	-	0,065	7,3	12,6	3,66	1550,00
17	*SMW - 8-2*	spring	*Mos Ion, district Glodeni*	-	0,214	7,8	11,5	9,75	1190,00
18	SMW-4-2	spring	*village Viișoara, district Edinet*	-	*0,294*	*7,4*	12,0	9,55	1070,00
19	SMW-4-3	spring	*villageSipot, district Edinet*	-	*0,088*	*7,4*	12,7	8,09	1234,00
20	MW- 9-1	artesian well	village Petrunea, district Glodeni	9,72	-	7,3	12,0	7,55	4020,00
21	4-393	artesian well	village Fetesti, district Edinet	4,45	-	8,0	14,3	2,07	290,00

	Site ID	Type of site	Location	DW level, m	Discharge, l/s	pH-value	Water temp (°C)	Dissolved oxygen (mg/l)	Electrical conductivity (µS/cm)
22	2-714	artesian well	village Tabani, district Briceni	2,72	-	7,9	10,5	3,62	640,00
23	13-459	artesian well	village Calinesti, district Glodeni	self-pouring	-	8,6	12,4	8,46	890,00
24	17-436	artesian well	village Petresti, district Ungheni	113,13	-	7,4	14,8	9,02	2680,00
25	1-912	artesian well	village Drepcauti, district Briceni	2,56	-	8,0	11,00	4,29	1510,00
26	1-913	artesian well	village Criva, district Briceni	5,48	-	7,2	12,4	4,59	1680,00
27	4-866	artesian well	village Stolniceni, district Edinet	11,4	-	9,0	10,2	7,43	1170,00
28	13-458	artesian well	village Calinesti, district Falesti	5,90	-	8,3	11,2	5,55	1950,00
29	4-492	artesian well	village Alexandreni, district Edinet	1,19	-	8,19	12,0	4,53	2650,00
Danube and Black Sea river basin district									
30	30-71	artesian well	village Tomai, municipality Comrat	2,15	-	8,6	14,4	8,54	1015,00
31	30-586	artesian well	city Tvardita, district Taraclia	6,57	-	7,8	14,4	8,02	980,00
32	32-591	artesian well	city Taraclia, district Taraclia	7,17	-	7,2	14,3	4,70	720,00
33	MW-32-1	artesian well	village Balabanu, municipality Comrat	11,52	-	7,6	13,6	8,32	1650,00
34	MW-32-2	artesian well	village Congaz, municipality Comrat	4,61	-	7,7	14,0	8,42	4380,00
35	*SMW-33-2*	*spring*	*village Lopatica, municipality Cahul*	-	*0,106*	*7,8*	*12,9*	*9,09*	*2110,00*
36	*SMW-30-2*	*spring*	*village Svetlii, municipality Comrat*	-	*0,085*	*7,9*	*13,8*	*9,79*	*1890,00*
37	*SMW-33-4*	*spring*	*village Alexandru Ion Cuza, municipality Cahul*	-	*0,17*	*7,7*	*13,7*	*8,75*	*1930,00*
38	SMW-30-1	*spring*	*village Bugeac, municipality Comrat*	-	*0,065*	*7,7*	*14,5*	8,79	3550,00
39	SMW-32-1	*spring*	*city Taraclia, district Taraclia*	-	*9,48*	*6,6*	*14,8*	4,67	2360,00
40	33-481	artesian well	city Vulcanesti, municipality Comrat	7,67	-	*8,5*	*14,00*	8,00	960,00
41	30-226	artesian well	city Ceadir-Lunga, municipality Comrat	120,72	-	11,03	*13,8*	8,04	1980,00

Table 4: The chemical composition of the groundwater from studied sites

No. of	Site ID	Type of site	Location	Cl	HCO_3	SO_4	Ca	Mg	Total hardness	Na+K	Na	K	NH_4	NO_2	NO_3	PO_4	F	Fixed residue	Mineralization	H_2S
Prut River basin district																				
	1-640	artesian well	village Lipcani, district Briceni	9	241	24	5	12	**3,42°**	84	34,9	8,3	<0,05	<0,003	9,15	0,01	0,46	274	384	<0,05
	4-486	artesian well	village Bratuseni, district Edinet	26	312	168	24	80	21,82°	52	118,9	1,4	<0,05	<0,003	43,62	0,16	**1,74**	576	706	<0,05
	17-437	artesian well	city Ungheni, str. Musatov 1	52	470	86	4	46	11,19°	162	50,7	5,2	<0,05	<0,003	1,76	0,06	<0,19	561	822	<0,05
	21-689	artesian well	village Grozesti, district Nisporeni	25	1704	98	9	95	23,10°	**517**	79,7	7,3	<0,05	<0,003	2,02	0,11	<0,19	**1622**	2450	<0,05
	25-62	artesian well	village Nicolaevca, district Leova	224	903	74	20	24	8,33°	**457**	184,4	31,6	**1,46**	<0,003	1,96	0,42	0,28	873	1293	0,36
	29-32	artesian well	village Gotesti, district Cantemir	193	292	94	3	42	10,04°	197	85,9	5,4	<0,05	0,005	1,52	0,03	<0,19	702	822	<0,05
	SMW-29-1	*spring*	*village Tiganca, district Cantemir*	200	671	**497**	112	102	39,3°	400	-	-	<0,1	0,006	**187,3**	-	0,06	**1746**	2169,3	-
	SMW - 29-2	spring	*village Vilcele, district Cantemir*	dry																
	SMW-21-2	spring	*village Bursuc, district Nisporeni*	7	353	79	86	34	19,95°	20	4,1	1,0	<0,05	<0,003	21,75	0,12	0,58	409	601	<0,05
	SMW-17-1	spring	*village Frasinesti, district Ungeni*	119	841	122	39	52	17,37°	**320**			<0,05	<0,003	24,48	0,12	**1,75**	1136	1518	<0,05
	SMW - 8-1	spring	*village Braniste, district Riscani*	7	608	16	55	70	23,81°	51	27,6	1,3	<0,05	<0,003	17,10	0,02	1,14	532	819	<0,05
	SMW-21-1	*spring*	*village Faisenberg, district Nisporeni*	100	1403	217	38	153	40,7°	452	-	-	<0,1	<0,003	**137,6**	-	1,47	**1713**	2500,6	-
	SMW-33-3	*spring*	*village Crihana Veche, municipality Cahul*	**255**	610	**274**	184	131	56,1°	173	-	-	<0,1	0,009	**249,8**	-	<0,05	1497	1876,8	-
	33-245	artesian well	village Slobozia Mare, municipality Cahul	12	316	48	31	16	8,05°	84	44,4	1,6	**0,66**	<0,003	1,06	0,07	0,37	370	509	<0,05

No. of	Site ID	Type of site	Location	Cl	HCO_3	SO_4	Ca	Mg	Total hardness	Na+K	Na	K	NH_4	NO_2	NO_3	PO_4	F	Fixed residue	Mineralization	H_2S
	SMW-33-1	spring	*city Cahul, municipality Cahul*	140	671	241	138	38	28,0°	271	-	-	<0,1	<0,003	**53,1**	-	0,11	1159	1552,1	-
	SMW - 4-1	spring	*city Cupcini, district Edinet*	52	834	131	103	127	43,63°	56	34,7	8,0	<0,05	<0,003	7,01	0,15	1,44	917	1310	<0,05
	SMW - 8-2	spring	*Mos Ion, district Glodeni*	9	590	140	47	55	19,25°	143	77,2	5,5	<0,05	<0,003	13,34	0,11	0,90	727	997	<0,05
	SMW-4-2	spring	*village Viișoara, district Edinet*	33	549	44	78	51	24,1°	88	-	-	0,10	0,006	**77,2**	-	0,72	633	920,2	-
	SMW-4-3	spring	*villageSipot, district Edinet*	9	854	126	66	154	44,9°	51	-	-	<0,1	0,006	**72,2**	-	1,04	862	1332,2	-
	MW- 9-1	artesian well	village Petrunea, district Glodeni	21	976	**1941**	341	316	120,6°	364	-	-	<0,1	0,03	31,6	-	<0,05	**3525**	3990,6	-
	4-393	artesian well	village Fetesti, district Edinet	15	238	20	12	26	7,71°	46	17,2	6,8	<0,05	<0,003	0,99	0,02	0,28	254	358	<0,05
	2-714	artesian well	village Tabani, district Briceni	19	368	9	55	40	16,96°	17	10,9	3,2	<0,05	<0,003	1,22	0,14	0,61	310	509	<0,05
	13-459	artesian well	village Calinesti, district Glodeni	145	2624	83	2	9	**2,2°**	1200	-	-	**2,20**	0,009	0,4	-	**11,94**	**2624**	4063	-
	17-436	artesian well	village Petresti, district Ungheni	**3800**	2075	159	2	6	**1,7°**	3594	-	-	**28,5**	0,015	0,3	-	**1,65**	**8186**	9636,0	-
	1-912	artesian well	village Drepcauti, district Briceni	14	541	**308**	45	31	13,40°	**247**	98,7	17,2	**3,64**	<0,003	1,02	0,14	**3,07**	933	1185	<0,05
	1-913	artesian well	village Criva, district Briceni	23	448	**1455**	410	89	77,84°	**286**	18,6	7,4	0,10	<0,003	24,86	0,10	<0,19	**2578**	2802	<0,05
	4-866	artesian well	village Stolniceni, district Edinet	29	1009	77	3	1	**0,70°**	**424**	**385,6**	14,9	**4,08**	<0,003	<0,10	0,68	**5,14**	1033	1457	<0,05
	13-458	artesian well	village Calinesti, district Falesti	117	1858	125	3	3	**1,01°**	**818**	435,6	15,7	**7,71**	<0,003	1,02	0,39	**16,34**	**2036**	2933	0,19
	4-492	artesian well	village Alexandreni, district Edinet	41	1342	**437**	12	11	**4,2°**	769	-	-	**6,12**	**2,99**	0,3	-	1,03	**1850**	2612	-
Danube and Black Sea river basin district																				
	30-71	artesian well	village Tomai, municipality Comrat	203	421	**296**	3	9	**2,58°**	**412**	162,1	1,8	<0,05	<0,003	1,26	<0,01	0,92	1111	1345	<0,05
	30-586	artesian well	city Tvardita, district Taraclia	9	792	36	35	89	25,40°	120	52,0	1,0	<0,05	<0,003	15,11	0,43	**2,48**	722	1096	<0,05

No. of	Site ID	Type of site	Location	Cl	HCO_3	SO_4	Ca	Mg	Total hardness	Na+K	Na	K	NH_4	NO_2	NO_3	PO_4	F	Fixed residue	Mineralization	H_2S
	32-591	artesian well	city Taraclia, district Taraclia	**554**	612	**918**	523	53	85,41°	**328**	53,7	2,08	**5,81**	0,02	0,99	0,03	0,40	**2721**	2995	<0,05
	MW-32-1	artesian well	village Balabanu, municipality Comrat	105	1159	97	34	61	18,8°	448	-	-	0,1	0,014	39,9	-	**2,37**	1300	1943,9	-
	MW-32-2	artesian well	village Congaz, municipality Comrat	**420**	854	**1453**	140	237	73,3°	741	-	-	<0,1	0,012	2,8	-	0,40	**3319**	3847,8	-
	SMW-33-2	*spring*	*village Lopatica, municipality Cahul*	152	368	**596**	117	91	37,35°	**226**	110,5	1,5	<0,05	<0,003	23,85	0,05	0,86	1414	1576	<0,05
	SMW-30-2	*spring*	*village Svetlii, municipality Comrat*	126	649	216	92	69	28,52°	194	104,1	2,3	<0,05	<0,003	0,99	0,06	**1,50**	1050	1347	<0,05
	SMW-33-4	*spring*	*village Alexandru Ion Cuza, municipality Cahul*	166	414	**436**	155	67	37,04°	174	85,7	3,1	<0,05	<0,003	13,72	0,01	0,96	1240	1426	<0,05
	SMW-30-1	*spring*	*village Bugeac, municipality Comrat*	**355**	1098	**732**	4	108	25,5°	889	-	-	<0,1	<0,003	**87,5**	-	**2,90**	**2599**	3273,5	-
	SMW-32-1	*spring*	*city Taraclia, district Taraclia*	150	622	**269**	46	71	22,7°	327	-	-	<0,1	0,005	**72**	-	**3,65**	1186	1557	-
	33-481	artesian well	city Vulcanesti, municipality Comrat	**375**	976	127	8	184	43,5°	359	-	-	<0,1	**1,89**	40,9	-	**1,91**	**1506**	2069,9	-
	30-226	artesian well	city Ceadir-Lunga, municipality Comrat	220	1281	40	2	9	**2,2°**	681	-	-	**1,92**	0,004	0,1	-	**2,54**	**1516**	2233	-

Table 5: The chemical composition (metals) of the groundwater from studied sites

	Site ID	Type of site	Location	Total Fe	Cu^{2+}	Pb^{2+}	Mn^{2+}	As^{3+}	Se^{6+}
Prut River basin district									
	1-640	artesian well	village Lipcani, district Briceni	**1,67**	<0,02	0,0012	0,01	<0,005	<0,0001
	4-486	artesian well	village Bratuseni, district Edinet	0,12	0,02	0,0020	0,02	<0,005	<0,0001
	17-437	artesian well	city Ungheni, str. Musatov 1	**1,05**	0,02	0,0016	<0,01	<0,005	<0,0001
	21-689	artesian well	village Grozesti, district Nisporeni	0,25	0,03	0,0017	0,01	<0,005	<0,0001
	25-62	artesian well	village Nicolaevca, district Leova	**15,20**	0,09	0,0020	<0,01	<0,005	<0,0001
	29-32	artesian well	village Gotesti, district Cantemir	**6,15**	0,06	0,0015	<0,01	<0,005	<0,0001
	SMW-21-2	spring	*village Bursuc, district Nisporeni*	<0,03	<0,02	0,0018	0,01	<0,005	<0,0001
	SMW-17-1	spring	*village Frasinesti, district Ungeni*	<0,03	0,02	0,0015	0,01	<0,005	<0,0001
	SMW - 8-1	spring	*village Braniste, district Riscani*	<0,03	0,02	0,0010	0,01	<0,005	<0,0001
	33-245	artesian well	village Slobozia Mare, municipality Cahul	**0,72**	0,02	0,0020	0,02	<0,005	<0,0001
	SMW - 4-1	spring	*city Cupcini, district Edinet*	<0,03	0,02	0,0017	0,01	<0,005	<0,0001
	SMW - 8-2	spring	*Mos Ion, district Glodeni*	<0,03	<0,02	0,0012	<0,01	<0,005	<0,0001
	4-393	artesian well	village Fetesti, district Edinet	**8,30**	0,05	0,0014	0,01	<0,005	<0,0001
	2-714	artesian well	village Tabani, district Briceni	**2,30**	0,03	0,0025	0,03	<0,005	<0,0001
	1-912	artesian well	village Drepcauti, district Briceni	**0,53**	0,03	0,0022	0,04	<0,005	<0,0001
	1-913	artesian well	village Criva, district Briceni	**1,12**	0,06	0,0027	0,03	<0,005	<0,0001
	4-866	artesian well	village Stolniceni, district Edinet	**0,51**	0,13	0,0022	0,02	<0,005	<0,0001
	13-458	artesian well	village Calinesti, district Falesti	**1,70**	0,27	0,0015	<0,01	<0,005	<0,0001
Danube and Black Sea river basin district									
	30-71	artesian well	village Tomai, municipality Comrat	**1,00**	0,02	0,0017	<0,01	<0,005	<0,0001
	30-586	artesian well	city Tvardita, district Taraclia	**0,34**	0,02	0,0018	<0,01	<0,005	<0,0001
	32-591	artesian well	city Taraclia, district Taraclia	**12,00**	0,05	0,0012	<0,01	<0,005	<0,0001
	SMW-33-2	*spring*	*village Lopatica, municipality Cahul*	0,12	0,03	0,0013	0,01	<0,005	<0,0001
	SMW-30-2	*spring*	*village Svetlii, municipality Comrat*	<0,03	0,03	0,0018	0,01	<0,005	<0,0001
	SMW-33-4	*spring*	*village Alexandru Ion Cuza, municipality Cahul*	0,07	<0,02	0,0014	<0,01	<0,005	<0,0001

2. Survey log book / Journal

Date	Time (from–to)	Location	Activity
19.10.22	10:00 – 10:40	village Tabani, district Briceni	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
19.10.22	11:20 – 12:00	village Criva, district Briceni	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
19.10.22	12:20 – 13:00	village Drepcauti, district Briceni	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
19.10.22	13:20 – 14:00	village Lipcani, district Briceni	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
19.10.22	14:20 – 15:00	village Fetesti, district Edinet	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
19.10.22	15:30 – 15:50	*village Viisoara, district Edinet*	*Taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and discharge (l/s).*
19.10.22	16:20 – 17:00	village Alexandreni, district Edinet	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
19.10.22	17:20 – 17:50	*city Cupcini, district Edinet*	*Taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and discharge (l/s).*
		EDINET Hotel	Planning the route for the next day
20.10.22	8:00 – 8:40	village Bratuseni, district Edinet	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
20.10.22	9:00 – 10:00	village Stolniceni, district Edinet	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
20.10.22	11:00 – 11:30	*village Sipot, district Edinet*	*Taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and discharge (l/s).*
20.10.22	12:30 – 12:50	*village Braniste, district Riscani*	*Taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and discharge (l/s).*
20.10.22	14:00 – 14:20	*Mos Ion, district Glodeni*	*Taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and discharge (l/s).*
20.10.22	14:40 – 15:30	village Calinesti, district Falesti	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
20.10.22	15:40 – 16:20	village Calinesti, district Falesti	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
20.10.22	17:00 – 17:40	village Petrunea, district Glodeni	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
		GLODENI Hotel	Planning the route for the next day
24.10.22	9:30 – 10:20	village Tintareni, district Anenii Noi	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).

Date	Time (from–to)	Location	Activity
24.10.22	13:00 – 14:00	city Causeni, district Causeni	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
		CHISINAU	Preparation for field trip in the period from 25.10.22 to 28.10.22
25.10.22	10:00 – 10:40	*village Bugeac, UTA Gagauzia*	*Taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and discharge (l/s).*
25.10.22	11:10 – 11:50	village Tomai, UTA Gagauzia	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
25.10.22	12:20 – 13:00	city Tvardita, district Taraclia	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
25.10.22	13:40 – 14:20	city Ceadir-Lunga, UTA Gagauzia	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
25.10.22	14:40 – 15:20	village Congaz, UTA Gagauzia	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
25.10.22	15:30 – 16:00	*village Svetlii, UTA Gagauzia*	*Taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and discharge (l/s).*
25.10.22	16:10 – 16:40	village Balabanu, district Taraclia	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
25.10.22	16:50 – 17:30	city Taraclia, district Taraclia	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
25.10.22	17:50 – 18:00	*city Taraclia, district Taraclia*	*Taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and discharge (l/s).*
25.10.22	18:20 – 18:40	*village Lopatica, district Cahul*	*Taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and discharge (l/s).*
		CAHUL Hotel	Planning the route for the next day
26.10.22	7:50 – 8:30	*village Alexandru Ion Cuza, district Cahul*	*Taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and discharge (l/s).*
26.10.22	8:50 – 9:30	city Vulcanesti, UTA Gagauzia	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
26.10.22	10:00 – 10:40	village Slobozia Mare, district Cahul	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
26.10.22	12:00 – 12:30	*village Crihana Veche, district Cahul*	*Taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and discharge (l/s).*
26.10.22	13:10 – 13:30	*city Cahul, district Cahul*	*Taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and discharge (l/s).*
26.10.22	14:00 – 14:40	village Gotesti, district Cantemir	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).

Date	Time (from–to)	Location	Activity
26.10.22	15:00 – 15:30	*village Tiganca, district Cantemir*	*Taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and discharge (l/s).*
26.10.22	15:50 – 16:50	*village Vilcele, district Cantemir*	*Taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and discharge (l/s).*
26.10.22	17:00 – 17:30	village Nicolaevca, district Leova	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
		LEOVA Hotel	Planning the route for the next day
27.10.22	10:30 – 11:00	*village Bursuc, district Nisporeni*	*Taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and discharge (l/s).*
27.10.22	11:40 – 12:30	*village Faisenberg, district Nisporeni*	*Taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and discharge (l/s).*
27.10.22	12:40 – 13:20	village Grozesti, district Nisporeni	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
27.10.22	13:30 – 14:20	*village Frasinesti, district Ungeni*	*Taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and discharge (l/s).*
27.10.22	15:30 – 16:10	city Ungheni, str. Musatov 1	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
27.10.22	16:40 – 17:40	village Petresti, district Ungheni	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
		UNGHENI Hotel	Planning the route for the next day
28.10.22	13:30 – 14:30	city Ialoveni, district Ialoveni	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
28.10.22	15:30 – 16:30	city Chisinau, municipality Chisinau	Pumping the well and taking samples. Measuring pH-value, water temperature (°C), dissolved oxygen (mg/l), electrical conductivity and level (m).
	17:00	CHISINAU	Finish the work.

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