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## **EU4Environment – Water Resources and Environmental Data**

### **TERMS OF REFERENCES FOR LOCAL CONTRACTOR**

#### **DEVELOPMENT OF A QUANTITATIVE WATER RESSOURCES MANAGEMENT PLAN FOR QASAKH SUB-BASIN IN ARMENIA**

**JULY 2022**

### **1. Financing**

European Union (ENI/2021/424-550)

Co-financing by Austria (Austrian Development Agency) and France (Artois Picardy Water Agency)

### **2. Procedure**

Simplified procedure according to EU PRAG<sup>1</sup>

### **3. Contracting Authority**

International Office for Water (OiEau) - France

### **4. Nature of contract**

Service contract

### **5. Time period of implementation**

September 2022 – March 2024

### **6. Contract amount (optional)**

Max. amount: 40 000 EUR

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<sup>1</sup> Practical Guide to Contract Procedures for EU External Actions

## 7. Background information

### I. Background and Objectives

The Programme “EU4Environment – Water resources and Environmental data” (hereinafter - the Programme) aims to operationalise several key mechanisms to preserve natural resources, enabling countries’ green growth in line with the European Green Deal and a post-COVID-19 green recovery. This will contribute towards longer-term environmental, climatic, and socio-economic resilience, and improved human health and wellbeing, as well as the achievement of the Sustainable Development Goals (SDGs).

The Programme’s specific objectives are:

- Specific Objective 1 “Water resources management”: Water policies and practices support more sustainable use of freshwater resources and help reduce the adverse impacts of human activities on water quality and ecosystems.
- Specific Objective 2 “Environmental statistics and open data”: The use of sound environmental statistics by the partner countries is extended and improved, and better availability of policy-relevant data to decision-makers and citizens is ensured.

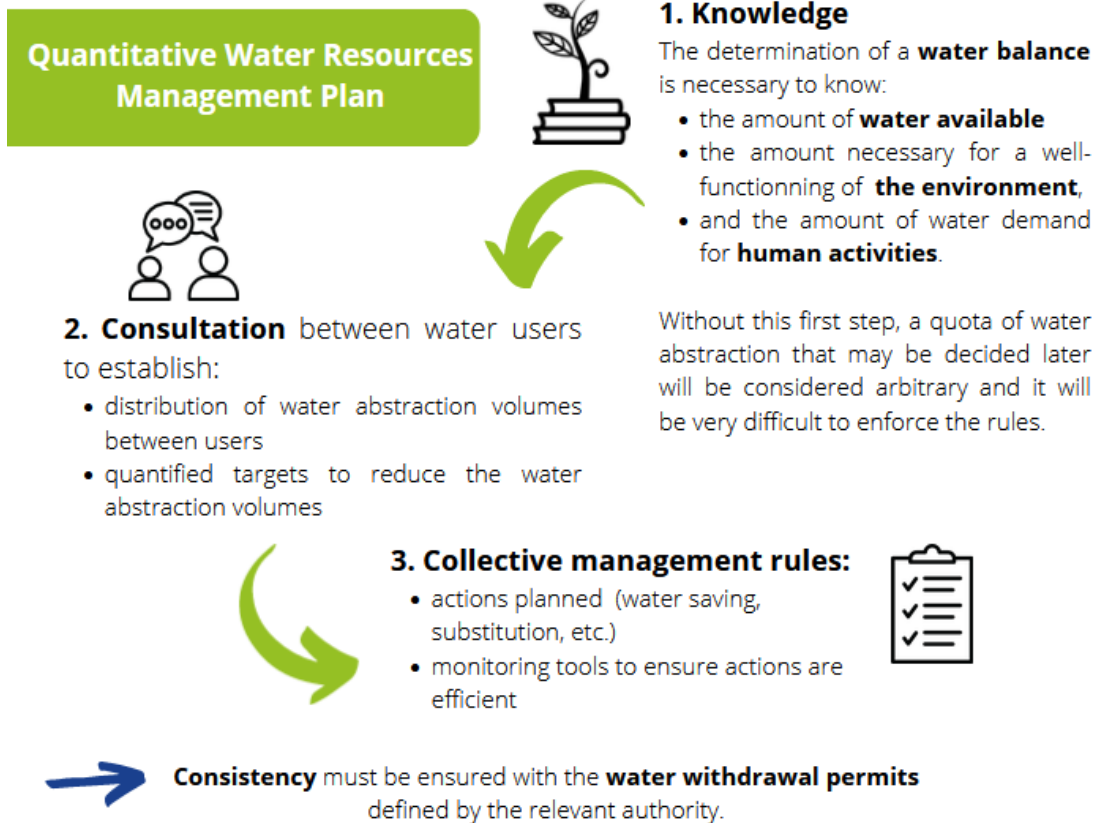
The Programme, co-financed by the European Union, is implemented in close cooperation and coordination with the Implementing Partners: three Member State agencies: Umweltbundesamt GmbH (also called “UBA” or “Environment Agency Austria”), Austrian Development Agency (ADA) and International Office for Water (OIEau, France) as well as two international organisations (OECD and UNECE).

During the previous project EUWI+ East, a River Basin Management Plan has been developed for Hrazdan River Basin District in which Qasakh river basin is included. The adoption process for the RBMP is on-going. The quantitative water resources management plan constitutes a meta measure that target programming concrete implementation. During the ENI-East SEIS, water accounts based on the UN SEEA-W standard has been successfully developed at national level on a yearly basis (see ARMSTAT publication of supply and use table). The use of the SEEA-W enables to assess water supply and use by the various economic sectors with a statistical view (i.e. focus a.o. on geographical and economic actors completeness and temporal consistency), and could be applied at catchment level for decision making.

### II. Scope of work

This assignment concerns the preparation of the Quantitative Water Resources Management Plan (Quantitative Management Plan or QMP in short) for the Qasakh river basin in Armenia (Cf. annex 1).

As such type of plan is not existing at this sub-basin scale in Armenia for the moment. This activity will allow to develop a methodological framework for their preparation and to produce some lessons learned on their feasibility for other priority basins under particular quantitative stress in Armenia in the future. To support this planning exercise, the preparation of water accounts (based in UN-SEEA-W standard) at the basin level with seasonal data will be tested. Water accounts focus on volumes of water abstracted, sold, used (i.e. consumed) or returned to the environment by economic actors.



*Figure 1. Process of realisation of a Quantitative Water Resources Management Plan*

This plan will have to be adapted to Qasakh basin's major specificities and respond to the methodology provided by the French experts' team in charge of the implementation.

The preparation of a Quantitative Water Resources Management Plan necessitates solid scientific knowledge on the sub-basin and good mediation skills to engage the stakeholders and elaborate clear rules, understood by everyone. This assignment will necessitate different types of expertise, ranging from hydrology to economy and sociology.

The participation of stakeholders is key for developing such plans, in order for them to be operational and ensure the measures are implemented. Therefore, the development of the Quantitative Water Resources Management Plan will include a process of stakeholder involvement, to be run in parallel of the development of the technical chapters of the plan. Consultation phases will punctuate the key stages of its development: diagnostic, consumption objective and plan for a sustainable water use. They aim to validate the main conclusions and identify solutions (future measures). Other meetings (more informal, in bilateral or little groups) outside the formal timeframe devoted to consultation are encouraged and recommended. The identification of the different groups of stakeholders requires a solid stakeholder analysis and close contact with the Water User Associations (WUAs).

Results will be presented at basin level, sub-basin level, and/or basin section level. Results will be mapped for the whole Qasakh basin in Armenia.

This Quantitative Water Resources Management Plan will demonstrate the differences and complementarity between specific water allocation tools in close synergy with the permitting policy, daily operations of quantitative management, and including the setting-up of environmental flows precise objectives and the more global River Basin Management Plan for the Hrazdan river basin district targeting coordination and water policy making. The Hrazdan River Basin Management Plan will be transmitted to the contractor.

The following outline presents the main structure of the plan concerned by the assignment:

#### Introduction of the QMP

- I. Characterization of the Qasakh river basin
  - Geographic overview
  - Description of hydrology and hydrogeology
  - Identified main quantitative issues
- II. Pressures and impacts on water resources
  - Water uses
  - Needs of human activities
  - Evolution of needs (2 or 3 baseline scenarios)
- III. Quantification of water resources available
  - Surface water
  - Groundwater
  - Impact of climate change (2 or 3 scenarios)
- IV. Determination of ecosystems needs (incl. minimum ecological flows)
- V. Sustainably usable volumes
  - Identification
  - Repartition in the river basin, during the year, between users
- VI. Elaboration of a programme of measures

Consultation phases proposed are as follows:

1. Work plan (to validate the elaboration process of different chapters)
2. Diagnosis (chapters I to IV)
3. Objectives (chapters V)
4. Plan with Programme of measures (chapter VI)

At least 4 consultation items at sub-basin level are foreseen with minimum 2 plenary meetings to share the diagnostic and the draft plan. Preliminary preparatory meetings in smaller groups will help to identify spokespersons per group and anticipate the conflicts.

Stakeholder groups identified so far: local authorities in the river basin districts (Aragatsotn), irrigation sector (Water Users Associations, Water Intakes Company Jrar), hydropower sector, Basin Management Organisations (BMOs), representatives of small farmers, representatives of fish farms industries, users/ investors in building of reservoirs (1 planned in Qasakh), local NGOs.

### III. Deliverables & format

The **deliverables** for the Qasakh sub-basin will consist of:

A stakeholder involvement report including:

- **Updated stakeholder analysis of the Qasakh sub-basin**, taking into account different interests, what is at stake, possible conflicts that may arise and identify solutions/common ground to promote dialogue and discussion.
- **Action plan for the stakeholder engagement process and consultation**: preliminary planning of meetings: working informal meetings as needed (may be virtual) and 3 pilot “River basin Councils”.
- **Report on consultation**: specific chapter of the QMP to track process of comments received, accepted or rejected during consultation meetings and draw conclusion of these meetings. The process must be as transparent as possible.
- **Experience sharing on consultation process**: involve Basin Management Organisation in the consultation process and organise 1 training for Basin Management Organisations and local authorities on the consultation process for such plans.

A data management report including:

- A compilation of data available and filling-in the water accounts supply and use tables (volume of water) at monthly or quarterly timescale for Qasakh sub-catchment. All data set used will be described and stored in the metadata catalogue. Plausibility checks for data validation will be performed and documented in a short note (Methodology will be defined during a training session with the consultant).
- **A metadata catalog** will describe data used in the QMP and their availability. The specifications in annex 3 will necessarily be applied for datasets and for GIS layers production. The framework provided in annex 4 will be used for metadata description (in English and Armenian). A user manual of the catalogue is provided in annex 5.
- **An atlas** will be produced from the priority list of maps. The content of the atlas will depend upon i) the availability and reliability of data and GIS layers produced by national institutions and ii) prioritization by the national focal points to be agreed with the national representative on the way. The atlas will be delivered as a set of QGIS files and their exported TIF files (300 dpi) presenting the maps based on the template provided by the contracting authority. All data and information collected will be provided in their original forms (paper, files) and their valorized forms (GIS layers, data base, Excel, etc). A very preliminary indicative list is presented in annex 2.

The Draft Quantitative management Plan itself:

- **Five technical reports** corresponding to chapters I & II, chapter III, chapter IV, chapter V, chapter VI, with relevant content including descriptive text, data analysis, illustrations (maps, tables, schemes, etc.), information sources, etc. The documents will be straightforward, synthetic and pedagogical. Reports will be delivered according to the schedule in part V. A graphical charter will be provided for the reports and the maps symbols to be preferably used.
- **One thematic summary**, being a concise document (< 10 pages) which will be used to prepare the stakeholders’ consultation to collectively identify the programme of measures. It will describe in a synthetic manner the main results concerning the water resources balance on the Qasakh basin.

- **The reports consulted** will be listed in a separate bibliography table according to the following criteria: Date, Authors, Title, Edition, link (if available on line), comments (eventually). This table will be provided separately on request of the national representative.
- **The complete QMP** consisting in the assemblage of all the technical reports together with the dashboard on implementation monitoring. It will be transmitted in one paper format in each language (English & Armenian) and digital form which can be corrected (MS Office 2007). The format of the annexes is preferably numeric, but not necessarily.

A proposed detailed table of contents is shown below, to give an idea of the minimum information required for each section of the outline (subject to data and information availability).

Introduction in each technical report (as a reminder):

- Presentation of the water management in Armenia
- Actors of a QMP project
- Objectives of a QMP
- Global context of the Qasakh basin
- Organisation of license or permit for abstraction in Armenia and situation in the pilot basin

#### I. Characterization of the Qasakh river basin

##### 1. Geographical overview

- a. Climate
- b. Topography
- c. Geology
- d. Soils
- e. Vegetation and land cover
- f. Protected areas

##### 2. Hydrological and hydrogeological descriptions

- a. Hydrographic network (natural and artificial)
- b. Surface water resources (characteristic flows, annual and inter-annual variations, ecological flows, water resources physico-chemical quality, biological quality/fish index if existing)
- c. Groundwater resources (quantity and quality)
- d. Hydrogeological description

##### 3. Identified water demand and main deficit areas

- a. Water resources areas facing high demand
- b. Existing water works that can influence the hydrology
- c. Drought phenomena on the basin including frequency

- II. Pressures and impacts on water resources
  - 1. Human activities on the basin including related socio-economic information including single economic operators according to the NACE-2 rev classification used in Armenia on division level (2-digit). The collection should at least cover the NACE-2 Sections A-F (see Classification of Economic Activity from ARMSTAT (in Armenian)), whenever data are available at a more disaggregated level, they will be collected
    - a. Population
    - b. Drinking-water supplies
    - c. Agriculture (including production data by type of crops -amount in Tonnes- and gross economic value)
    - d. Fish farms, shellfish aquaculture (including production data -amount in Tonnes- and gross economic value)
    - e. Forestry
    - f. Industry, mining, aggregates extraction, dredging (including production data (unit to be defined according to the type of production) and gross economic value)
    - g. Hydropower generation
    - h. Waste disposal, landfills, polluted sites
    - i. Tourism
    - j. Linear infrastructures (roads incl. winter road maintenance, underground infrastructures, dikes, dams, etc.)
  - 2. Water uses and needs<sup>2</sup>
    - a. Drinking-water supplies (individual and collective abstraction, restitution to the environment), including average water consumption per person and year
    - b. Agriculture (individual and collective abstraction and uses by crop type, if possible, characterisation of the restitution to the environment in function of the irrigation technic used)
    - c. Industry including volume of water used for cooling/heating (abstraction, restitution to the environment)
    - d. Hydropower
    - e. Transfers outside/inside the river catchment (localization, volume, trends)
    - f. Transfers between economic sectors (e.g. water used for hydropower and transferred for irrigation)
  - 3. Future evolution and baseline scenario
    - a. Proposal of 2 or 3 scenarios
    - b. Needs for the different uses (influence of demographic growth, other sectors demand)

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<sup>2</sup> The focus of the exercise is water quantity, results will be presented along the hereunder listed sections, using NACE-2 on division level or more detailed, and in volume of water abstracted and used by economic operator (with a priority on main water consumers – threshold to be defined- at monthly or seasonal scale including coordinates of abstraction or source of water (groundwater, surface water or provided by another economic operator), and restitution points

- III. Water resources available (determined through modelling: simulation without influence and/or water accounting)
  - a. Water inflows in the catchment at monthly level (river discharge from transboundary catchment, groundwater inflow, rainfall)
  - b. Surface water
  - c. Groundwater
  - d. Soil water
  - e. Impact of climate change (2 or 3 scenarios)
  
- IV. Minimum biological flows (MBF)
  - 1. Description of water bodies and aquatic ecosystems status
  - 2. Choice of the measuring stations to study
  - 3. Application of a method to be agreed with the contracting authority to determine the MBF
  - 4. Choice of nodal points for the basin
  
- V. Identification of the volumes that can be used sustainably
  - 1. Evolution scenarios and choice of one reference scenario
  - 2. Proposal of characteristic flows:
    - a. Low water flow objectives
    - b. Proposition of the minimum water flow to be used for drought crisis management (alert and crisis management threshold)
    - c. Proposition of the piezometric alert levels
  - 3. Determination of sustainably usable volumes and water use target per main area of the basin
  - 4. Test water accounting for following up the water balance
  - 5. Proposition of repartition of the sustainably usable volumes between uses, in the main river basin areas, during an average year
  
- VI. Programme of measures to achieve the objectives (schedule, project owner, cost, etc.)

Measures could concern: rules, governance, knowledge improvement, awareness, and works

  - a. No regret water saving measures (to be determined at an early stage)
  - b. Proposal for water regulation and water accounting improvement
  - c. Further water resources mobilisation measures (to be further studied at a later stage if no other alternatives are identified)
  - d. Description of the monitoring of the QMP

At this stage, only a rough indicative economic evaluation is required (e.g. economic weight of economic activities, estimation of ecosystems services, inaction costs, etc.) to support choices and the cost estimate of the measures.



#### IV. Global coordination

##### **Meetings & trainings**

The assignment will be rhythmized by different meetings, consultations or workshops with different public (e.g. expert groups, stakeholders, public...). These events will take place either in Yerevan or on the Qasakh basin.

The consultant is requested to participate to:

- One workshop on water allocation,
- One stakeholder meeting related to the consultation on the QMP,
- One 2 days sub-regional training workshop on water accounts (first week of October, in Georgia)
- Regular coordination meetings with the experts' team, most of the time on-line.

The contractor is committed to participate in their own expenses and in an active manner to these events and to make presentations according to specifications transmitted in advance, in national and English language.

Comments received during those meetings will be considered to review the reports, and tracks of those contributions will be annexed to the produced deliverables.

##### **Parallel assignments**

Before this assignment, important work took place on the Hrazdan River Basin District – including Qasakh basin - and should be used to build upon.

The list and links of available documents produced during the previous project European Union Water Initiative + East (2016-2021) are presented below:

Name	Country or Region	Theme	Type of document
<a href="#">Armenia – Study on groundwater resources (Arm)</a>	1- Armenia	3- Water Monitoring	2- Technical Reports
<a href="#">Armenia – Study on groundwater resources (Eng)</a>	1- Armenia	3- Water Monitoring	2- Technical Reports
<a href="#">Armenia : Hydromorphological assessment report 2019 (Eng)</a>	1- Armenia	3- Water Monitoring	2- Technical Reports
<a href="#">Armenia : SURFACE WATER SURVEY 2018</a>	1- Armenia	3- Water Monitoring	2- Technical Reports

<a href="#">Armenia : Surface Water survey report 2019 (Eng)</a>	1- Armenia	3- Water Monitoring	2- Technical Reports
<a href="#">Armenia: Definition of reference conditions and class boundaries in rivers of Armenia for the BQE benthic invertebrates (Eng)</a>	1- Armenia	3- Water Monitoring	2- Technical Reports
<a href="#">Armenia: Groundwater Monitoring Development Plan, 2021 (AM)</a>	1- Armenia	3- Water Monitoring	2- Technical Reports
<a href="#">Armenia: Groundwater Monitoring Development Plan, 2021 (ENG)</a>	1- Armenia	3- Water Monitoring	2- Technical Reports
<a href="#">Armenia: Groundwater surveys (2018-2019) report (Eng)</a>	1- Armenia	3- Water Monitoring	2- Technical Reports
<a href="#">Armenia: Hrazdan-Sevan Detailed Assessment of Modern Flow Measurement Equipment Needs for Irrigation Water Accounting, 2018 (Arm)</a>	1- Armenia	3- Water Monitoring	2- Technical Reports
<a href="#">Armenia: Hrazdan-Sevan Detailed Assessment of Modern Flow Measurement Equipment Needs for Irrigation Water Accounting, 2018 (Eng)</a>	1- Armenia	3- Water Monitoring	2- Technical Reports
<a href="#">Armenia: RBMP Supplement - Report on Surface Water Monitoring in the Hrazdan RBD (ENG)</a>	1- Armenia	3- Water Monitoring	2- Technical Reports
<a href="#">Armenia: Surface Water Monitoring Development Plan, 2021 (AM)</a>	1- Armenia	3- Water Monitoring	2- Technical Reports
<a href="#">Armenia: Surface Water Monitoring Development Plan, 2021 (ENG)</a>	1- Armenia	3- Water Monitoring	2- Technical Reports
<a href="#">Armenia: Surface Water Monitoring in the Hrazdan RBD (ENG)</a>	1- Armenia	3- Water Monitoring	2- Technical Reports
<a href="#">WATER MONITORING ASSESSMENT REPORT – ARMENIA May 2019</a>	1- Armenia	3- Water Monitoring	2- Technical Reports
<a href="#">Armenia - Guidelines: General manual for surveys in surface water (Arm)</a>	1- Armenia	3- Water Monitoring	3- Guidance Documents
<a href="#">Investigative Monitoring, Surface Water Capacity Building in Armenia. Annexes</a>	1- Armenia	3- Water Monitoring	2- Technical Reports
<a href="#">Armenia : THEMATIC SUMMARY - DEVELOPMENT OF DRAFT RIVER BASIN MANAGEMENT PLAN FOR HRAZDAN RIVER BASIN</a>	1- Armenia	4- River Basin Management Plans	2- Technical Reports

<a href="#">Armenia: Hrazdan &amp; Sevan - Groundwater delineation report, 2018 (ENG)</a>	1- Armenia	4- River Basin Management Plans	2- Technical Reports
<a href="#">Armenia: Hrazdan, Atlas to the River Basin Management Plan, 2020 (ARM)</a>	1- Armenia	4- River Basin Management Plans	2- Technical Reports
<a href="#">Armenia: Hrazdan, Atlas to the River Basin Management Plan, 2020 (ENG)</a>	1- Armenia	4- River Basin Management Plans	2- Technical Reports
<a href="#">Armenia: Hrazdan, River Basin Management Plan, 2020 (ARM)</a>	1- Armenia	4- River Basin Management Plans	2- Technical Reports
<a href="#">Armenia: Hrazdan, River Basin Management Plan, 2020 (ENG)</a>	1- Armenia	4- River Basin Management Plans	2- Technical Reports
<a href="#">Armenia: Hrazdan, Summary of the RBMP – programme of measures, 2020 (ENG)</a>	1- Armenia	4- River Basin Management Plans	2- Technical Reports
<a href="#">Armenia: Short version Thematic Summary 2nd consultation (Arm)</a>	1- Armenia	4- River Basin Management Plans	2- Technical Reports
<a href="#">Guidance document for establishing and updating river basin management plans in Armenia (Arm)</a>	1- Armenia	4- River Basin Management Plans	2- Technical Reports
<a href="#">Over-abstraction and altered flow regimes in Armenian rivers: workshop on environmental flow assessment in the Akhuryan Basin, 19-20 June 2019</a>	1- Armenia	4- River Basin Management Plans	4- Workshops - Training
<a href="#">Armenia: Consultation Report on main issues (2019) - Hrazdan &amp; Sevan RBMPs (Eng)</a>	1- Armenia	4- River Basin Management Plans , 6- Stakeholders Involvement	2- Technical Reports
<a href="#">Armenia: Hrazdan - Short version Thematic Summary 2nd consultation (Arm)</a>	1- Armenia	4- River Basin Management Plans , 6- Stakeholders Involvement	2- Technical Reports
<a href="#">Armenia: Hrazdan - Thematic Summary 2nd consultation (measures) (ARM)</a>	1- Armenia	4- River Basin Management Plans , 6- Stakeholders Involvement	2- Technical Reports
<a href="#">Armenia: Hrazdan, consultation report on RBMP programme of measures, 2020 (Eng)</a>	1- Armenia	4- River Basin Management Plans , 6- Stakeholders Involvement	2- Technical Reports

<a href="#">Armenia: Hrazdan, questionnaire analysis for non-governmental stakeholders - consultation report on RBMP programme of measures, 2020 (Eng)</a>	1- Armenia	4- River Basin Management Plans , 6- Stakeholders Involvement	2- Technical Reports
<a href="#">Armenia: Questionnaire Analysis - consultation report on main issues (2019) - Hrazdan RBMP (Eng)</a>	1- Armenia	4- River Basin Management Plans , 6- Stakeholders Involvement	2- Technical Reports
<a href="#">Armenia: Participation and communication for River Basin Management Planning - Sevan and Hrazdan best practices, 2021 (ARM)</a>	1- Armenia	4- River Basin Management Plans , 6- Stakeholders Involvement	3- Guidance Documents
<a href="#">Armenia: Public Participation in River Basin Management Planning - Sevan and Hrazdan best practices, 2021 (ARM)</a>	1- Armenia	4- River Basin Management Plans , 6- Stakeholders Involvement	3- Guidance Documents
<a href="#">Armenia: Hrazdan, Questionnaire 2nd consultation (measures) (ARM)</a>	1- Armenia	4- River Basin Management Plans , 6- Stakeholders Involvement	8- Other
<a href="#">Armenia: Hrazdan - Factsheet RBMP in brief (ARM)</a>	1- Armenia	4- River Basin Management Plans, 7- Communication - Visibility	6- Visuals (Infographics - Factsheets)
<a href="#">Armenia: Guidance - User Guide for metadata catalogue, web services and online tools</a>	1- Armenia	5- Water Data Management	3- Guidance Documents
<a href="#">Infographics Main Issues Hrazdan river basin in Armenia (ARM)</a>	1- Armenia	7- Communication - Visibility	6- Visuals (Infographics - Factsheets)
<a href="#">Armenia: Technical report - delineation of surface water bodies in Sevan and Hrazdan river basins (ENG)</a>	1- Armenia	4- River Basin Management Plans	2- Technical Reports

The participative process in QPM construction is an important aspect of the assignment. At the beginning of the assignment, results from the Hrazdan basin consultation on the sustainably usable volume will have to be integrated in such a manner that the programme of measures will target the resolution of the water deficit. The results, events and actions will contribute to feed on a continuous basis the communication of the EU4Environment – Water and Data programme to raise awareness on more sustainable management practises for water resources. .

## V. Schedule & implementation modality

### V.1. Schedule

Duration of the assignment will be up to March 31st 2024 and is expected to start from September 2022. The assignment is divided into phases. The successive chapters have to be prepared according to the schedule underneath and delivered to the project team in due time. Any delay must be announced as early as possible and acknowledged.

Payment for the deliverables shall be considered only when the work is accepted by the project team on behalf of the country beneficiaries.

#### *Summary of the work schedule*

<b>Deliverables</b>	<b>Approx. number of pages excluding annex</b>	<b>Language of deliverable</b>	<b>Start date</b>	<b>Due date for draft report</b>	<b>Final draft delivery</b>
Technical report 1 chapters I & II	20	National language / English	September 2022	March 2023	June 2023
Technical report 2 chapter III	5	National language / English	September 2022	March 2023	June 2023
Technical report 3 chapter IV	5	National language / English	December 2022	June 2023	November 2023
Technical report 4 chapter V	10	National language / English	December 2022	June 2023	November 2023
Technical report 5 chapter VI	10	National language / English	December 2022	October 2023	December 2023
One thematic summary	50	National language / English	June 2023	October 2023	December 2023
Atlas	At least 10 maps	National language / English	September 2022	October 2023	December 2023
Metadata catalogue	At least 5 fiches	National language / English	September 2022	May 2023	December 2023
Bibliography table	2	English	September 2022	May 2023	December 2023
Full QMP report	100	National language / English	September 2022	October 2023	December 2023

## V.2. Implementation modalities

Works shall be implemented by an Armenian company or group of NGO(s), university, research institution, etc. that are not representing the project beneficiaries. The studies will be closely coordinated, assisted and monitored by the project team (OiEau, UBA and the project representative) and the beneficiaries (Water Resources Management Department, and Water Policy Department of the Ministry of Environment and the Water Committee of the Ministry of Territorial Administration and Infrastructures). Close coordination shall be ensured with the beneficiaries who will take full ownership of the QMP produced.

Technical issues as data description (producers, availability, quality, scales, collection frequency, etc), related difficulties to collect them, data formatting requirements, methodological aspects (average ratio to convert socio-economic data into pressures data), etc. will be discussed regularly with the project team.

The contractor will have to designate competent specialists for each part of the assignment as well as a coordinator who will be responsible of managing these specialists, harmonise the document, and inform regularly the project team. As a matter of illustration, the contractor's team could be typically include the following competencies:

- 1 team leader, main redactor and coordinator of the QMP
- 1 hydrologist
- 1 hydrogeologist
- 1 specialist of water-related ecosystems
- 1 specialist in water economics
- 1 specialist in irrigation
- 1 specialist in hydraulic infrastructures
- 1 GIS specialist for map production with knowledge of the water sector
- 1 specialist in stakeholder involvement (background in sociology and/or human geography, good knowledge on water resources management, good knowledge of the Qazakh sub-basin region and of its stakeholders.)

The repartition of the use of the budget in function of the outputs is indicated as follows:

<b>Deliverables</b>	<b>% of allocated budget</b>
Technical report 1 chapters I & II	15
Technical report 2 chapter III	10
Technical report 3 chapter IV	10
Technical report 4 chapter V	20
Technical report 5 chapter VI	20
One thematic summary	5
Atlas	5
Metadata catalogue	3
Bibliography	2
Full QMP	10
<b>TOTAL</b>	<b>100</b>

**Contact details:**

Local Representative of the Programme “EU4Environment Water and Data” in Armenia:

Mr Vahagn Tonoyan, Senior Water Management and Coordination Expert, v.tonoyan@eu4waterdata.eu

The responsible thematic leaders:

Mr Pierre Henry de Villeneuve, International Office for Water, p.henry-de-villeneuve@oieau.fr

Mr Yannick Pochon, International Office for Water, y.pochon@oieau.fr

**VI. Participation to the tender**

Interested parties (individual and legal persons) are invited to inquire the full tender dossier containing instructions and further information about the tender procedure from Ms. Ilke CICEKOGLU, Project Assistant, International Office for Water (OiEau) and Mr Pierre HENRY DE VILLENEUVE, Project Manager, International Office for Water (OiEau).

(email address : i.cicekogl@oieau.fr )

(email address : p.henry-de-villeneuve@oieau.fr )

Deadline for submission of the technical and financial offer is **31 August 2022, 18:00 CET**.

## *LIST OF ANNEXES*

*Annex 1: Map of Qasakh river basin*

*Annex 2: provisional list of maps*

*Examples:*

- *Geology of the basin*
- *Hydrogeology of the basin*
- *Land use*
- *Localisation of the water intake facilities for drinking-water/agriculture/industry*
- *Irrigation network, canals*
- *Localisation of hydrometric and meteorological stations*
- *Protected areas*
- *Main water use*
- *Sustainable water use objectives*

*Annex 3: Specifications for datasets, metadata and maps production*

*Annex 4: metadata sheet description (AM and EN)*

*Annex 5: metadata user manual (AM)*