Contents

I. General information

1. Brief information on the project

The Water Sector Reform Program (2016-2025) was adopted based on the Decision of the Government of the Republic of Tajikistan (GoT) No. 791 of 30 December 2015 to achieve the objectives and principles of water sector reform. River basin management and integrated water resources management (IWRM) are the main principles of the reform program. The program reflects issues in all water-related subsectors and includes an action plan for implementation. The technical assistance provided by development partners to the Ministry of Energy and Water Resources (MEWR) to implement the reform process is aimed at both the national and river basin levels. Regarding the river basin level, Article 22 of the Water Code divides the Republic of Tajikistan into five (5) river basin zones.

GIZ supports the Water Sector Reform Program within the Integrated Rural Development Project (IRDP) financed by the German Federal Ministry for Economic Cooperation and Development (BMZ) and co-financed by the European Union.

The water component under Component 1 of IRDP provides technical support to MEWR in the Zarafshan river basin, as well as at the national level. Such technical support includes technical advisory services and capacity building measures aimed at increasing its capacity for implementation and coordination of the entire reform process.

The Water Component of IRDP has structured its work processes into four Work Packages (WP), which include all the above-mentioned elements. The four WP are (1) Water Governance, (2) Information and Knowledge Sharing, (3) Capacity Building, and (4) Water-resilient Food Systems.

Work Package 2 promotes knowledge management and the exchange of data and information on water resources among relevant stakeholders at the national and basin levels. The objective of Work Package 2 is to establish a digital basin information system in the Zarafshan RBO linked to NWIS with sufficient relevant water information to provide a solid basis for evidence-based decision-making and integrated water resources management in the NWIS basin. Work Package 2 assists MEWR in the implementation of the NWIS concept.

According to the Decree of the Government of the Republic of Tajikistan (GoT), the Information and Analysis Centre on the National Water Information System (IAC NWIS) is the structural subdivision of the MEWR.

The IAC NWIS will consist of 5 main on-line applications: 1) State Water Cadastre (SWC); 2) Water Management Balance (WMB); 3) Irrigation Management Information System (IMIS); 4) Geoportal; 5) Drinking Water Supply and Sanitation Information System (DWSS).

In addition, the IAC NWIS will use hydrological modelling tools to determine water availability in the basin using Spatial Processes in Hydrology (SPHY) and Water Evaluation And Planning (WEAP) for water distribution in the basin.

2. Context

MEWR RT appealed to the Integrated Rural Development Project (IRDP/TRIGGER II) with a request to continue to provide technical support in the process of step-by-step creation of the Information Analytic Center for NWIS that will support the efforts of the Government of Tajikistan in creating a comprehensive reliable information system with applications for at the national and basin levels, including with a focus on the Zarafshan Basin, as a means to improve the monitoring and use of water resources, as well as to provide accurate and timely water data and to introduce information technologies and analytical tools to support informed decision-making in the field of water and energy sectors.

It should be noted that on March 11, 2022, MEWR held a meeting with representatives from MEWR, the World Bank, and the IRDP/TRIGGER II Water Component, where it was decided to continue supporting NWIS with IRDP/TRIGGER II, which will support it until the end of the project.

The various tasks of the IAC NWIS support will be carried out by a team of six national consultants. The assignment will be led by a NWIS Technical Coordinator with extensive experience in programming and database management. The second national consultant should have extensive knowledge of information technology (IT) and local and wide area networks (LAN/WAN). The third national consultant should have experience with a Geographic Information System (GIS). The fourth national consultant with extensive knowledge of information technology and experience in Geographic Information System (GIS) and local database management. The fifth and sixth local databases and data entering to the NWIS applications.

In addition, the NWIS team will actively support the staff of the Zarafshan RBO in the creation of a digital basin information system for the Zarafshan basin.

3. **GIZ** shall hire an expert **(Database management and GIS)** for the anticipated contract term**, from 01st March to 30th September 2024.**

4. The Contractor shall, in consultation with the Project Team, provide the following works/services and activities, including but not limited to the following***:***

4.1. Task 1: NWIS applications, including the State Water Cadastre (SWC)

The first task involves the following steps in collaboration with other consultants:

4.1.1. Analysing and identifying the functionality of NWIS applications, including the State Water Cadastre (SWC) system, Geoportal and the NWIS website wis.tj.

4.1.2. Analysis and processing of transferred data from Zeravshan RBO on water resources use (water use by sectors) for the period 2020-2022. It is necessary to draw up a special format for processing data on water resources use in different sectors. Data on hydrology, irrigation (irrigation networks, DPT, NS, etc.), data on WUAs, drinking water supply and sanitation, demography (population growth, urban and rural population density, etc.), administrative data, industry, agriculture and land use, etc. will be analysed and processed. All these data should be collected at the jamoat level. Develop methods for processing the missing data.

4.1.3. Collection and processing of data on the 2TP-Vodkhoz reporting form by the "Water Resources and Cadastre" department of the State Institution "TajikNIIGIM" for the period 2014-2023. In the beginning data will be collected according to the 2TP-Vodkhoz reporting form by the method of official letter from MoEWR of RT, then it is necessary to recommend a new form or improve the old form. Mainly data on water use plan and actual water used per year are collected and processed, as well as data on water use in drinking water supply, industry and irrigation sectors, as well as data on irrigated lands.

4.1.4. Daily data will be collected and transferred for digitisation to the GWC database (DB). Data on discharge, levels, turbidity and water temperature will be collected for the period 1959, 1961, 1963, 1963, 1965, 1967, 1970-1974, 1980-1984, 1987-1989 of the Zeravshan River basin.

4.1.5. Collection of information data from different ministries and agencies regarding water formation (flow rates, levels, turbidity and temperature), water use by sector (irrigation, groundwater, surface water, etc.). Data will be obtained from the CEP, Main Department of Geology, AMI, MEWR, Tajik Hydromet, TajikGiprovodkhoz, etc.

4.1.6. Updating of wis.tj website, electronic library (hydrological yearbooks, books on water resources, existing and updated legislative framework, decisions of the PRT, regulatory legal acts, as well as creation of a section on Water Supply and Drainage and its subsections (uploading of thematic maps and maps of water infrastructure on Water Supply and Drainage prepared by the Hydrophil project).

4.2. Task 2: Geospatial system

The second task includes the following steps in cooperation with other consultants:

4.2.1. Collect, update and finalise existing and missing operational attribute data on existing layers, in particular attribute layer information:

- **a)** Water bodies (objects) main rivers, lakes, reservoir, glaciers, rivers;
- **b)** Monitoring: river gauging stations, meteorological stations, BDBP gauging stations;
- **c)** Irrigation: WUAs with service areas, canals, DPTs, irrigators, bank protection dams, gauging stations on canals;
- **d)** Infrastructure: Hydropawer station sites, sewerage network;
- **e)** Land: geomorphological zones, land use classes, seismic hazard zones;
- **f)** Administrative and basin characteristics: basin water zones, settlement, WUA buildings, river basins, cities, RBOs, administrative boundary of districts, location of AMI offices, pumping stations;
- **g)** Risk and hazard areas: mudflow areas, avalanche areas, soils;

h) Environment: average annual temperature, precipitation zones, forests, wetlands;

i) Hydrology: groundwater aquifers.

4.2.2. Uploading new layers to the NWIS Geoportal.

4.2.3. Transliteration (translation from Russian into English) of thematic maps of the Zeravshan River basin (average monthly air temperature for October, average monthly soil temperature for January, April, July and October, number of hail days per year and number of thunderstorm days per year)

4.3. Task 3: Organization and support

The third task includes the following steps in cooperation with other consultants:

4.3.1. Coordination of NWIS work and meetings with development partners.

4.3.2. Assistance in facilitating, organising and conducting trainings on GIS NWIS.

5. Deliverables and reports

The deliverables foreseen in this consultancy are the following, Under Task 1-3:

Milestones

NWIS applications, including the State Water Cadastre (SWC) under the Task 1

• The functionality of NWIS applications, including the State Water Cadastre (SWC) system, Geoportal and the NWIS website wis.tj were analysed	**March-August 2024**
• Analysed and processed transferred data of Zeravshan RBO on water resources use (water use by sectors) for the period 2020-2022, as well as developed a special format for data processing, developed methods for processing missing data.	**March 2024**
• The data on the reporting form 2TP-Vodkhoz by the department "Water Resources and Cadastre" of the State Institution "TajikNIIGIM" for the period 2014-2023 were processed. then recommend a new form or improve the old one.	**April-August 2024**
• Daily data on discharge, levels, turbidity and water temperature were collected and transferred for the period 1959, 1961, 1963, 1965, 1967, 1970-1974, 1980-1984, 1987-1989 in the Zeravshan river basin for digitisation into the SWC database	**March-August 2024**
• Collection of data from different ministries and agencies (CEP, Main Department of Geology, ALRI, Tajikhydromet, Tajikgiprovodkhoz, etc.) on water resources formation (flow rate, level, turbidity and temperature).	**March-August 2024**
• The website wis.tj was updated, in the category of electronic library (hydrological yearbooks, books on water resources, current and updated legislation, decisions of the Provincial Government of the RT, regulatory legal acts, as well as the creation of the section "Water Supply and Drainage" and its subsections (uploading thematic maps and maps of water	**March-August 2024**

infrastructure on water supply and drainage, prepared by the project "Hydrophil")	

Task 2: Geospatial system

• Collected and updated and finalised existing and missing operational attribute data of layers	**June-August 2024**
• New layers to the NWIS Geoportalis upteded	**April-September 2024**
• Transliteration (translation from Russian into English) of thematic maps of the Zeravshan River basin (average monthly air temperature for October, average monthly soil temperature for January, April, July and October, number of hail days per year and number of thunderstorm days per year)	**April-September 2024**

Task 3: Organization and support

• Coordination meetings of NWIS activities with development partners held	**March-September 2024**
• GIS trainings prepared and conducted	**March-August 20242024**

Period of assignments: **from 01st March to 30th September 2024**

Documents should be prepared and executed professionally, according to strict quality standards. All deliverables should be presented in Russian and English in the form of reports and including prepared materials in the form of GIS source files and databases (layers, thematic maps, attribute tables and tables of completed data on discharge/level, water turbidity, river water temperature and water demand in difference sectors in Excel format).

II. Tender requirements

1. Qualifications of proposed expert

1.1. Database management and GIS expert:

1.1.1. General qualifications

➢ **Education:**

- University degree (bachelor's/master's) in Technical, Information and Communication Technologies.

➢ **Professional experience:**

- More than 4 years of experience in cartography, practical application of programs and software for geographic information systems, development and design of GIS database structures, processing space images and data from drone accented in implementation of the water sector reform program with a focus on NWIS.
- More than 5 years of experience in online application database development, administration, and testing accented in implementation of the water sector reform program with a focus on NWIS.

- Experience in collecting water and irrigation data from other government databases and keeping tabular data up to date.
- Experience in collecting and analyzing application databases: Data Base Basin Planning; Data Base Basin Water Resources Accounting and Irrigation Management Information System
- More than 5 years of experience in the development of the geospatial component of the NWIS.
- More than 5 years of experience in developing standards for the geospatial component of the NWIS.
- More than 5 years of experience in connecting a geospatial component to online databases and a geoportal.
- More than 5 years of experience in checking the quality of work on the creation of an NWIS component.
- More than 5 years of experience in the development of technical requirements and instructions for NWIS.
- Skills in creating a database to ensure full coverage of the republic by the administrative boundaries of the region, district, jamoat, settlements.
- Skills in creating topographic maps in WGS-84 (World Geodetic System) coordinate systems for air navigation support.
    - Ability to work with the Microsoft Office, Internet Explorer, GIS, QGIS, Erdas Imagine, AgisoftPhotoscan, e-Motion, CorelDraw, Adobe Photoshop, programs and software..

➢ **Experience in the region/knowledge of the country:**

- Excellent interpersonal and communication skills; ability to work in a diverse team.
- Familiar with the rules of operation of GIZ and/or EU projects in the country.

➢ **Language skills:**

- Knowledge of English, Russian and Tajik at C1 level in the Common European Framework of Reference for Languages.

2. Specification of inputs

Fee days	**Number of experts**	**Number of days per expert**	**Comments**
• Preparation/debriefing	1	1	Joint meeting with GIZ and a team of consultants
• Implementation: Task 1	1	85	
• Implementation: Task 2	1	18	
• Implementation: Task 3	1	16	

Travel expenses	Number of experts	Number of days/nights per experts	Comments
• Per-diem allowance in country of assignment	n/a	n/a	
• Overnight allowance in country of assignment	n/a	n/a	
• Travel costs (train, private vehicle)	n/a	n/a	
Flights	**Number of experts**	**Number of flights per experts**	**Comments**
• International flights	n/a	n/a	
• Domestic flights	n/a	n/a	
• CO_2 compensation for air travel	n/a	n/a	
Other costs	**Number of experts**	**Amount per experts**	**Comments**
• Flexible remuneration	n/a	n/a	

Calculate your financial bid exactly in line with the quantitative requirements of the specification of inputs above. There is no contractual right to use up the full days/travel or workshops or budgets. The number of days/travel/workshops and the budgets will be contractually agreed as **maximum amounts**. The regulations on pricing are contained in the price schedule.

III. Other requirements

1. Requirements on the format of the tender

The CV submitted for each expert can have a maximum of four pages. The concept (if required) should not exceed five pages. If one of the maximum page lengths is exceeded, the content appearing after the cut-off point will not be included in the assessment. External content (e.g. links to websites) will also not be considered.

2. Materials

All materials produced/developed during the period of assignment must be handed over to the Project after completing all the activities.

3. Confidentiality

An expert must keep confidential all material that is delivered to it for the performance of its work and that is the property of the GIZ Program. Likewise, you may not give said material.

4. Submission of commercial offer

- The technical and financial offers must be submitted in separate PDF files.
- Technical proposal (CVs, certificates, diploma and etc);
- Financial proposal in local currency (prepared in a separate PDF file)

5. Requirements for commercial offer:

- Provide full legal address, contact numbers and e-mail;
- Currency: Tajik somoni;
- Terms of payment: by transfer to the bank account.

6. Address for submission:

Please send your commercial offer via E-mail to TJ_Quotation@giz.de before 17:00 of **27th of February 2024** indicating the tender number "**83459605**" in the subject of the e-mail.

7. Special conditions

- **Note:** Proposals made for the supply of goods/services which are under sanctions or whose manufacturers/Suppliers are under sanctions will not be considered.
  Please sign the declaration (see attachments) and send it along with your price offer.
- Bidders should not contact other GIZ personnel unless directed to do so by the GIZ representative.
- Please raise any commercial, technical or procedural questions promptly, and no later than **25th of February 2024**. All questions should be submitted in writing and with indication of the tender number "**83459605"** in the subject of the email to the address Procurement.TJK@giz.de
- The default size of e-mails is limited to 30 MB. Above that, GIZ's email servers refuse the message and its attachments. If necessary, send more than one e-mail.
- In case of bigger files, it is possible to transfer the file via GIZ's Filetransfer service: https://filetransfer.giz.de GIZ accepts only this specific filetransfer solution for submission of documents exceeding the default mail size of 30 MB.
- GIZ is not responsible for the failure of electronic delivery of e-mail messages to the address provided, either for technological problems on the part of GIZ or the candidate.
- This invitation to tender is in no way binding on GIZ. The GIZ's contractual obligation commences only upon signature of the contract with the successful Tenderer.
- Up to the point of signature, GIZ may either abandon the procurement or cancel the award procedure, without the candidates or tenderers being entitled to claim any compensation.
- All costs incurred in preparing and submitting tenders are borne by the tenderers and cannot be reimbursed.
- All tenderers will be informed in writing of the results of this tender procedure.
- GIZ reserves the right to disqualify and reject proposals from suppliers who do not comply with these guidelines.