United Nations Development Programme

TERMS OF REFERENCE

Job title:	International Consultant to support the institutional assessment for the establishment of a Flash Flood Warning System
Duty station:	Home-based with two missions to Moldova
Project reference:	„Hydro-infrastructure rehabilitation to mitigate vulnerability to climate-driven extreme events in the Republic of Moldova" Project
Contract type:	Individual Contract (IC)
Contract type:	50 W.D., June 2025 – December 2025

A. BACKGROUND

Climate change is projected to increase the occurrence of intense rainfall events in Moldova with potential consequences for damaging flooding, given the country's rolling topography and current land use patterns. The majority of Moldova's rural population lives in small towns located in these watersheds, which are often found in low-lying areas and other areas at risk of flooding as a result of heavy rains. On average, under climate change, rainfall will become (with 66% probability) more frequent, either in absolute terms or as a proportion of total precipitation, that is, less precipitation with a higher proportion of heavy rain events. Consequently, potentially damaging and life-threatening river floods are expected to intensify.

The task of hydrological and meteorological monitoring falls under the responsibility of the State Hydrometeorological Service (SHS), but its capacities are insufficient to assess local-level hazards and vulnerabilities with sufficient precision, and the current early warning system for heavy precipitation and flooding is weak. SHS monitoring stations are unevenly distributed, with the vast majority found on the two largest border rivers (Prut and Dniester), leaving the interior under-serviced. The network of stations cannot adequately detect fluvial and flash flood risk, and hazard maps are out of date. The state institutions - the State Hydro-meteorological Service (SHS) and the National Administration "Apele Moldovei" (NAAM) - charged with hazard analysis and risk assessments currently lack the technical capacities to carry them out effectively, and they have no hydrological or hydraulic modelling capacities which is limiting the efficient flood forecasting.

Compounding vulnerability from the threat of flooding, local governance institutions have insufficient capacities for effective flood risk and water resources planning and management at the sub-basin level. Local governance institutions and community stakeholders lack the organizational and technical capacities to carry out participatory integrated water resource management and flood risk assessment and management. Under the provisions of Water Law No. 272 of 2011, some elements of integrated water resources management at local level have been delegated to sub-basin committees. While sub-basin committees have been established, they meet irregularly, have no long-term strategy for engaging local land users in analysis and planning, and their links with local water users' groups and other land use regulatory institutions are weak or non-existent. Water users' groups lack the support they need to ensure adequate capacities for appropriate maintenance of private and public hydro-infrastructure.

Against this background, the Flood Management project is proposing a set of measures aimed at strengthening the country's adaptation to climate-driven flood risk through a two-pronged approach. The first will build the essential national hydro-meteorological monitoring and early warning systems, including the institutional capacities to manage and operate them countrywide. The second one, will apply an integrated water resources management (IWRM) approach to 5 key watersheds that will produce knowledge and institutional capacities for rehabilitation of high-risk hydrotechnical infrastructure, as well as increased participation by local stakeholders in water governance.

With these measures the project will put in place knowledge, capacity, infrastructure, policy and regulatory frameworks to enable a long-term impact of country's enhanced capabilities to manage the run-off from extreme climate-driven rainf The following are the project outcomes and outputs of the project:

Outcome 1: Increased capacities of the relevant national and local authorities to respond effectively to extreme water-related events

Output 1.1: Strengthened hydro-meteorological monitoring network for effective river basin management

Output 1.2: Flash-flood/flood forecasting and early warning system established and operational

Outcome 2: Enhanced security of the vulnerable rural population in key watersheds from potential failure of flood control infrastructure

Output 2.1. Methodology, protocol and standards for safe operation of hydro-technical infrastructure developed

Output 2.2: High risk dams identified in 5 pilot sites, conditions analyzed, and remedial measures identified with priority high risk dams rehabilitated

Outcome 3: Enhanced capacity of the local authorities and empowered community stakeholders to participate actively in governance of integrated water resources management for flood control

Output 3.1: Flood risk and water resources planning, and management instruments are available and put at use at the local level

The project will have several categories of target groups such as, firstly, the local population from the pilot areas who are directly exposed to the flood-related hazards, namely, those living in floodplain areas or having agricultural land and/or economic activities in these areas.

Another target group is the local public authorities from the selected pilot regions. As custodians of the hydro-technical infrastructure, they bear the responsibility to ensure proper operation and maintenance in order to mitigate the flood risks.

The next target group of the project is the central public authorities such as the Ministry of Environment with its subordinated institutions, that is, the NAAM and the SHS who will benefit from instruments and knowledge to better understand the flood-related risks, prevent, and prepare for these.

The project duration is from December 2023 through November 2027.

This assignment refers to Outcome 1, Output 1.2, specifically to the Activities 1.2.4 and 1.2.5, which include the study and identification of institutional responsibility to maintain a Flash-Flood Detection System and Alert/Warning Center, and the elaboration of guidelines for the operation of this Center, respectively, as detailed in the next section.

B. SCOPE OF WORK AND EXPECTED OUTPUTS

UNDP intends to contract an experienced International Consultant (*hereinafter "the Consultant"*) to offer support and consultancy for Outcome 1, Output 1.2, specifically for the Activity 1.2.4, which includes the identification of institutional responsibility to maintain a Flash-Flood Detection System and Alert/Warning Center, and for the Activity 1.2.5, which includes the elaboration of an instruction / guide addressing the operation of the Alert/Warning Center and the provision of training for the assigned staff.

The Consultant will be provided with the relevant laws and governmental decisions establishing the responsibilities of all institution involved in the water management in the Republic of Moldova. Water resources management in Moldova mostly follows an Integrated Water Resources Management (IWRM) approach that ensures that all water resource typologies are taken into account when developing national policies and decisions on water management and (civil) protection. The responsibility for defining strategies and policies for the water sector is shared among several government institutions as follows:

- The Ministry of Environment (MoEnv) is a main responsible governmental body creating a policy frame-work for IWRM, including coordination with neighbor countries for transboundary waters.
- The State Hydrometeorological Service (SHS), subordinated to MoEnv is the agency responsible for monitoring the state and evolution of hydro-meteorological conditions and environmental quality.
- The National Administration "Apele Moldovel" subordinated to MoEnv is responsible for the implementation of the state policy in the field of water resources, flood protection and is the principal national water management authority which regulates the crucial surface water related relationships.
- The Agency for Geology and Mineral Resources is responsible for monitoring of groundwater level and quality and coordination of groundwater use and protection.
- The Environmental Agency is an administrative authority subordinated to MoEnv responsible for the implementation of the state policy in the areas of Environmental Assessment and Ecological Expertise.
- The Environmental Protection Inspectorate ensures enforcement of the environmental policies through the monitoring and control procedures on the ground.
- The General Inspectorate for Emergency Situations (GIES) under the Ministry of Internal Affairs, in accordance with its mandate, is responsible for the protection of the population

and of the property in exceptional situations, including from weather and water related risks.

Currently, the first link of the Flood Alert System is SHS, which monitors and issues regular information on the meteorological conditions and hydrological state of the rivers in Moldova, based on the information collected with varying frequency (based on the available equipment) from the stations/posts in the country. Once precursors of potential floods (e.g. heavy precipitations, increased release of stored water from the largest reservoirs) are detected, a institutional Crisis Cell starts functioning, comprising staff from all SHS divisions, including the administration. This institutional Cell then communicates with the national Cell, managed at the GIES. The latter is responsible for constant monitoring of the crisis at regional/national level, including gradual involvement of institutions based on the gravity of the floods and needs for intervention (e.g. involving the authorities from the raions affected by the flood; accessing the resources of the Army if the local capacities are exceeded; approaching international emergency aid). This mechanism will need to be reassessed by the Consultant in order to determine gaps, redundancies, or optimization options at various stages of flood management.

Under the guidance of the Project Manager and Component Officer, the Consultant is expected to perform the following tasks:

Task 1. Institutional responsibility assessment towards the maintenance of a Flash Flood Alert / Warning Center

The consultant will perform, on site where relevant, an analysis of legislation, existing institutional collaborations impacting the (potential) functioning of the Flash Flood Detection System and a Flash Flood Alert/Warning Center. Based on this analysis, the Consultant will provide a list of recommendations on improvements in inter-institutional collaboration and the assignment of the responsibility for the maintenance of the Flash Flood Warning Center to the most relevant institution.

Task 2. Elaboration of the instruction / guidelines for the operation of the Flood Alert / Warning Center

Based on the results of the previous analysis, the Consultant will provide a comprehensive analysis, guidelines and instructions for the establishment and operation of the Flood Alert / Warning Center. The Consultant will also take into account the available results of the radar capacity assessment performed in Activity 1.2.3 (“Study of climate radar capacities and options with the purpose to incorporate them into the Flash Flood Detection System”). The project team will facilitate the access to this analysis. The guidelines and instructions should include suggestions of normative documents for the functioning of the Center, responsibilities of the members, as well as suggestions for changes in the legislative basis of the national flood management system.

Task 3. Training in the operation of the Flood Alert / Warning Center

The Consultant will organize, with the support of the project team, a 2-day training on the operation of the Flood Alert / Warning Center, given to the assigned team, with materials built upon the result from Task 1 and Task 2.

The work of the Consultant will be mostly home based, but will include 2 missions in Moldova, the first envisioned for summer 2025 (for gathering data for Task 1 and Task 2) and the second in December 2025 (for Task 3).

The Consultant is expected to deliver the following outputs as per the below-identified timeline and

anticipated workload:

Deliverable number	Deliverable description	Estimated number of Workdays	Tentative timetable
1	Detailed Work Plan based on technical meetings with the Project team *Relevant Task:* Tasks 1-3	2 WD	by 15 Jun 2025
2	Report on a country visit to collect available documentation, including from discussions with any relevant stakeholders, for the purpose of assessing the institutional responsibility towards the maintenance of a Flash Flood Alert / Warning Center *Relevant Task:* Task 1	6 WD	by 31 Jul 2025
3	Report on the assessment of institutional responsibility towards the maintenance of a Flash Flood Alert / Warning Center *Relevant Task:* Task 1	15 WD	by 30 Sep 2025
4	Guidelines and instructions for the operation of the Flood Alert / Warning Center *Relevant Task:* Task 2	18 WD	by 15 Dec 2025
5	Report on a country visit to perform a training in the operation of the Flood Alert / Warning Center – carried out in-person *Relevant Task:* Task 3	6 WD	by 31 Dec 2025
6	Final activity report (including details on all stages passed, achieved results, conclusions, and recommendations for subsequent activities) – submitted and approved by the Project *Relevant Task:* Tasks 1-3	3 WD	by 31 Dec 2025
Total		**50 WD**	

C. INSTITUTIONAL ARRANGEMENTS

The timeframe for the work of Consultant is planned for June 2025 – December 2025.

All communications and documentation related to the assignment will be English.

The Consultant will work under the overall guidance and direct supervision of the UNDP Project Manager. For technical and administrative aspects, the assignment will be coordinated with the

UNDP Project Analysts.

The UNDP Project will provide administrative and logistical support in the organization of the envisaged events, meetings and/ or consultations.

All deliverables shall be approved by the Project Manager/Flood Management Project and the Climate Change, Environment and Energy Analyst.

Travel

All envisaged travel costs related to the country visits will be arranged and covered by the project office. As per Deliverables D2 and D5, the expected number of missions to Chisinau, Moldova, is 2 (two), with the total number of mission days of up to 4 (four) days. The exact duration and period of the missions shall be coordinated with UNDP.

UNDP will not cover travel costs exceeding those of an economy class ticket. Should the Consultant wish to travel on a higher class, he/she should do so using their own resources.

In the case of unforeseeable travel, payment of travel costs including tickets, lodging and terminal expenses should be agreed upon, between the respective business unit and Individual Consultant, prior to travel.

D. FINANCIAL ARRANGEMENTS

The financial proposal shall specify a total lump sum amount, and payment terms around specific and measurable (qualitative and quantitative) deliverables (i.e., whether payments fall in installments or upon completion of the entire contract). Payments are based upon output, i.e., upon delivery of the services specified in TOR. To assist the requesting unit in the comparison of financial proposals, the financial proposal will include a breakdown of this lump sum amount (including the daily fee, taxes, and the number of anticipated working days).

E. CONFIDENTIALITY

Materials provided to the Consultants and all proceedings within the consultancy contract shall be regarded as confidential, both during and after the consultancy. Violation of confidentiality requirements may result in immediate termination of contract.

F. QUALIFICATIONS AND SKILLS REQUIRED

Academic Qualifications:

- Master's degree or higher in hydrology, meteorology, physics or other relevant field

Experience and knowledge:

- At least 10 (ten) years of professional experience in operational hydrological monitoring
- At least 5 (five) years of professional experience in multi-institutional working groups
- At least 2 (two) years of professional experience in international collaborative projects

Competencies:

- Previous professional experience in working with international organizations, including UN Agencies
- Previous experience in working with governmental institutions in the Republic of Moldova is an asset.
- Demonstrated interpersonal and diplomatic skills, as well as the ability to communicate effectively with all stakeholders and to present ideas clearly
- Proven analytical and report-writing skills, including conducting gap analyses, and developing recommendation frameworks
- Good command of English language is a must, good command of Romanian is an asset. Deliverables will be submitted in English.

Personal qualities:

- Proven commitment to the core values of the United Nations, in particular, respecting differences of culture, gender, religion, ethnicity, nationality, language, age, HIV status, disability, and sexual orientation, or other status
- Responsibility, flexibility and punctuality, ability to meet deadlines and prioritize multiple tasks

The UNDP Moldova is committed to workforce diversity. Women and men, persons with different types of disabilities, LGBT, Roma and other ethnic, linguistic or religious minorities, persons living with HIV, are particularly encouraged to apply. ***Please specify in CV, in case you belong to the group(s) under-represented in the UN Moldova and/or the area of assignment.***

G. DOCUMENTS TO BE INCLUDED WHEN SUBMITTING THE PROPOSALS

Interested individual consultants must submit the following documents/ information to demonstrate their qualifications:

- CV, including information about experience in similar assignments and contact details for at least three referees;
- Brief description of why the individual considers him/herself as the most suitable for the assignment, focusing on experience in similar assignments, and brief methodology on how he/she will approach and conduct the work;
- Offeror's Letter confirming Interest and Availability with financial proposal (in USD, specifying the total lump sum amount). Financial proposal template prepared in compliance with the template in Annex 2.

Important notice:

The applicants who have the statute of Government Official / Public Servant prior to appointment

will be asked to submit the following documentation:

- a no-objection letter in respect of the applicant received from the Government, and;
- the applicant is certified in writing by the Government to be on official leave without pay for the entire duration of the Individual Contract.

A retired government official is not considered in this case a government official, and as such, may be contracted.

H. EVALUATION

Initially, individual consultants will be **short-listed** based on the following minimum qualification criteria:

- Master's degree or higher in hydrology, meteorology, physics or other relevant field
- At least 10 (ten) years of professional experience in operational hydrological monitoring
- At least 5 (five) years of professional experience in multi-institutional working groups

Cumulative analysis

The award of the contract shall be made to the individual consultant whose offer has been evaluated and determined as:

a) responsive/ compliant/ acceptable, and

b) having received the highest score out of a pre-determined set of weighted technical and financial criteria specific to the solicitation.

* Technical Criteria weight – 60% (300 pts);

* Financial Criteria weight – 40% (200 pts).

Only candidates obtaining a minimum of 210 points would be considered for the Financial Evaluation.

Criteria	**Scoring**	**Maximum Points Obtainable**
Technical		
Master's degree or higher in hydrology, meteorology, physics or other relevant field	*Master's degree – 10 pts, Ph.D.'s degree – 20 pts*	20
At least 10 (ten) years of professional experience in operational hydrological monitoring	*10 years – 30 pts, each additional year of experience – 10 pts, up to a maximum of 50 pts*	50
At least 5 (five) years of professional experience in multi-institutional working groups	*5 years – 20 pts, each additional year of experience – 5 pts, up to a maximum of 40 pts*	40

At least 2 (two) years of professional experience in international collaborative projects	*2 years – 10 pts, each additional year of experience – 2 pts, up to a maximum of 20 pts*	20
Previous professional experience in working with international organizations, including UN Agencies	Each collaboration – 5 pts, up to 15 pts	15
Previous experience in working with governmental institutions in the Republic of Moldova	Each collaboration – 5 pts, up to 10 pts	10
Subtotal desk review scoring – 155 pts.		
Interview (demonstrated technical knowledge and experience; communication/ interpersonal skills; initiative; creativity/ resourcefulness). **Only the first 5 applicants that have accumulated the highest technical score shall be invited to the interview.**		
In-depth knowledge of hydrological monitoring	*Limited – up to 10 pts, good – up to 20 pts, excellent – up to 30 pts*	140
Strong understanding of interinstitutional needs for collaboration and the needs of a Flood Detection System and Warning Center	*Limited – up to 20 pts, good – up to 40 pts, excellent – up to 50 pts*	
Proven analytical and report-writing skills, including conducting gap analyses, and developing recommendation frameworks	*Each report – 5 pts, up to 20 pts*	
Excellent interpersonal and diplomatic skills, as well as the ability to communicate effectively with all stakeholders and to present ideas clearly	*Each collaboration – 5 pts, up to 10 pts*	
Proven ability to work under pressure and meet tight deadlines	*Limited – up to 5 pts, good – up to 10 pts, excellent – up to 15 pts*	
Fluency in English and, as an asset, Romanian	*English: yes – 10 pts, no – 0 pts, Romanian: yes - 5 pts, no – 0 pts*	
Belonging to the group(s) under-represented in the UN Moldova and/or the area of assignment*	*No – 0 pts, to one group – 2.5 pts, to two or more groups – 5 pts*	5
Subtotal interview scoring – 145 pts.		
Maximum Total Technical Scoring		300

**Under-represented group in the area of assignment are persons with disabilities, LGBTI, ethnic and linguistic minorities, especially ethnic Gagauzians, Bulgarians, Roma, Jews, people of African descent, people living with HIV, religious minorities, especially Muslim women, refugees, and other non-citizens.*

Financial	**Maximum Points Obtainable**
Evaluation of submitted financial offers will be done based on the following formula: **S = Fmin / F * 200**	200

S – score received on financial evaluation **Fmin –** the lowest financial offer out of all the submitted offers qualified over the technical evaluation round **F – financial offer under consideration**	

Winning candidate The winning candidate will be the candidate, who has accumulated the highest aggregated score (technical scoring + financial scoring).