



TERMS OF REFERENCE

- **Job title:** National Technical Consultant supporting the design of a demonstration programme on natural refrigerants under HPMP Stage III
- **Duty Station:** Republic of Moldova, Chisinau
- **Reference to the project:** Implementation of Tranche 2 of Stage III of the HCFC Phase-out Management Plan (HPMP) in the Republic of Moldova
- **Contract type:** Individual Contract (IC)
- **Contract duration:** up to 20 working days during August– December 2026

1. BACKGROUND

The Republic of Moldova is Party to the Vienna Convention for the Protection of the Ozone Layer (Vienna, March 22, 1985) and Montreal Protocol (MP) on Substances that Deplete the Ozone Layer (Montreal, September 16, 1987) since 1996. In this line, the country has committed to gradual phase-out of ozone depleting substances (ODS) such as hydrochlorofluorocarbons (HCFCs) mostly because of their high Global Warming Potential (GWP) and the significant climate benefits this would generate. Linked to the schedule for HCFCs phase-out (and the concern about HFCs), is the need for continued development of alternative substances and low or zero GWP energy efficient technologies that would minimize environmental impacts, in particular impacts on climate, as well as meeting other health, safety and economic considerations.

On 27 June 2014, the European Union (EU) and the Republic of Moldova signed the Association Agreement(AA), which is applied since 1 September 2014. The Parliament of Moldova ratified the AA on 2 July 2016'.Article 95 from the AA specifically refers to the cooperation between the two Parties in the area of climate change and ozone layer protection.

Chapter 17 of the National Action Plan on Moldova - EU Association Agreement for 2014-2019 includes actions to be implemented for environment protection. Measures related to ozone depleting substances include elaboration and approving of the National Phase-out plan for Hydrochlorofluorocarbons (HCFCs) for the period 2016-2040.

The Republic of Moldova is categorized as an Article 5 Party (developing country) under the Montreal Protocol with a low-volume consumption of chlorofluorocarbons (CFCs). Historically, ozone depleting substances (ODS) and, more specifically, HCFC consumption has occurred solely through their import and use in the refrigeration servicing sector. No HCFC production capacity is established in the country.

The Government of the Republic of Moldova has committed to follow the Montreal Protocol phase-out schedule for HCFCs. Consequently, the Programme for Phase-out of the Hydrochlorofluorocarbons (HCFCs) for 2016-2040 and Action Plan for its implementation during 2016-2020 (GD No. 856 dated July

13, 2016) has been elaborated by the National Ozone Unit (NOU) of the Ministry of Agriculture, Regional Development and Environment (MoARDE) in order to define the Government's commitment and plan to meet the HCFC phase-out obligations, which it has assumed as a Party to the MP under Decision XIX/6 of the 19th Meeting of the Parties, accelerating the phase-out of consumption of the hydrochlorofluorocarbons (HCFCs) in both Article 5 and non-Article 5 countries. Article 5 countries have been requested by the ExCom to adopt a staged approach to the implementation of their HCFC Phase-out Management Plans (HPMP).

HPMP Stage I program (2011-2015) was formulated with approval of the preparatory assistance at the 55th Executive Committee meeting in July 2008, and then approved for the Republic of Moldova at the 63rd Executive Committee meeting held in April 2011. The HPMP aimed at the 10% HCFC reduction from the estimated (2009/2010) baseline of 1,0 ODP tones of HCFC-22 used in the RAC servicing sector, as an overall objective by 2015, and comprised a combination of interventions such as policies and regulations, technical assistance, training, awareness and communications and management, coordination, and monitoring in the RAC sector.

Implementation of HPMP Stage I resulted in net sustainable reduction of 18% from the baseline in the national HCFC consumption in 2015, contributing to Moldova's compliance with the 2013 and 2015 control targets for HCFCs.

HPMP Stage II for the Republic of Moldova for the period 2016-2020 aimed to reduce HCFC consumption by 35 percent of the baseline (1,0 ODP tones).

The present HCFCs Phase-Out Management Plan – Stage III encompasses the current HCFCs consumption situation in the Republic of Moldova and the strategy, actions and support needed to achieve total phase-out in 2030 allowing for the 2.5% servicing tail during the period 2030-2040. It has been prepared by the national Montreal Protocol Unit (MPU) with the support of UNDP, acting as lead implementing agency and UNEP, acting as a cooperating agency, and has gone through national stakeholder consultation process to agree on the format of MLF assistance needed to accomplish HCFCs phase-out. It is intended to serve as a direct implementation instrument of the country's policy and commitment to meet its obligations under the Montreal Protocol.

The action plan for achieving the total HCFCs phase-out in 2030, allowing for the 2.5% servicing tail during the period 2030-2040, will include:

- Strengthening of the HCFCs Recover, Recycle and Reuse equipment system and application of good refrigeration practices and procedures in the RAC services sector;
- Technology support to RAC sector, formal technical education institutes and centres and Inspectorate for Environment Protection;
- Develop and implement a new technologies demonstration programme on natural refrigerants in commercial and cold stores sectors via local assembly.

Given that HCFC consumption in Moldova occurs primarily in the Refrigeration and Air Conditioning (RAC) servicing sector, the successful phase-out depends on strengthening the technical capacity of this sector and facilitating the uptake of low-global warming potential (low-GWP) refrigerants, including hydrocarbons (HC), carbon dioxide (CO₂), and other natural alternatives. These technologies offer significant environmental benefits but require appropriate system design, specialized equipment, and strict adherence to safety standards.

During the previous stage of the project, a comprehensive market assessment and stakeholder engagement process was carried out to identify interested and eligible enterprises in key sectors such as supermarkets and cold storage facilities, alongside awareness-raising activities and initial technical groundwork for the promotion of low-GWP technologies. Building on these results, there is a need to move towards a more structured and strategic approach for promoting their uptake. In this context, the development of a comprehensive demonstration programme is essential to guide future investments, ensure technical feasibility and safety, and maximize replication potential across the sector. The present assignment aims to design such a programme by defining its technical concepts, priority applications, eligibility and selection framework, procurement approach, and monitoring system, thereby providing a clear and implementation-ready basis for scaling up low-GWP technologies in line with Moldova's HCFC phase-out commitments.

2. OBJECTIVE AND EXPECTED OUTPUTS

The objective of this assignment is to provide technical expertise to support UNDP and the national Montreal Protocol Unit (MPU) of the P.I. "Environmental Projects Implementation Unit" in the design of a demonstration programme on natural refrigerants under HPMP Stage III. Building on previous results, including identified interested enterprises and initial technical groundwork, the assignment will define a structured programme framework for future deployment of demonstration projects using hydrocarbons (HC), CO₂, and other low-GWP refrigerants. The Consultant will assess priority applications and validate appropriate technology options, and will develop standardized technical concepts, including system configurations, capacity ranges, and safety considerations. The assignment will also define technical eligibility requirements, technical inputs to selection criteria, and indicative technical specifications to support procurement and implementation. The Consultant will contribute to stakeholder consultation and validation processes through preparation of technical materials and participation in workshops, ensuring that technical solutions are aligned with market conditions and sector capacities. In addition, the assignment will establish technical aspects of the monitoring and performance framework, including key indicators and data collection approaches, to support reliable performance tracking, replication, and scaling-up.

The final output will be a comprehensive technical package providing a sound basis for the selection, design, and initial implementation of demonstration installations in the RAC sector.

To achieve the objective, the Consultant shall have the following responsibilities:

- Review previous phase outputs and provide technical input to define priority applications and target sectors, ensuring alignment with technical feasibility and suitability for low-GWP refrigerants.
- Assess and technically justify priority applications (e.g. supermarkets, cold storage facilities), considering system requirements, compatibility with HC, CO₂ and other low-GWP technologies, safety aspects, and replication potential.
- Develop standardized technical concepts for demonstration installations, including indicative system configurations, capacity ranges, and key safety requirements, suitable for guiding implementation.
- Provide technical inputs to the programme structure and implementation approach, including recommendations on suitable technologies, system types, and practical implementation considerations.

- Define technical eligibility criteria and provide inputs to the selection framework, ensuring alignment with application feasibility, system readiness, and safety requirements.
- Contribute to the development of practical implementation tools, including technical inputs to application templates, evaluation tools, and operational procedures.
- Provide indicative technical requirements to inform procurement, without developing full technical specifications.
- Prepare and present technical materials for stakeholder consultation and validation workshops, and document key technical feedback.
- Define technical performance indicators (e.g. energy efficiency, refrigerant use, system performance) and monitoring parameters for demonstration projects.
- Propose technical approaches for data collection, reporting, and performance evaluation, ensuring consistency and reliability of results.
- Provide technical inputs to the implementation roadmap, including identification of technical risks and recommended mitigation measures.
- Support the technical assessment of applications and validation of selected companies, including review of technical feasibility of proposed demonstration projects.
- Provide technical guidance for the initial implementation of demonstration projects, ensuring alignment with defined concepts, safety standards, and performance expectations.

By the end of the assignment, the following concrete, measurable outcomes are expected:

- A technically validated set of priority applications and technology options, including standardized technical concepts (system configurations, capacity ranges, safety requirements) suitable to guide demonstration project design and implementation
- Defined technical eligibility criteria, evaluation parameters, and indicative technical requirements, supporting transparent selection of companies and informing procurement and implementation
- An established technical monitoring and performance framework, including KPIs and data collection approaches, enabling reliable evaluation and comparability of demonstration results
- A documented technical assessment of selected companies/applications, confirming feasibility and readiness, and providing inputs to the implementation roadmap, including key technical risks and mitigation measures

3. Expected Deliverables:

	Key deliverables	Estimated workload	Tentative deadline
1.	Deliverable 1: Report on the Technical Assessment of the Priority Applications for Demonstration Projects and Concept Package <i>Note: This deliverable will provide the technical basis for the demonstration programme through the assessment of priority applications and validation of low-GWP refrigerant options based on sector data and existing infrastructure. It will define and justify suitable technology options (e.g. HC, CO₂), develop standardized technical concepts including system configurations, capacity ranges, and safety considerations, and provide technical inputs to eligibility and selection</i>	12 w.d.	October 2026

	<i>criteria. It will also include technical materials prepared for the consultation workshop and a summary of the feedback received.</i>		
2.	Deliverable 2: Technical Specifications, Technical Evaluation of Applicants and Implementation Readiness Documentation <i>Note: This deliverable will provide the technical framework to support programme finalization, company selection, and initial implementation of demonstration projects. It will include:</i> • Technical Framework for Company Selection (3 w.d.) ○ Development of technical eligibility requirements for participating companies; ○ Preparation of indicative technical specifications for the demonstration projects; ○ Development of technical evaluation criteria, methodology, and scoring parameters for the assessment of applications. • Technical Assessment Report (2 w.d.) ○ Technical review and assessment of submitted applications against the established requirements and evaluation criteria; ○ Preparation of a technical evaluation summary, including recommendations and justification of shortlisted/selected companies for consideration by the Evaluation Panel. • Monitoring and Implementation Readiness Documentation (3 w.d.) ○ Development of technical monitoring indicators and data collection approaches; ○ Preparation of technical inputs and supporting materials for the validation workshop; ○ Provision of technical guidance and recommendations to support the initiation of demonstration projects.	8 w.d.	December 2026

4. Organizational Setting:

This is a part-time consultancy. The timeframe for the work of the Consultant is planned for August – December 2026. All communications and documentation related to the assignment will be in Romanian and English.

The consultant is expected to work under the overall guidance of UNDP Moldova (Environment, Energy and Climate Change Cluster) and under direct supervision of the National Montreal Protocol Unit (MPU), P.I. “Environmental Projects Implementation Unit”. The Consultant will work in close coordination with the Team Leader of the assignment, ensuring alignment of technical inputs with the overall programme design. The Consultant will closely coordinate with relevant stakeholders, including representatives of the RAC sector and training participants.

Before submission of deliverables, the Consultant will discuss draft documents with the Team Leader and the relevant parties involved, ensuring that final outputs reflect consolidated feedback and agreed positions.

5. Financial arrangements:

The financial proposal shall specify a total lump sum amount, and payment terms around specific and measurable (qualitative and quantitative) deliverables. Payment will be made upon the successful completion of the tasks assigned and submission of the assessment report. Payments are based upon output, i.e. upon delivery of the services specified in the TOR. To assist the requesting unit in the comparison of financial proposals the financial proposal shall include a breakdown of this lump sum amount (including fee, taxes, communication costs, travel, per diems, and number of anticipated working days).

6. 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.

7. Qualifications and skills required:

Academic Qualifications:

- University degree (Bachelor or Master) in a relevant field, such as Engineering (Mechanics, Refrigeration), Chemical Hazardous Management, Chemistry, Biology, Environmental Sciences, or any related qualification.

Years and sphere of experience:

- At least 3 (three) years of professional experience in technical activities related to ozone layer protection, including the ozone depleting substances consumption accounting and assessment of mitigation actions for ODS and HFCs releases, will be an asset.
- At least 3 (three) years of experience in conducting ODS-related analyses.
- Proven experience in working with international or local organizations on similar assignments (successful experience in working with UN agencies) is a very strong advantage.

Competencies:

- Familiarity with the Vienna Convention on Ozone Layer Protection and the Montreal Protocol on Substances that Deplete the Ozone Layer, Kigali Amendment to Montreal Protocol, respectively with the United Nations Framework Convention on Climate Change and the Paris Agreement.
- Ability to analyse guidance documents, tools, and other resources related to environmental protocols/conventions.
- Skills to develop and produce quality knowledge products, reports and research papers, demonstrated by previous assignments.
- Ability to achieve results and deadlines in a timely manner, maintaining a high standard throughout.
- Excellent human relations, planning and teamwork skills.
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability.
- Excellent command of Romanian is required for this assignment, Russian and English is an asset.

*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, as well as refugees and other non-citizens legally entitled to work in the Republic of Moldova, 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.***

8. Documents to be included when submitting the proposals:

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

- Offeror's letter to UNDP confirming interest and availability for the individual contractor (IC) assignment, incorporating Financial proposal in Annex 2
*Upload the signed version of the filled in Offeror's letter to UNDP confirming interest and availability for the individual contractor (IC) assignment. Annex 2 to the Offeror's letter, incorporating the Financial Proposal, shall be filled in mandatorily and includes the detailed breakdown of costs supporting the all-inclusive financial proposal.
The Financial Proposal shall be additionally submitted directly in the system. Please ensure there are no mathematical errors and that amounts from Offeror's Letter to UNDP Confirming Interest and Availability match with your offer in the system.*
- Duly completed and updated personal CV and at least 3 references;
- Motivation statement indicating the position applying for, explaining why they are the most suitable for the work including previous experience in similar Projects (please provide brief information on each of the above qualifications, item by item);

Note: Please, refer to the Individual Procurement Notice of this recruitment for a more detailed information on the application and selection process.

Important notice: 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.

9. EVALUATION

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

- University degree (Bachelor or Master) in engineering (Mechanics, Refrigeration), environmental sciences or other relevant fields.
- At least 3 (three) years of professional experience in technical activities related to ozone layer protection, including the ozone depleting substances consumption accounting and assessment of mitigation actions for ODS and HFCs releases, will be an assets;
- Citizen of the Republic of Moldova.

The short-listed individual consultants will be further evaluated based on the following methodology:

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		
University degree (Bachelor or Master) in a relevant field, such as Engineering (Mechanics, Refrigeration), Chemical Hazardous Management, Chemistry, Biology, Environmental Sciences, or any related qualification;	(Bachelor - 30 pts., Master – 40 pts.)	40
At least 3 (three) years of professional experience in technical activities related to ozone layer protection, including the ozone depleting substances consumption accounting and assessment of mitigation actions for ODS and HFCs releases, will be an assets;	(3 years – max. 45 pts, more than 3 years – up to 75 pts, 15 pts – for each additional year)	75
At least 3 (three) years of experience in conducting ODS-related analyses;	(3 year – max. 20 pts, more than 3 year – up to 60 pts, 10 pts – for each additional year)	60
Proven experience in working with international or local organizations on similar assignments (successful experience in working with UN agencies);	(10 pts. for each assignment)	40
Familiarity with the Vienna Convention on Ozone Layer Protection and the Montreal Protocol on Substances that Deplete the Ozone Layer, Kigali Amendment to Montreal Protocol, respectively with the United Nations Framework Convention on Climate Change and the Paris Agreement;	(15 pts. for each assignment)	30
Demonstrated experience in developing and producing knowledge products, technical reports or research papers, evidenced by a list in the CV specifying, for each item, the title, year, the consultant's role (author or co-author) and the commissioning organisation or client.	(15 pts. for each assignment)	30

Criteria	Scoring	Maximum Points Obtainable
Excellent command of Romanian is required for this assignment, Russian and English is an asset	(Romanian – 10 pts; English and Russian – 5 pts each)	20
Belonging to the group(s) under-represented in the UN Moldova and/or the area of assignment* * Under-represented groups in UN Moldova 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. Please specify in CV, in case you belong 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
Maximum Total Technical Scoring		300
<u>Financial</u>		
Evaluation of submitted financial offers will be done based on the following formula: <u>$S = F_{min} / F * 200$</u> 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.		200

Winning candidate

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