

## Terms of Reference

Job Title:	National Expert to carry out a survey for Hydrofluorocarbons (HFCs) available/used/consumed in stationary air-conditioning sector in Moldova
Project Reference:	Maximizing climate benefits of HCFCs Phase-out
Duration of Employment:	February - April 2015, up to 50 days
Contract type:	Individual Contract
Duty Station:	Chisinau, Moldova

### I. 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 (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.

The Government of the Republic of Moldova has as a general objective to follow the Montreal Protocol phase-out schedule for HCFCs. The activities included in the HCFC Phase-out Management Plan Project (HPMP, Stage I) for the period 2011-2015 are meant to support the country in achieving a 10 percent reduction in HCFCs consumption baseline by 2015, contributing to Moldova's compliance with the 2013 and 2015 control targets for HCFCs.

The Republic of Moldova is a small-sized country, categorized as an Article 5 Party under the Montreal Protocol, which consumes around 1.88 ODP tonne of HCFCs, as per 2012 data and in line with Article 7 of the Montreal Protocol. The particularity of the country as compared to other candidates for HFCs survey is that Moldova is a representative small economy neighboring the European Union which has signed the Association Agreement with the EU in June 2014. As part of the association effort, it has committed to aligning its legislation, norms and standards, including in the environmental field (and specifically related to the RAC sector) with the European Union legislation and practice. Considering the current adaptation of the F-Gas regulation in Europe, which envisage reducing of the emissions of the fluorinated greenhouse gases covered by the Kyoto Protocol, it is timely for Moldova to take stock of the situation of the HFCs imports, use, consumption and availability and explore the potential impact of the new F-gas regulation in the EU on Eastern neighboring countries.

Against this background, the country has benefited from financial support from the Climate and Clean Air Coalition, which aims at maximization of climate benefits of HCFC phase-out through demonstration of energy-efficient and low-GWP alternative technologies and conducting HFCs surveys. The main objective of this project is to conduct survey of HFCs consumption, use, availability in Moldova in refrigeration, air-conditioning sector and other applicable sectors which depend on HCFCs at this moment, and covered by HPMP support for HCFC phase-out currently implemented by the National Ozone Unit of Moldova and UNDP.

The survey would establish the current consumption/use/availability baseline of HFCs and provide for future projections of growth patterns by substance. To the extent feasible, consumption and growth patterns by sectors, primarily in refrigeration and air-conditioning sector, will also be established. In addition, the surveys will present actions taken by the country for transition from HFCs to low-GWP alternatives and will also identify opportunities and challenges for transition to low-GWP alternatives for various applications.

Successful implementation of this project is expected to contribute to wider adoption low-GWP, energy efficient and safe alternatives to HCFCs and a significant multiplier effect towards maximizing climate benefits of HCFC phase-out in Article 5 countries sustainably through direct and indirect CO<sub>2</sub> emission reductions, while avoiding the introduction of high-GWP alternative technologies.

In order to achieve the expected results of the project, UNDP is currently seeking a qualified candidate to conduct the survey in close coordination with the National Ozone Unit (NOU) under the Ministry of Environment.

## II. Scope of work and responsibilities

The overall objective of the assignments is to support the NOU in Moldova in conducting a national HFCs survey as part of the CCAC support and HFCs focal area programme.

The scope of work of the National Expert is to collect initial consumption/use/availability data for HFCs group of chemicals in stationary air-conditioning sector, which serve as replacement for HCFCs covered now by the current HPMP Stage I programme.

### Tasks and Responsibilities

In order to achieve the above stated objective, the National Experts will have the following responsibilities:

*1. Conduct desk review of relevant documentation and initiate consultations with relevant stakeholders on existing data and potential HFCs data source in the Republic of Moldova.*

*2. Establish current consumption of HFCs by substance/sector :*

- ▶ Collect HFC import (and export as applicable) data for various HFC substance species for the past 3 years;
- ▶ Collect HFC consumption in stationary air-conditioning sector for the past 3 years;
- ▶ Correlate HFC substance species with possible end-use in stationary air-conditioning sector and establish estimated HFC use by sector.

*3. Establish estimated growth patterns in HFC consumption by substance/sector :*

- ▶ Review the historical HFC use data;
- ▶ Review and forecast growth of HFC use for various applications including moveable systems, split systems, multi-split systems, rooftop systems, displacement chillers, heat pumps and centrifugal chillers;
- ▶ Establish growth patterns in HFC use by substance/sector.

4. *Identify challenges and opportunities for transition to low-GWP alternatives for various applications*

- ▶ Compile data on available low-GWP alternatives for various applications and actions taken for transitioning from HFCs to low-GWP alternatives;
- ▶ Identify opportunities and challenges for applying low-GWP alternatives for various applications;
- ▶ Estimate the potential impact of transition to low-GWP alternatives, where feasible.

5. *Submit the report on HFCs consumption/use/availability to survey in Moldova which:*

- Establish current consumption/use/availability of HFCs by substance/sector,
- Establish growth patterns in HFCs consumption by substance and sectors;
- Identify challenges and opportunities for transition to low-GWP alternatives in Moldova.

III. Deliverables

Nr	Deliverables	Time
1.	<u>Inception report</u> containing the following information : <ul style="list-style-type: none"><li>- Potential HFCs data sources in Moldova reviewed and shortlisted and the groups of HCFs chemicals to be analyzed are identified</li><li>- Stakeholders' consultation process undertaken in a relevant format: interviews, meetings or round tables (with NOU support)</li></ul>	February, 2015
2.	Report on current consumption/use/availability of HFCs by substances/ sector	April, 2015
3.	Report on growth patterns in HFC consumption by substances/sector and identification of challenges and opportunities for transition to low-GWP alternatives in Moldova	April, 2015
4.	Draft Report on HFCs survey by sector	April, 2015
5.	<u>Final Report</u> on performed assignment submitted	April, 2015

IV. Timeframe

The timeframe for the assignment of the National Experts is planned from February through April 2015 and shall not exceed 50 working days .

V. Management arrangements

The National Experts will work closely with the Ministry of Environment, under overall supervision of the National Ozone Unit Manager. The NOU will provide all needed support to the experts in order to facilitate the process. The experts will report to the Project Manager and UNDP assigned programme officer.

VI. Payment schedule

The payment for the services will be carried out in two installments upon submission and approval of deliverables, and certification by UNDP that services have been satisfactorily performed.

- 20% upon approval of the Inception Report;
- 80% upon approval of the Final Report.

VII. Requirements for experience and qualification

1. Academic Qualifications:

- Bachelor's degree in engineering (Mechanics, Refrigeration), environmental sciences or other relevant fields

2. Years of experience:

- At least 5 (five) years experience with activities related to Refrigeration and Air-Conditioning sector, environmental science or other relevant fields
- Proven experience (at least 5 years) in conducting HPMP-related surveys/analyses
- Experience of work in international assistance projects/development projects. Previous experience with UNDP is a very strong advantage

3. Competencies:

- Good knowledge of refrigeration and air-conditioning sectors: current situation, trends and problems to be solved, familiarity with the Montreal Protocol and country programme on ODS phase-out in Moldova, legal requirements of the EU Regulation 842/2006
- Skills to research, design, and produce quality knowledge products, reports, research papers, etc.)
- Ability to achieve results and deadlines in a timely manner, maintaining a high standard throughout

4. Language requirements:

- Fluency in written and spoken Romanian and Russian. Knowledge of English will be a strong asset