

## Terms of Reference

<b>Job Title:</b>	International Consultant/Trainer on Alternative Ozone Depleting Substances (ODS)-free Technologies and Safety Standards
<b>Project Reference:</b>	Maximizing climate benefits of Hydrochlorofluorocarbons (HCFC) phase-out, Republic of Moldova
<b>Duration of Employment:</b>	November 2015 – January 2016, up to 20 w/days, including one mission of 4 w/days to Moldova
<b>Contract type:</b>	Individual Contract
<b>Duty Station:</b>	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 2007, the country has committed to gradual phase-out of ozone depleting substances (ODS) such as (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 replacement 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 Republic of Moldova is a small-sized country, categorized as an Article 5 Party under the Montreal Protocol. The country 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 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 HFC surveys.

The main objective of this project is to conduct the survey for HFCs consumption, available baseline and provide future projections of growth patterns of in Moldova for different sectors like refrigeration, air-conditioning, mobile air-conditioning, transport refrigeration, industrial refrigeration and aerosols consumption. It provides the current situation on consumption and availability of HFCs in Moldova.

For transfer of knowledge and information on available alternatives to HCFCs, based on results of HFCs survey, the project hires an international expert on alternative ODS-free technologies and safety standards who will be internationally recruited, based on an open competitive process.

The task of the International Consultant will be to support the project team in elaboration of the Guidebook/Report “Alternative ODS-free Technologies and Safety International Standards in RAC sector” and undertake a visit to Moldova to train the trainers on this subject.

The International Consultant will work under the direct supervision of the Project Manager and he/she will work as part of a project team.

## **II. Scope of work and responsibilities**

The objective of this assignment is to support the project team in elaboration of the Guidebook/Report on “Alternative ODS-free Technologies and Safety International Standards in RAC sector” and undertake a visit to Moldova to train the trainers (one group of max. 25 participants) on this subject.

In order to achieve the above stated objective, the International Training Expert will have the following

### **Tasks and Responsibilities:**

#### **A. Reviewing and selecting alternative and energy efficient technologies and refrigerants that not deplete the Ozone Layer (home-based):**

- Reviewing international experience on application of alternative/natural refrigerants and identifying alternative and energy efficient technologies and refrigerants that not deplete the Ozone Layer, in particular ammonia (NH<sub>3</sub>), carbon dioxide (CO<sub>2</sub>) and hydrocarbon – propane (C<sub>3</sub>H<sub>8</sub>) that applicable in the natural and climatic conditions of Moldova;
- Developing recommendations with clear justifications on selection of alternatives and energy efficient technologies using of natural/alternative refrigerants that not deplete the ozone layer with the low GWP (NH<sub>3</sub>, CO<sub>2</sub> and C<sub>3</sub>H<sub>8</sub>) for their further application in Moldova.

#### **B. Development of a Guidebook/Report on application of alternative and energy efficient technologies using ODS-free and low GWP refrigerants and safety international standards in RAC sector (home-based):**

- Developing a Guidebook/Report on application of new alternative and energy efficient technologies using ODS-free and low GWP refrigerants and safety international standards in RAC sector including:
  - a. mandatory steps to be implemented and required conditions for effective application of new alternative and energy efficient technologies;
  - b. a set of safety standard on using of NH<sub>3</sub>, CO<sub>2</sub> and C<sub>3</sub>H<sub>8</sub> and etc.;
  - c. recommendations for end-users on servicing and technical maintenance of new technologies.
- Discussing the draft Guidebook/Report with PM and local consultants (by using available means of communication) to get feedback and finalize the Guidebook/Report.

#### **C. Train the trainers on “Alternative ODS-free Technologies and Safety International Standards in RAC sector” ( 4-day mission to Moldova):**

- Undertake one visit to Moldova to train the trainers on the subject “Alternative ODS-free Technologies and Safety International Standards in RAC sector”, one group of max. 25 participants.

### III. Deliverables/ Timeframe

The following deliverables and indicative schedule are expected from the consultant. Exact dates of beginning and completion stages as well as scope of works for each phase can be corrected by Project Manager based on reasonable justification by the International Consultant. The project reserves the right, if necessary, to amend the terms of reference of the International Consultant on a written agreement. The final schedule will be agreed upon in the beginning of consultancy assignment. All deliverables should be submitted to the project by the Consultant in English.

Nr.	Deliverables	Tentative timeframe
1.	Reviewing international experience on application of alternative/natural refrigerants and identifying alternative and energy efficient technologies and refrigerants that not deplete the Ozone Layer, in particular ammonia (NH <sub>3</sub> ), carbon dioxide (CO <sub>2</sub> ) and hydrocarbon – propane (C <sub>3</sub> H <sub>8</sub> ) that applicable in the natural and climatic conditions of Moldova (Report)	December 11, 2015
2.	A Guidebook/Report on application of alternative and energy efficient technologies using ODS-free and low GWP refrigerants and safety international standards in RAC sector developed	December 30, 2015
3.	Provided a ToT on “Alternative ODS-free Technologies and Safety International Standards in RAC sector”, one group of max. 25 participants, (4-day mission to Moldova)	January 19, 2016
4.	Final Report, which includes details of conducted ToT and practical recommendations for trainers for further conducting of workshops for RAC specialists submitted	January 25, 2016

### IV. Timeframe

The timeframe for the assignment of the International Consultant is planned through November 2015-January 2016. The consultancy should involve about 16 home-based working days and about 4 working days in Moldova.

### V. Management arrangements

The International Consultant will work under overall supervision of the Project Manager and Moldova’s National Ozone Unit (NOU) under the Ministry of Environment. The International Consultant 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 as follows:

- 1<sup>st</sup> installment at the rate of 30% of total amount after approval of deliverable no.1;
- 2<sup>nd</sup> installment at the rate of 70% of total amount after the completion and approval of deliverable no.2,3, 4.

### VII. Requirements for experience and qualification

1. Academic Qualifications:

- University degree in the field of chemistry, refrigeration engineering, relevant technical sciences or environmental protection

Years of experience:

- At least seven (7) years of experience in design and delivery of trainings for refrigeration and air-conditioning technicians on good practices in RAC sector;
- Proven experience related to phase-out of ozone depleting substances (ODS), ODS-based and ODS-free/natural low-GWP, energy efficient and safe alternative technologies, safety international standards in RAC sector under the Montreal Protocol on Substances that Deplete the Ozone Layer and its amendments and adjustments, relevant international/European legislation/regulations on ODS;
- Proven experience in developing training manuals, modules and training materials in the fields relevant for this assignment;
- Experience in working with UNDP and/or other international organizations on the identified area;
- Experience in development and conducting training programs in the Eastern Europe and CIS region is an asset.

2. Competencies:

Corporate Competencies:

- 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;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability;
- Demonstrates integrity and ethical standards.

Functional Competencies:

- Proven report skills;
- Ability to meet strict deadlines and plan the work according to priorities;
- Excellent written and oral communication skills, focus on results, ability to interact productively in a teamwork environment;
- Initiative, good analytical skills, ability to work under tight schedule while respecting deadlines achievement, ethics and honesty;
- Good ability to use information and communication technologies as tools and resources.
- 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.

3. Language requirements:

- Proficiency in English. Knowledge of Romanian and/or Russian will be an asset.

UNDP Moldova is committed to workforce diversity. Women, persons with disabilities, Roma and other ethnic 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.