

Terms of References

Job Title:	Team of 5 (five) National Experts (Team Leader and 4 Experts in refrigeration and air-conditioning sector) to carry out a survey on ODS alternatives in Moldova
Project Reference:	MOL/SEV/75/TAS/33 Survey of ODS alternatives
Duration of Employment:	May – July 2016
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.

Following the decision of the Parties to the Montreal Protocol (paragraph 4 of decision XXVI/9), at its 74th meeting, the Executive Committee approved funding for the preparation of surveys of ODS alternatives for Article 5 countries, defined the objective and scope of the surveys; and limited the funding for preparation of surveys based on the countries' HCFC baseline consumption. Requests for preparation of surveys of ODS alternatives in Article 5 countries have been submitted to the 75th meeting.

Against this background, the country/ Moldova has benefited from financial support from the Multilateral Fund for the implementation of the of the Montreal Protocol for conducting ODS alternatives survey. The main objective of this project is to conduct survey of ODS alternatives 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.

Following the 75th meeting of the Executive Committee, the Secretariat revised the format for the preparation of surveys of ODS alternatives and the presentation of the resulting data (UNEP/OzL.Pro/ExCom/75/77/Rev.1)¹ based on which the Secretariat has prepared the Guide to be used as a reference in the preparation and finalization of the surveys of the ODS alternatives in Article 5 countries. The Guide is divided into the following sections and annexes:

¹ <http://www.multilateralfund.org/75/English/1/7577r1.pdf>

Part I: Preparation of surveys on ODS alternatives

Describes the objectives, implementation modalities, timeframe, and activities to be undertaken by Article 5 countries with the assistance from bilateral and implementing agencies, for guidance purposes only.

Part II: Presentation of the resulting data from the surveys

Presents a proposed format for the final report, and describes how the results of the surveys will be analysed and presented.

Annex I: Use of ODS alternatives per sector

Summarizes information on most commonly used ODS alternatives in all manufacturing sectors, as contained in decision XXV/5 Task Force Report of the Technology and Economic Assessment Panel (TEAP), and includes tables that could be used in collecting data and information on the use of alternatives in sectors and sub-sectors during the survey, for guidance purposes only.

Annex II: Data tables

Includes the required tables to be submitted to the Secretariat as part of the survey report for summarizing and presenting data collected through the surveys.

Annex III: Glossary of terms

Provides definitions of terms used in the present document, for reference purposes only.

The survey is proposed to be undertaken through a team consisting of 4 National Experts and a National Team Leader on preparation of ODS alternatives survey. The National Experts shall undertake survey planning, data collection and data analysis under the National Ozone Office and UNDP coordination. The Team Leader shall provide technical and policy guidance to the National Experts to carry-out a survey on ODS survey in Moldova.

The Ozone Unit in Moldova will use the experience it acquired for a similar HFC survey undertaken with financial support from the Climate and Clean Air Coalition (CCAC), which aimed at maximization of climate benefits of HCFC phase-out through demonstration of energy-efficient and low-GWP alternative technologies and conducting HFCs surveys.

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 CO₂ 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 5 qualified candidates 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 detailed national survey on ODS alternatives as part of the HCFCs focal area programme. The survey will establish the current supply and consumption of ODS alternatives, analyze historical consumption and provide future projection and growth patterns by substance/sector.

The scope of work of the (5) National Experts (Team Leader and 4 National Experts) is to collect consumption data for ODS alternatives used in the country and the key sectors/subsectors where they are used: refrigeration and air-conditioning (RAC) servicing sector (industrial, commercial, mobile air-conditioning (MAC), stationary air-conditioning sub-sectors), and aerosol (technical products and/or metered dose inhalers); foam; solvents; and/or fire fighting.

The Guide prepared by the Secretariat of the Multilateral Fund shall be used as a reference document in the preparation and finalization of the surveys of the ODS alternatives in Moldova.

The Team Leader will assist the National Ozone Unit (NOU) in

- Planning and implementation of the ODS alternatives survey work;

- Coordination of desk and field data collection and analyses from institutional sources including NOU, end- users, importers, distributors and associations;
- Compilation of data and analyses, including comparative analysis with HCFC data;
- Assessment of the institutional, regulatory and policy framework controlling ODS, GHGs and other air pollutants;
- Presentation of the Final Report (National survey report on ODS alternatives (collected and compiled) in all sectors and sub-sectors) as per the ExCom approved format.

Tasks and Responsibilities

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

I. Preparation of survey on ODS alternatives

Activities to be undertaken

The main activities to be undertaken by the National Experts are data collection, and data analyses and assessment, are described below:

Data collection

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

2. Based on this desk study, the methodology for data collection could be designed to focus only on the specific ODS alternatives commonly used in the country and the key sectors/subsectors where they are used, i.e., commercial or industrial refrigeration (servicing); stationary and mobile air-conditioning (servicing); aerosol (technical products and/or metered dose inhalers); foam; solvents; and/or fire fighting). The methodology should be developed to allow for comprehensive surveys that could follow the ODS alternatives supply chain from the time the substance is ordered, imported, and passed to distributors, manufactures and/or consumers. It should also allow the identification of how an ODS alternative came to be used in each specific sector, and the reasons why one alternative was chosen over another. Data on the use of these ODS alternatives shall be collected from 2012 onwards.

3. Develop a detailed questionnaire for distribution to identified key stakeholders including, *inter alia*:

- Importers;
- Distributors of chemicals (including systems houses) and ODS- and ODS alternative-based equipment;
- Industry and trade associations;
- Manufacturers of refrigeration and/or air-conditioning equipment;
- Refrigeration and (mobile and stationary) air-conditioning service companies; and
- Others (e.g., end-users).

4. Identify existing and planned policy, legislative and/or regulatory frameworks supporting the use of ODS alternatives, including those related to energy efficiency of ODS and ODS alternative-based refrigeration and air-conditioning equipment;

5. Establish current consumption of ODS alternatives by substance and by sector/applications (industrial, commercial, mobile air-conditioning, stationary air-conditioning; aerosol (technical products and/or metered dose inhalers); foam; solvents; and/or fire fighting) :

- Collect ODS alternatives import (and export as applicable) data for various ODS substance from 2012;
- Collect ODS alternatives consumption from 2012;
- Correlate ODS substance species with possible end-use in various sectors and establish ODS alternatives use by sector;
- Collect information on prices and availability of the commonly used ODS alternatives in the country;

- ▶ Collect data on estimated equipment population that requires servicing, for uses of ODS alternatives specifically in the refrigeration and air-conditioning sector,
 - ▶ Compare information obtained from institutional sources against that obtained from field sources to ensure consistency and reliability of the data.
6. Collect information on prices of electricity and other relevant energy information, to the extent possible.

Data analysis and assessment

7. Establish estimated growth patterns in ODS alternatives consumption by substance/sector:
- ▶ Develop a methodology for forecasting growth of ODS alternatives by substance/sector;
 - ▶ Review the historical (from 2012) data for the use of each ODS alternatives;
 - ▶ Review and forecast growth of ODS alternative use for various applications (up to 2030);
 - ▶ Estimate growth patterns in ODS alternative use by substance/sector (up to 2030).
6. Identify challenges and opportunities for transition to low-GWP alternatives for various applications where these substances are used:
- ▶ Review national regulations and standards related to the import and use of ODS alternatives and identify barrier that limit the introduction of low-GWP technologies and how these could be addressed, (e.g., safety concerns related to flammable alternatives, lack of domestic standards);
 - ▶ 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;
 - ▶ Make use of the available linkage to the country's HPMPs.

II. Presentation of the resulting data from the survey

7. The final report should present the results of the survey briefly describing the activities undertaken, the analysis of the data gathered, and conclusions. The summary tables provided in Annex II of the Guide are mandatory and should be used to present the data collected.

The main components of the report are described below:

- *Executive summary*: Presents an overview of the key information contained in the report, a summary of the data collected highlighting the most commonly used ODS alternatives for each sector and subsector.
- *Methodology for data collection*: Describes the methodology developed for data collection, validation, and analysis, including the institutions involved and the sources from which data was obtained.
- *Sectors using ODS and ODS alternatives, and analysis of data collected*: Describes the data gathered on the use of ODS alternative in the sector and subsectors where ODS alternatives are used. This information should be provided, to the extent possible, in tables (including, but not limited to those included in Annex II to the Guide). It should also contain an analysis of the data collected, including consumption information (2012-2015); forecasts of future use (2016-2030); availability and prices of the identified alternatives; a comparison of the use of these alternatives with the ODS being replaced (i.e., HCFC); challenges faced in the use and further uptake of these alternatives, and proposed solutions, if any; and describe the impact of these ODS alternatives on the environment.
- *Conclusions and recommendations*: Presents the main issues encountered during the process, the findings where action may be needed and the recommendations.

Important note: National Expert shall clearly indicate the position/ area they are applying for.

III. Deliverables

Key expected deliverables for the Team Leader (National Expert in aerosol (technical products and/or metered dose inhalers); foam; solvents; and/or fire fighting sectors)

No.	Deliverables	Deadline
1.	Detailed work plan. In coordination with the Ozone Unit Coordinator the Team Leader will identify and submit a detailed work plan for the survey.	May 2016
2.	<u>Inception report</u> containing the following information : Assessment of the institutional, regulatory and policy framework controlling ODS, GHGs and other air pollutants, Potential ODS and ODS alternatives data sources in Moldova reviewed and shortlisted and the groups of ODS chemicals to be analyzed are identified, The methodology for data collection, validation and analysis, A detailed questionnaires for distribution to identified key stakeholders, A methodology for forecasting growth of ODS alternatives used in each sector/subsector.	May, 2016
3.	Report on data collection, analysis and assessment on ODS alternatives by substance in aerosol (technical products and/or metered dose inhalers); foam; solvents; and/or fire fighting) sectors. Stakeholders'consultation process undertaken in a relevant format: interviews, meetings or round tables (with NOU support).	June, 2016
4.	Report on data review based on NE's report. Compilation of data and analysis, including comparative analysis with HCFC data.	June, 2016
5.	Draft report with all the information and results of survey including challenges and opportunities for transition to low-GWP alternatives for various applications identified. Data on available low-GWP alternatives for various applications compiled. Draft report on findings submitted.	July,2016
6.	Final Report (National survey report on ODS alternatives (collected and compiled) in all sectors and sub-sectors) as per the ExCom approved format	July, 2016
7.	<u>Final Report</u> on performed assignment submitted.	July, 2016

Key expected deliverables for the National Experts in refrigeration and air-conditioning servicing sector (industrial, commercial, mobile air-conditioning (MAC), stationary air-conditioning sub-sectors)

Nr	Deliverables	Deadline
1.	<u>Inception report</u> containing the following information : Potential ODS and ODS alternatives data sources in Moldova reviewed and shortlisted and the groups of ODS chemicals to be analyzed are identified, The methodology for data collection, validation and analysis, A detailed questionnaire for distribution to identified key stakeholders, A methodology for forecasting growth of ODS alternatives used in each sector/subsector.	May, 2016
2.	Report on data collection, analysis and assessment on ODS alternatives by substance/sector. Stakeholders'consultation process undertaken in a relevant format: interviews, meetings or round tables (with NOU support).	June, 2016
3.	Draft Report on the resulting data from the ODS alternatives survey in sector.	June, 2016
4.	<u>Final Report</u> on performed assignment submitted.	July, 2016

IV. Timeframe

The timeframe for the assignment of the National Experts is planned from May, 2016 through July 2016 .

V. Management arrangements

The National Experts will work closely with the Ministry of Environment, under overall supervision of the National Ozone Unit Coordinator. The NOU will provide all needed support to the experts in order to facilitate the process. The experts will report to the NOU Coordinator 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.

- 30% upon approval of the Inception Report;
- 70% upon approval of the Final Report.

VII. Requirements for experience and qualification

For Team Leader

1. Academic Qualifications:

- Bachelor's degree in engineering (Mechanics, Refrigeration), environmental science, or other closely related fields.

2. Years of experience:

- At least 10 (ten) years experience with activities related to Refrigeration and Air-Conditioning sector, environmental science, or other relevant fields;
- Proven experience in conducting HPMP project related surveys/analyses;
- Previous experience in producing similar reports (National survey/ inventory in relevant technical area (Ozone Depleting Substances (ODS), Greenhouse Gases (GHGs), etc.);
- Proven experience in working with international or local organizations on similar assignments (successful experience in working with UN agencies) is an asset.

3. Competencies:

- Ability to analyze guidance documents, tools, and other resources related to environmental protocols/conventions;
- 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;
- Excellent human relations, coordination, planning and team work skills;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability.

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.

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 noncitizens legally entitled to work in the Republic of Moldova, are particularly encouraged to apply.

4. Language requirements:

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

For Technical Experts in refrigeration and air-conditioning servicing sector (industrial, commercial, mobile air-conditioning (MAC), stationary air-conditioning sub-sectors):

1. Academic Qualifications:

- Bachelor's degree in engineering (Mechanics, Refrigeration), environmental science, or other closely related fields.

2. Years of experience:

- At least 3 (three) years experience with activities related to Refrigeration and Air-Conditioning sector, environmental science, or other relevant fields;
- Proven experience in conducting HPMP project related surveys/analyses;
- Previous experience in producing reports, research papers on compiling and analyzing of survey data;
- Proven experience in working with international or local organizations on similar assignments (successful experience in working with UN agencies) is an asset.

3. Competencies:

- 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;
- Excellent human relations, planning and team work skills;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability.

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