# REPORT

Joint Annual Meeting of the Ozone Action Network of Central America, South America and the Caribbean America



Kingston, Jamaica 1-3 October 2013

> Prepared by United Nations Environmental Program Regional Office for Latin America and the Caribbean

# **CONTENT REPORT**

### 1. REPORT OF THE DAY: OCTOBER 1, 2013

The welcoming words were given through a video by Mrs. Margarita Astrálaga, Regional Director and Representative of UNEP in Latin America and the Caribbean while the opening statements were made by Gilbert Bankobeza, Chief Officer of the Ozone Secretariat and Cecilia Mercado, Chief Officer of the Secretariat of the Multilateral Fund. Finally, Honorable Robert Pickersgill, Minister of Water, Land, Environment and Climate Change of Jamaica presented the official inauguration of the event.

Immediately after, the day continued with self presentations of the participants and the presentation of the objectives by Marco Pinzon, Officer of ROLAC/UNEP. In addition, the group of countries elected the Board and approved the topic and the sessions programme of the meeting. The President of the Board was given to the representative of Jamaica.

#### Summary of individual presentations

Mr. Gilbert Bankoveza, Principal Officer of the Ozone Secretariat presented an update about the 33rd Meeting of the Open Composition Work Group and of the 25th Meeting of the Parts in the Montreal Protocol. He briefly reviewed the proposals of extensions for essential uses and for critical uses for 2014 and 2015, and presented a summary of the final report of the Technological and Economical Evaluation Group related to the additional information about the alternatives to the substances that deplete the ozone. Among other topics to be covered in the meetings mentioned were organizational issues related to the Technological and Economical Evaluation Group, terms of reference for the study on the replenishment of the Multilateral Fund from 2015 through 2017 and issues of compliance and data reporting.

Subsequently, Ms. Cecilia Mercado, Chief of the Secretariat of the Multilateral Fund continued with an update of the Decisions of the 70th Meeting of the Executive Committee of the Multilateral Fund. He began his presentation with a reflection on the impact of the decision to carry out only two annual meetings of the Executive Committee on the projects of Institutional Strengthening and applications for funding tranches of HPMP. He reported on the status of compliance reports and progress reports to 31 December 2012 (Decisions 70/7, 70/9, 70/10, 70/11); as well as how to register the reimbursement for Phase I of the Management Plan for the Elimination of HCFCs according to Decision 69/24 (c). He presented the draft guidelines for funding the preparation of Phase II Management Plan for the Elimination of HCFCs (decisions 66/5 and 69/2) and the discussion paper on how to minimize the adverse impact of the elimination of HCFCs in the service sector of refrigeration and air conditioning (Decision 68/11). Finally, he discussed the progress and lessons learned from the demonstration projects of final disposition of unwanted ODS and non-approved projects for the countries of the region.

A video conference with Agustín Sánchez, Coordinator of the Protection Unit of the Ozone, Mexico, who spoke about proposals of Amendments to the Montreal Protocol, was performed to conclude this session.

In the period of questions and comments that followed these initial interventions, several countries expressed their comments and questions on the subject; getting answers and opinions from the presenters and implementing agencies, in some cases.

#### Separate sessions by sub-regions

Two working groups were formed, one from the countries of Central America, South America, Cuba, Mexico and Dominican Republic, facilitated by Mirian Vega and the other from countries of the English-speaking Caribbean and Haiti, which was facilitated by Marco Pinzon. In these groups, the following issues were discussed and analyzed: progress in the implementation of the sections of the HPMP and Institutional Strengthening projects; Reporting requirements: formats and quality of information, review of recommendations and conclusions of the last meeting

of the sub-regional Networks, South-South Cooperation, among others. The work in groups was followed by a plenary session where they expressed their views, recommendations and conclusions to the issues discussed.

### 2. REPORT OF THE DAY: OCTOBER 2, 2013

#### **Morning Summaries**

#### Session of individual presentations

Mr. Philippe Chemouny Environment Canada spoke of the opportunities in the "Coalition on Climate and Clean Air" to address the needs of the Refrigeration and Air Conditioning industry. He provided information on the background of the CCAC initiative and more specifically on working with HCFCs through the "Support Enabling Alternative Climate Friendly to high-GWP HFCs" and how it is relevant to the Montreal Protocol Initiative relative to the elimination of HCFC. This initiative aims to significantly reduce the projected growth of HFCs, by promoting the development, commercialization, adoption of climate-friendly alternatives, and overcoming barriers to technology demonstration, including revisions to the rules industry, various experiences of information and policy options to reduce the use of emissions.

Continuing, Colombia and Chile presented the market studies on HCF that they have done under the previous framework initiative of HFC. Ms. Angelica Antolinez of Colombia, identified some options and future actions in the country based on data obtained in the inventory, such as the replacement for HFC 134A 334Y, the use of hydrocarbons for commercial refrigeration R600A and R290 for small units, among others. He added that of the 4 domestic production plants of domestic refrigerators in the country; one is starting to produce refrigerators R600A as replacement to 134A. In the area of supermarkets he said they are exploring the possibility of making a CO2 demonstration project in the CO2 cascade system and that in the area of air conditioning they are beginning to formulate a thermal district project in the city of Medellin. He concluded that in the thermal insulation of commercial refrigeration equipment, they are thinking of demonstration projects with HFO or unsaturated HFC for spray applications used in the production of continuous panels. Meanwhile, Ms. Lorena Alarcon de Chile said they have identified virtually the same alternatives of Colombia in the sector of domestic and commercial refrigeration; and in the case of supermarkets and in the transportation of cooled CO2. He added that in air conditioning options to consider may be hydrocarbons and HFO or CO2 in issues of mobile air conditioning.

There was a period of questions and responses that followed these 3 presentations. Among other doubts, it was clarified that the inventory was done based on consumption rather than emissions, and that this data could be used to calculate emissions based on GWP of each substance and reported to the Convention of Climate Change each year.

Similarly, there were comments and reflections on the importance of this issue, since it allowed clearly to recognize the difference between making an inventory of emissions of methane or black carbon with respect to one of HFC and between having a well structured and highly operational ozone unit as opposed to the diffuse organization divided between a number of institutions, which exists in most countries of the Region to implement the issue of climate change. It also drew attention to the problem of HFC mixtures, which are not recoverable and reusable as pure substances are. This means changing their training scheme which has been promoted to technicians in terms of recovery and recycling, since in practice these products cannot be recovered, but instead have to be stored to destroy them.

Mr. Ezra Clark of UNEP was in charge of the next conference on the importance of national standards in phasing out HCFCs, who explained the many benefits/uses of the adoption of international standards at national or regional level. He mentioned, among others, strengthening legislation and regulations for the manufacture, export and import; the help to countries to ensure the safe use of alternatives; development of good practice in services; ensuring the level of training, skills and technical certificate program; integration of ODS using some ISO

certification; promoting markets in non-ODS alternatives; mechanisms for quality control of imported ODS; and support to development and energy efficiency labeling programs.

He continued to state that as part of a series of technical assistance activities, UNEP recently completed a survey in 3 regions of the world on the subject and has initiated the development of a basic manual, as well as, a symposium, some webinars with experts and various workshops/conferences on standards.

As final observations and conclusions he stressed that it is important for countries to participate in the process of setting standards, begin to have a dialogue with stakeholders in their respective countries, identify the responsible institution, and discover who is involved in the process and what standards could be relevant to the development of work under the HPMP. He stressed that to adopt international standards it will be necessary to ensure that these are the most appropriate and beneficial to the national context, which does not create barriers for the employment or adoption of alternatives and that these can be modified.

After this presentation, some countries expressed their interest in knowing if the manual being elaborated contained complete documents of the norms of interest for consultation. The presenter responded that the purpose of the manual is to provide an overview of the process and a comprehensive evaluation of the norms in a simple and brief manner; and that given the large volume of existing rules at national, regional and international levels, references and abstracts of the same will be compiled in an electronic annex for access of the user that requires further information. He clarified that the references of norms will be published in the annexes and not the full documents of norms; since these are commercial third-party products that are sold to interested parties. In this regard, Mrs. Vega from UNEP/ROLAC suggested that after defining the process and identifying the type of standards that countries are interested in adopting, there could be the possibility of purchasing these standards through institutional strengthening projects or through the political components of the HPMP.

Several countries manifested that they consider that the manual will work to update or adjust certain specific processes that have already been initiated. Nevertheless, Antigua stated that the important thing is that the guide does not become a trilogy of additional norms, given that there are already 14 regional norms in the case of the Caribbean region, in which one only has to find a level of uniformity and application at the national level. Some South American countries considered that the references included in the manual will be very useful to guide the selection and location of specific standards required in the field of refrigerant and the RAC systems. They added that it is important that all material (guides, schedules and technical presentations on these topics) are also available in Spanish for a better understanding and clarity of the issues.

The following topic on the potential application of energy efficiency labeling in the countries of the region was introduced by Mr. Marco Pinzón of UNEP and developed based on the experiences of some countries of Latin America and the Caribbean.

# Session of experiences: Labeling on energy efficiency in the countries of the region

Mr. Pinzón stated that with the purpose of ordering the labeling and provide training for consumers, ISO started work on the issue of standardization, and from the year 2000 introduced eco-labels specifically. In regards to the issue of energy efficiency labels, he showed several examples and indicated that the impact is specifically environmental, since it targets to the reduction of greenhouse gas effects. Finally, with the help of a graph, he indicated that the effect of standards on the market for a product, is that it pushes manufacturers to stop making inefficient models and focus on more efficient models; while the label aims to make the manufacturer meet the needs of consumers, being both of complementary measures.

As for the experiences in the Caribbean, St. Lucia explained that in most of the island countries, the Bureau of Standards, responsible for the establishment of standards, including labeling, is the one preparing the labeling standards for energy efficiency for refrigerators and air conditioners.

For Latin America, Costa Rica shared that it is working on a label for "non-use of methyl bromide in their agricultural products" in order to improve its image in competitiveness against other countries in Central America that occupy the same market and if they use it. Also, the case of Chile was explained, where they are implementing two types of projects relating to labeling. The first is related to cleaner production agreements in productive sectors, users of substances that deplete the ozone layer. The other project is associated with the implementation of activities related to energy efficiency systems, and its objective is to develop a proposal on a technical and standard basis for the implementation of energy efficiency labeling for ODS-containing equipment.

UNIDO, based on a similar experience in Uruguay, considered that one of the limitations that Costa Rica may encounter is that from the year 2015 when the total elimination of methyl bromide occurs, with some exceptions, the added value of the label will not be so strong, since many countries or producers will be in the same situation.

# Sharing Session of Presentation: Co-benefits of energy efficiency in the adoption of alternatives to ODS

The last topic of the morning was initiated with the presentation of a series of case studies on the co-benefits of energy efficiency HFC-free alternatives by Mr. Mahapatra Avipsa from the Environmental Investigation Agency.

In commercial refrigeration he mentioned various examples of ammonia refrigeration and CO2 cascade systems. For the area of air conditioning, he presented examples of air conditioners with propane (R290) with an improvement of 15% in energy; a particular line of air using hydrocarbons; and in conclusion, the conversion of HCFC-22 equipment to propane (Duracool 22a) of the Mona Campus of the University of West Indies. He also mentioned several applications of ammonia chillers in hospital buildings, airports and government buildings, where the feasibility of this system in tropical climates is demonstrated. He also presented two examples of solar refrigeration and air conditioning.

In conclusion, he stressed that it is important to be aware of all the different options available in both refrigeration and air conditioning in the preparation of the HPMP Stage 2; this is to ensure that the transitions are maximized in different sectors and use alternative low GWP and of high energy efficiency. And if it is a country of service, it is also important to remember that 50% of climate impacts of refrigeration and air conditioning are of leakage or increased energy consumption due to the inadequate size of the load and, therefore, the implementation of good operating and maintenance practices can reduce costs and climate impact and save energy.

Mr. Alan Marshall of Jamaica continued on the same topic, and presented the lecture "thermal technology eliminates hazardous refrigerants and reduces power consumption by 99%." He indicated that to eliminate pressurized refrigerant one has to change the cycle and technology in conjunction by means of dehumidification and cooling by desiccation. Thus, electrical energy consumption is reduced by at least half and does not require high speed motors. He then went on to explain in detail the 3 types of thermal technology applications, its main features, benefits and basic operation.

In conclusion, he emphasized that the financial challenges associated with these technologies should be considered, given that the procurement of equipment represents a capital cost and there is a lack of financial incentives that skew the viability of environmentally rational decisions. Similarly, he said that we must fight against the resistance of the companies in the industry of refrigeration/HVAC, either by lack of consumer demand, the financial arrangements with suppliers and manufacturers of predominant technology or possible loss of income because of maintenance services, since desiccant systems require very little maintenance. These challenges, he concluded, can be addressed through education, cooperation and commitment, especially by financial institutions, the NOUs and the implementing agencies.

Mr. Devon Gardner of Sustainable Options Limited continued with the previous topic, and spoke on the provision of high quality hydrocarbons for refrigeration in the Caribbean.

First he described in detail the situation of the energy sector in the region, the differences in the patterns of production and energy consumption, consumption increases and fuel prices, electricity prices, etc. To complete his

situational analysis, he summarized the technical, social economic and environmental characteristics that influence and/ or affect the energy sector in the Caribbean.

He went on to talk about the experience of ESCOs in the Caribbean, which began in December 2004 with the import to Jamaica of a cargo pilot of refrigerant mixtures of hydrocarbons to be used as replacement "drop-in" of R12 refrigerants, R134a and R22. The project was done in conjunction with the Ozone Unit of the National Environment Protection Agency (NEPA), responsible for implementing a National Training Program for Technicians. He stressed that as results of the project, there was training of over 300 technicians in the code of practice developed by the NEPA and a reduction in electric consumption in the equipment that was loaded with hydrocarbons. In the future, he said they will be more interested in themes of heating and cooling in the residential and commercial sector since there higher energy consumption is mostly concentrated in that sector. Currently, the company informed to use the Duracool<sup>®</sup> brand as a replacement; the Duracool 12a<sup>®</sup> is marketed and sold as a replacement for CFC-12 and HFC-134a and Duracool 22a<sup>®</sup> is used as a replacement for HCFC-22.

To close this series of presentations on the co-benefits of energy efficiency in the adoption of alternatives to ODS, Mrs. Neera Singh, Technical Assistant of the National Ozone Unit of Trinidad and Tobago spoke and shared with participants of the hydrocarbon production plans for refrigeration in her country.

She explained that this initiative began two years ago when, as generators of gas and petroleum, they began to explore the possibility of producing hydrocarbons as refrigerant with national energy corporation which is under the Ministry of Energy of Trinidad and Tobago. After many conversations and discussions, today they count with propane and butane available for that use, but it must be done in separate and independent bottling plants, therefore these will have to be built. However, in order to follow that path they have to do a feasibility study in terms of the market and demand in the Latin America and the Caribbean region. He added that the intention of his presentation was to give a brief introduction of what they are doing and request countries to complete the questionnaire that will be distributed by email, which will serve to initiate the market study mentioned.

In the subsequent discussion, some countries and agency representatives expressed their particular concerns to each presenter. Mr. Gardner clarified the costs relating to thermal technology in relation to other technologies and the absorption lifetimes. In addition, he informed that there are many research data and certain quantity of samples at local level and that currently they are importing these types of alternatives with HC and their spare parts, not in a massive way, but with some regularity.

In addition, other countries provided additional information and knowledge on the subject of hydrocarbons. It was reported, for example, that GIZ has a manual in English, extensive and complete on the use of hydrocarbons used for the training of instructors. It was also reported that some countries already have been doing training on technological alternatives with HC; as well as an assessment of one of the systems installed in institutions and businesses. Moreover, Honduras considered the high price of HC as an important barrier and explained that his work has been limited to small equipments, but since about a year and a half ago there is exists a private company that has done retrofits in large equipments.

# Summaries of the afternoon

# Shared Session of presentations: Energy Efficiency and Energy Service Companies (ESCOs)

The first presentation dealt with the synergies that can be found between the ozone and climate when talking about energy efficiency and energy service companies (ESCOs). Mr. Anderson Alves of UNDP explained that ESCOs provide maintenance and savings services in order to obtain energy efficiency and reduction of water consumption, through an operational tool called "performance contract". As pay in return, the ESCO receives a portion of the savings that the building obtains with the changes. However, in this process there is a significant gap to consider that is related to the financial side, since it is a bank which usually finances between 75-85% of the work.

Establishing a connection with the refrigeration and air conditioning sector, he indicated that some opportunities are observed. The first is that the ESCO usually has the know-how of the energy business; they can easily identify the biggest consumers and know how to deal with this consumption. On the other hand, there is the Montreal Protocol that indicts countries to maximize climate benefits under the HPMP framework, so increasingly seen in national strategies there is a growing interest to reduce pressure on the energy consumption, growth and emissions.

Among the challenges he highlighted the profile of the ESCOs, with different knowledge of the systems (lighting, HVAC, refrigeration, water, etc..); the little interest and knowledge by owners of the buildings; the lack of guarantees for contract performance; the lack of knowledge with these types of loans of commercial banks; and implementation of performance contracts in the public sector.

He concluded that ESCOs in the refrigeration and air conditioning are important actors in activities related to energy efficiency, and in the management plans for the elimination of HCFCs. But that, as they generally lack a deep understanding of the linkages between energy efficiency, ozone and climatic problems, this type of training and capacity building can be strengthened from the RAC sector; and similarly, the Ozone Units can share their knowledge with the ESCOs and act as integrators of alternative technologies already implemented; as well as with the information related with the lifecycle of its production (market availability, technical capacity, norms, maintenance, final disposal).

The second presentation by Roberto Marvid described some initial experience of Uruguay in the issue of ESCOs. He explained that there is a private company that has begun importing a mixture of hydrocarbons for the Uruguayan market from an American manufacturer and has made agreements with several large companies interested in trying out the product. As far as it has been reported, this ESCO has already achieved energy savings of about 30% in air conditioners in some of its projects. The product, which is a mixture of three HC (HC12, HC22, and HC502), has been tested in air conditioners of comfort, cold chambers, among others, mainly the R22 for simple drop-in, without the need to make any change in equipment or oil.

In this regard, he said the Ozone Unit recently tested it in a cold chamber, a milk chiller tank and a Split air conditioning equipment, with quite promising results; not only in terms of energy savings, but also in relation to the amount of mixing that is used, which is much lower when compared to another type of mixture that is utilized (30% of the original charge).

Following the presentations, there were some questions and comments about the prices of these HC mixtures, applications, quality and purity. The presenter from Uruguay responded that the R22 carafe is obtained at US\$50, the DuPont 422A at US\$500, isobutene of 6 kilos at US\$50, and propane of 13 kilos at about US\$15-20; he also clarified that he was waiting for a quote to know the price of R290 mixture. In terms of applications, he indicated that they have a policy of hydrocarbons since 2003, which specifies the uses and applications, but does not recommend the use of these in automobiles. He recommended that to avoid problems with the quality and purity of HC, they must analyze or demand certificates of origin of the products purchased; and use filters to control the issue of humidity.

# Session of individual presentation: Key considerations for the implementation of HPMP in the maintenance sector of refrigeration and air conditioning

Ms. Mercado from the Secretariat of MLF made a detailed introduction on the background of the topic under the framework of discussions of the Executive Committee at various meetings of the Parties; indicating that the latter was the presentation of an item of discussion at the 70<sup>th</sup> meeting that present problems and considerations involved in promoting more strategies, of different approaches and technologies that minimize the impact on the climate in the elimination HCFC phase according to Decision 19/6. In this regard, some of the recommendations have been questioned by Article 5 countries; among others those related to measures to restrict the import of

HCFC equipment, adoption of safety standards, and the lack of mature technology for replacing HCFC technology in the service sector.

He continued stating that seeing the topic in the overall context of the approved HPMPs; most countries have committed to 35% reduction in Stage 1 and have already identified four similar activities in the field of RAC services, all with enough space to start thinking about ways to minimize climate impact within that sector.

In this sense, he proceeded to ask a series of questions and suggestions to consider when implementing their work strategies in the service sector; clarifying that these are not new activities or ideas, just a different way of analyzing and focusing them. It included questions about activities or HPMP strategies, alternatives that minimize climate impact, the main barriers to the introduction of alternatives and how to remove these, legislation measures, regulations, good practicing codes and existing standards, coordination and cooperation with the customs authority and other sectors and finally the long-term sustainability of the training and certification programmes of technicians. On the other hand, he indicated that in the issue of conversion we will have to ask if the correct options are HFCs or hydrocarbons, and if there is the necessary infrastructure to do so.

He concluded that these are just a few ideas to help the planning process of the specific activities of the services sector, since countries have the choice and flexibility to make adjustments to their management plans within the identified elements according to their needs and situations.

Following the presentation, several countries and implementing agencies that requested clarification on whether the Secretariat will be reviewing and evaluating applications for sections, based on the questions and suggestions just presented and the implications this might have on the approval of disbursements.

The presenter responded that in the past the reviews had been more than quantitative (e.g. how many technicians have been trained), but that it will now also be considering the qualitative aspects of the same activity. He clarified that the intention is not to change the way the HPMP were designed and approved, but to simply ask more questions to appreciate the quality of implementation, so that the approval of disbursements is not affected. He added that what there is to understand of the presentation is that there are indeed a number of opportunities to see the activities in a different way and that what is expected is to encourage organizations and countries to do so, not to change the design of the management plans, which, obviously, is a decision only of the country.

The representative of Environment Canada said it is important that these suggestions be considered by countries in developing projects and strategies for step 2, since the energy efficiency and other highlighted issues, point not only to the HCFC elimination phase but also to minimize climate impact. In this sense, the speaker emphasized that the presentation is for guidance only; for countries to begin to ask questions about the realities of its implementation in the service sector and to advance in the implementation of its management plan, whether it be stage 1 or 2.

#### Brainstorming Session: Identification of possible activities to include in Phase 2 of the HPMP

The coordinator of this session, Marco Pinzon of UNEP, explained that the objective was to conduct a brainstorming session on how to develop the second stage implementation of the HPMP. This suggested a round of participation of these countries based on the inputs received at conferences of yesterday and today.

The comments and opinions expressed by the representatives of the different countries are organized and summarized as follows:

Activities in development should continue in stage 2	Possible activities / components included in step 2
(Strengths)	(Opportunities)
Capacity building through technology transfer.	Promote and participate in the implementation process
<ul> <li>Provision of equipment and tools for recovery and</li> </ul>	of sustainable public procurement systems.
recycling technicians and maintenance workshops, as well	Strengthening of networking activities and south-south
as identifiers of substance for Customs departments.	cooperation.

• Training in maintenance services and certification in labor	Capacity building in energy management within the
competency of refrigeration technicians.	NOUs.
<ul> <li>Continue to work with recovery and recycling networks,</li> </ul>	<ul> <li>Awareness and coordination with national and/or</li> </ul>
as well as with conversion workshops.	regional organizations to assess issues related to climate
<ul> <li>Support for associations of refrigeration and air</li> </ul>	change and ozone layer, when import tariffs are set.
conditioning technicians to continue with the theme of	<ul> <li>Coordination and development of synergies with national</li> </ul>
recovery and recycling and developing alternative	entities of energy and climate change.
technologies primarily.	<ul> <li>Support the work of the ESCO and all financing tools for</li> </ul>
<ul> <li>Review and adaptation of policies and national legislation</li> </ul>	large end users (such as district cooling systems for
in the context of the introduction of alternative	buildings, manufacturing, hotels, etc.).
technologies.	<ul> <li>Incorporate other sectors or substances that were not</li> </ul>
<ul> <li>Development/adoption of standardized guidelines for the</li> </ul>	referred to in step 1, for example, mixtures of HCFCs, fire
management of technologies and alternative substances.	extinguishers, aerosols, polyurethane foam
<ul> <li>Identifying and establishing incentives for imports of</li> </ul>	manufacturing in the areas of commercial and industrial
alternative substances and technologies.	refrigeration, construction, etc.
	<ul> <li>Adaptation and/or adoption of international regulations</li> </ul>
<ul> <li>Technical and financial administration and periodic evoluation of all components and activities</li> </ul>	on management and use of alternative substances
evaluation of all components and activities.	selected at a national level.
<ul> <li>Strengthening of existing monitoring mechanisms (e.g.</li> </ul>	<ul> <li>Develop a strategy and build the technical capacity to</li> </ul>
records of importers and users of ODS) and implementing	<ul> <li>Develop a strategy and build the technical capacity to manage alternative substances (such as HC, CO 2, etc.)</li> </ul>
new controls (e.g. equipment containing HCFCs).	through training, certification of technical expertise,
Permanent training and coordination with customs,	infrastructure development, demonstration projects,
environmental police, consumer protection, trade and	among others.
other authorities responsible for the control of trade in	0
ODS and equipment containing them.	<ul> <li>Pilot projects to test new technologies, for example, air</li> </ul>
Continuity of awareness activities and citizen participation	conditioners with HC, refrigeration, cascade systems, etc.
for consumers and users to be aware of environmental	
issues, change their attitude and conduct safe and	
sustainable purchases.	
<ul> <li>Monitoring activities and assessment of the progress and</li> </ul>	
results of the HPMP.	

To close this session the implementing agencies also made some final suggestions or recommendations. 1 - Try not to focus on the strategy as a role of control, as if the supply is cut the demand grows which somehow creates favorable conditions for illegal trafficking; 2 - Design any kind of strengthening projects for the management of ESCO; . & 3 - Examine regional or sub regional approaches, where each country can contribute a small amount of funds to try to try to jointly address some common themes; for example, the establishment of risk profiles, customs training and the adoption of norms or standards, among others.

# REPORT OF THE DAY: OCTOBER 3, 2013

#### **Morning Summary**

#### Sharing Session of Presentations: Resource Mobilization

#### 1. Introduction and Background

For the introduction and background section of this meeting, Mrs. Market from the Secretariat of the MLF addressed the issue of resource mobilization within the MLF framework. He explained that this concept came from Decision 19-6 which encourages countries and agencies to explore potential financial incentives and opportunities for additional resources to maximize environmental benefits for the ozone and climate. The current funding framework is that the Multilateral Fund is responsible for paying additional costs for specific eligible activities defined in certain plans or projects. The definition of which ones are eligible for funding is based primarily on the

guidelines of the Multilateral Fund. He explained that the financing will go to expenses that are not eligible for funding from the Multilateral Fund and the possibilities vary through auto loans, retroactive payments, etc.

He spoke briefly about the activities and funding framework for resource mobilization, approved by the Executive Committee at the 63rd Meeting for UNEP, UNDP, the World Bank and UNIDO. UNDP should examine three pilot demonstration projects in the RAC and manufacturing sector and identify technical interventions that would be required to maximize the climate impact of the elimination of HCFC. The UNEP project, on the other hand, is a study of financing options and resource mobilization for the countries of LVC in the service sector and in the organization of regional workshops. UNIDO should work on the preparation of 2 proposals for possible co-financing in specific areas: transportation and refrigeration. In addition, the World Bank project would be a study that would focus on funded monetary credits, which would be funded as an activity of resource mobilization.

He went on to say that at the 69th Meeting the reports of these projects were examined. UNDP summarized his accomplishments and detailed the funding that was received outside the MLF for the demonstration and application of low-GWP technologies and EE in India, Indonesia and Malaysia. UNEP submitted only an interim report since activities end in late 2013. UNIDO in its final report identified the GEF as partner activities in the HPMP Gambia and Vietnam for projects in the fishery and food processing sectors. The World Bank, meanwhile, had already indicated that they would present their report later in the 70th Meeting.

Then Ms Mirian Vega of UNEP briefly presented some of the findings emanating from the LAC Networking Meeting held in November 2011 in relation to the issue of resource mobilization, but not before mentioning that during the development of the presentations of the same, World Bank, IDB, GEF and UNEP gave presentations about several co-financing options.

She said the main finding was a request of ozone officials to the implementing agencies to keep them informed on the progress of investment demonstration projects (such as Colombia and Mexico) in relation to issues of capital cost and operational costs of applications of new technologies, as well as projects approved by the 63rd meeting on co financing options.

She expressed that there are still options, such as the successful energy efficiency program in Caribbean hotels; however, what is required is to develop a more organized line that identifies and leads these types of actions. She added that it is obvious that at this time neither the implementing agencies nor the NOUs have the necessary profile, so the first step required would be to establish a capacity building program at national and regional level.

At this point, a brief time was opened for questions and comments on the first two presentations. First, a question was addressed to the Secretariat, to see if there is a list of countries that have benefited from the resource mobilization within the HPMP projects. Mrs. Mercado said that there is not a list of countries where funding has been allocated to resource mobilization. She explained that those are individual strategies that have been identified by countries within their management plans as resource mobilization projects. Also it was made clear that while the Secretariat will be delighted to discuss this issue with any separately, decisions on whether these funds will be available are issues that must be decided by the Executive Committee of the Secretariat and not vice versa.

Second, UNEP was requested, if possible, to take the initiative to approach the Multilateral Fund through the Executive Committee in order to explore the possibility of additional funding for capacity building in resource mobilization. In this regard, Mrs. Vega suggested that the stakeholders interested in the CAP requesting the Executive Committee to establish a program for national capacity building could meet after the meeting to evaluate options.

# 2. Options and issues of resource mobilization in the LVC countries

Mr. Gorman considered that the UNEP study should reflect various aspects; among others, the fact that there is a need on the part of countries to deal basically with a energy management component in relation to refrigeration

and air conditioning and that more work and a better understanding of partners at the country level is required. Not only is it important to identify potential funding sources in this region, but also to map and analyze examples from other regions to see if it is possible to adopt or adjust to national conditions. He recommended for Ozone Officers to have discussions on how they should plan ahead and see if it is feasible, for example, to have 1 or 2 pilot countries implement these issues in the region and learn from that experience.

The purpose of the third presentation of this session was to introduce the UNEP resource mobilization project with the results of the 4 workshops and study; the description of what UNEP considers should go in the framework of resource mobilization for LVC countries in the services sector; and provide an initial guide to the problems and options.

After the presentation, clarification was requested on what channels were used if a country was interested in implementing some of the options, if it were necessary to go through UNEP or one of the funding agencies or whether there could be a direct approach from the country. The speaker replied that there are plenty of opportunities and basically, there could be a lot of direct activities of one's own country, as well as with others with some of the bilateral donors. There are many examples, but it all depends on what the country wants and then a program can be developed designed to cover their needs. In this regard, the representative of the MLF Secretariat said he wanted to ensure that it is understood that all financial activities outside the MLF, the responsibility to talk to the funding agencies and work with them is exclusively of the country. For his part, the representative of UNEP said that it is important to understand that there is certain funding approved under the HPMP, but for purposes of additional funding to cover the bilateral benefits of climate change and energy efficiency, the country may wish to use resource mobilization.

# 3. Experience of implementing agencies in mobilizing resources and collateral benefits for the climate related to phasing out of ODS

**UNDP, Kasper Koefoed.** He examined some technical interventions made by UNDP to maximize the climate impact of the elimination of HCFCs. In this regard, UNDP has sought to mobilize resources from bilateral and multilateral sources, as well as private sectors, in sectors more related to manufacturing.

He presented an example associated with the service sector and integrated approach in Ghana, where they have multiple funding sources. The next example was on energy efficiency in the refrigeration and air conditioning in Indonesia and, finally, some demonstration projects that have been developed and funded by private companies and bilateral donors.

UNEP, Ezra Clark. He started talking about the history and role of UNEP in relation to resource mobilization, which has been limited to information sharing and policy-related and technology for climate co-benefits, in addition the aspect of funding has not been focused on at the national level. He then proceeded to explain some examples of resource mobilization at a global level. He spoke of the "Jump Start" project (funded by the European Community - ENRTP \*) to support the reduction of automobile emissions in China and the mobile air conditioning sector in India. He mentioned the Promotion of Alternative Technologies Program of HFCs of CCAC, where governments and the private sector support to address HFC emissions in rapid growth; and the initiative of Refrigerants, Naturally!, where a group of companies take measures to combat climate change by replacing F-gases in refrigeration equipment with natural friendly climate refrigerants.

Within the regional level he considered as examples, attendance at meetings of the Network sessions on opportunities for co financing and resource mobilization; and the involvement of the industry in the tours and roundtables of Ozone2Climate. On the issue of ODS destruction, he mentioned a UNEP-EU (under the ENRTP) project on environmentally sound collection, management and destruction of ODS banks in the countries of South Asia and Southeast Asia and the Pacific to help the reduction of direct emissions of ODS/GHG and other, in approval, which will assist in collecting, transporting and destroying ODS in developing countries. Finally, he

mentioned the UNEP-Regional USEPA project that will support the transition of HCFC alternatives of zero or low GWP in the RAC industry in Asia-Pacific.

UNIDO Castellá Guillermo Lorenzo. In addition to some general considerations and background on the issue, he said that UNIDO has a specific mandate to link industry to energy efficiency and environmental protection ("Green Industry"). In that context, he explained the projects prepared by UNIDO under the initiative of the MLF which are oriented to aspects of energy efficiency in the implementation of the HPMP and the replacement of HCFCs in the service sector through sustainable solutions for the future.

The projects are focused on the areas of food processing and fisheries in Gambia and Vietnam, respectively; and explore a range of low GWP refrigerants, including ammonia systems, CO2 alone and in cascade, and units with hydrocarbons. The GEF is presented as the main source of funding for these activities; and co-financing is provided by governments, beneficiaries, UNIDO, but also technology providers, community development banks, the EU and Shecco.

The debate session focused on clarifying some doubts about the partiality of sectors and chosen countries as examples of resource mobilization, which according to the feeling of some participants did not meet the expectations of the Caribbean sub region. In this sense, it was clarified that these were only models, but that agencies were open to start work on proposals in other sectors of interest of the Caribbean specifically. In addition, the issue of double funding such projects and how to prevent this from happening came up for discussion. Both the Secretariat of MLF as well as agencies felt that these resource mobilization projects are at the moment being reviewed and consulted step by step between the various sources of financing to avoid any discrepancy from happening, but ultimately will have to set some guidelines to achieve a clear instrumentation and efficient use of allocated resources.

# Summaries of the afternoon (... continuation of previous session)

# 4. Appropriate mitigation actions at the national level (NAMA) in the refrigeration, air conditioning and foam sectors

Mr. Alvaro Zurita said that Appropriate Mitigation Actions Nationwide or NAMAs are voluntary measures implemented by developing countries to reduce CO2 emissions; that within them can present different profiles: specific projects, policies and strategies, research and development, and sector approach, which is what has been working with the PM. He described the classification system and the possible sources of financing for NAMAs and briefly reviewed the stages of a NAMAs work plan.

He also presented a project they have in the RAC and foams sector for 4 countries (Thailand, Mexico and others) funded by the Ministry of Environment of Germany, which includes HFC replacement demonstration projects; guidance for conducting an inventory of fluorinated gases in the RAC and foams sector; preparation of a technical manual and practical tools; and support to countries to develop NAMAs in sectors mentioned. The Manual of NAMA, he added, will be a basic guide of 10 modules on technical issues, policy and procedure in the RAC and foams sectors, with practical tools for assessment, analysis and planning of NAMAs and guidance on the economic aspects. At this point he explained in detail the contents of module 1 on inventory methodology and then in the case of Thailand where the inventory has been completed and where they have achieved making comparisons and reproducing mitigation scenarios to evaluate the technical options. On the other hand, he said the inventory of Mexico is in progress.

In conclusion, he considered that now there is availability of methodology and tools for the development of NAMAs in the RAC and foams sector, linking them with the financing instruments of the international climate regime. With this comprehensive concept for reducing HFCs in developing countries and the inventory of emissions, a practical approach has been achieved for the immediate planning and implementation of national strategies.

To clarify doubts on the subject, the lecturer said that NAMAs are designed to cover the controlled gases under the Kyoto Protocol, such as HFCs, but not that of the HCFCs. Similarly, he explained that NAMAs in the future may be financed by the Green Climate Fund; however, currently there are some individual initiatives funded by the British Government and Germany, to carry out NAMAs in certain countries.

# **5.** Other experiences in resource mobilization and co-benefits for the climate related to the refrigeration and air conditioning maintenance sector (Steve Gorman, Consultant - UNEP) climate

Mr. Gorman considered summarizing here that the UNEP study should reflect various aspects; among others, the fact that there is a need on the part of countries to deal basically with management of an energy component in relation to refrigeration and air conditioning and that more work and better understanding of partners at the country level is required. Not only is it important to identify potential funding sources in this region, but also to map and make an analysis of examples from other regions to see if these can be adopted or adjusted to national conditions. He recommended Ozone Officers to have discussions on how they should carry on and evaluate to see if it is feasible, for example, have 1 or 2 pilot countries to implement these issues in the region and learn from that experience.

# 6. Perspectives of regional development banks to contribute to the mobilization of resources in relation to the elimination of HCFCs in developing countries operating under Article 5

**Options identified in the Caribbean, Donnalyn Charles, Representative of Saint Lucia.** She spoke of three banks that she investigated in the Caribbean. The first, the Caribbean Development Bank has a specific program for disaster risk management and climate change that promotes and supports mitigation and energy efficiency; where a dialogue with negotiations for some countries in the sub region as St. Kitts and others could be opened. Secondly, she mentioned the Interamerican Development Bank whose objective is similar to the latter one and serves exclusively to developing countries that are not part of the Organization of Eastern Caribbean States (OECS), such as Jamaica, Haiti and others. Finally, she spoke of the Development Bank of Saint Lucia, a local bank that primarily supports development programs geared towards poverty reduction, agriculture and tourism. She explained recently that in the context of a symposium organized by a NOU on energy efficiency technologies and low GWP, a bank representative volunteered his services, so they will be starting these conversations soon.

**Options identified in Latin America, Angelica Antolinez, Representative of Colombia.** She started putting into context the origin and actors of the option selection process and its objectives, coordination and funding. She identified as base programs the one from the Technical Ozone Unit (TOU) of Colombia for HCFC phase out stage in compliance with the Montreal Protocol, the Colombian strategy of low carbon of the Climate Change Convention and the national program for the rational and efficient energy use. This last one was in charge of defining the work areas of higher priority on the energy consumption in the country, among these are domestic, commercial and industrial refrigeration.

She indicated that so far they have accomplished uniting the different aspects of the 3 basic programs already mentioned and have identified various funding sources in the Development Banks. For example, they already have funding from the CAF to develop a NAMA for a national program for substitution of domestic refrigeration, based on improved energy efficiency and at the same time, make proper provision of the replaced refrigerators in conjunction with the demonstration project of elimination of ODS that have been carried out with funds from the MLF.

On the other hand, she mentioned that a sustainable cities project with EE, funded through a bilateral cooperation with the Swiss government is being developed to create a thermal district in Medellin. She said it should also include sustainability programs with productive sectors that, through a technical assistant component to end users of refrigeration and air conditioning of HPMP, offer and support strategies to find lines of low credit interest that facilitate the substitution of equipment.

She explained that they are working on the strategy of market transformation, which is aimed at transforming both supply and demand, taking into account environmental criteria and required energy efficiency standards, the needs of the productive sectors, new EE technologies and funding models. Within this context, he went on to specify the tools and activities that they are developing at the moment, namely, tax incentives, the credit for energy efficiency, the negotiation of context with the IDB and BANCOLDEX for the design of the performance contract and insurance policies with ESCOs, and the development of pilot studies in the sectors of end users. So far we have identified 30 potential demonstration projects that must go through a selection process implemented by BANCOLDEX in coordination with the TOU.

### 7. Final questions and comments

In the ensuing discussion, both Ozone officers, as well as, implementing agencies, actively participated with questions and comments. Some of the participants' doubts were about NAMAs Colombia project; among those were the following: if the project qualified for registration since ODS equipment was included and which controls would apply to ensure that the change uses non-ODS with low GWP; whether NAMAs covered both energy efficiency and carbon emissions components; what the funding source receives in exchange (the CAF, in this case) and how much these co financing or loans can affect inflation.

The representative of Colombia responded that the NAMAs project would have no problem to classify in the registry as it points to energy efficiency by substituting domestic refrigerators (containing either CFC-12 or HCFC-134A) for refrigerators with R600A and that, therefore, emissions would be calculated based on the future emissions of HFCs that could have been contained in those refrigerators. To ensure and control the change to non-ODS alternatives and low GWP, he said that currently they are in the process of defining a set of criteria that apply to companies that will participate in the pilot project. He also confirmed that, indeed, the project covers the energy efficient line that the national program prioritizes of rational and efficient energy use and the carbon emissions component under the national strategy of low carbon of the Climate Change Convention. Moreover, he clarified that the CAF is only giving funding for the formulation of the NAMAs, not for the implementation; so once developed and approved they would have to seek funding for implementation. Regarding inflation, he considered that this has remained stable in recent years in Colombia, so he expects end users to take advantage of such mechanisms, provided that commercial banks maintain lines of credit with low interest rates. In concluding his intervention, he clarified that the NAMAs project is just one component of a large project that is more complex and has different components from other projects in the country, converging the work of various institutions, agencies and departments, including the Ministry of Mines, Ministry of Environment, PM, Kyoto, etc..

Moreover, the same presenter was requested to summarize the previous steps that allowed them to reach the current situation. She explained that since the HPMP includes a line of technical assistance to end users; training had been subject only to the promotion and identification of alternative substances with low GWP, but not for direct assistance for investment projects. Therefore, initially a search for mechanisms of technical assistance that would go a little bit further was done, talks were given about the best options available, they began to strengthen inter-agency and inter-program liaisons and, in the process, it was found that BANCOLDEX (Colombian Bank of development) was generating a low interest credit line in energy efficiency through local commercial banks, which is what ultimately gives credit to the end user. Finally, several meetings with BANCOLDEX materialized to know about the operation of the line of credit and define the areas of large RAC users who wanted to be prioritized. Once the sectors were identified, training workshops were organized to explain this financing option to them.

Venezuela continued to briefly share their experience in mobilizing resources for EE projects. In this case, he explained that they conducted a small pilot project with a hotel, using trained technicians to do conversions and pre and post assessments; and the TOU established certain criteria for replacing R22 with propane, which was donated by a generation company. The results obtained will be evaluated and then presented to the Ministry of Energy, who will be responsible to develop a large-scale plan for government in the housing construction industry for marginalized groups. He concluded that as far as he knows, there will be no banks involved in the financing.

Mr. Alvaro Zurita of GIZ was asked to clarify whether it was feasible or not to register a NAMAs project to substitute old equipment that contain CFCs and/or HCFCs to hydrocarbons, as Colombia states. His answer was that it was feasible given that the basis for the calculation of the mitigation potential is the equipment that could be replaced by HFCs, by which Colombia in its project reasonably assumes that equipment with CFCs will probably be converted to HFCs in the future. In response to another concern that emerged, he added that, however, these NAMAs projects are an evolving process and that there are very few being implemented, so that the deadlines are not yet well defined and there are different interpretations.

# **Roundtable session on the countries' needs and the path to follow** (Panelists: UNDP, UNEP, UNIDO, GIZ, Colombia, Santa Lucia)

In the first place, the moderator, Mr. Steven Gorman, asked the invited panelists to give their views on how it could really help the NOU move forward on these issues and what might be some good advice for them.

Implementation agencies mentioned several recommendations derived from their experience in relation to resource mobilization. First, one must know the major consumers of HCFCs very well and identify those sectors that would be of priority based on the resources and incentives that exist and are available. Then evaluate the main sources of funding, GEF, other international conventions, national and international development banks, etc.., trying, where possible, not to keep strictly with international and complicated funds at times, as those of the GEF, but also to explore local banks. Moreover, NAMAs could represent an opportunity to access additional funding, since they are an instrument that counts with methodologies, has a focus on how to deal with the services sector and the method to reduce emissions.

They also suggested that before taking a course of action, it is important to consult with senior decision-making levels in the Ministry and based on this, make a roadmap. In this regard, it will be necessary to establish a good working plan to generate the necessary capabilities to address this issue. They also recommended, as specific activities to encourage the mobilization of resources, to invite some experts in energy efficiency, development banks and other funding agencies so they can explain their guidelines; and develop some pilot projects, perhaps with a sub regional approach.

The two panelist countries invited, Colombia and St. Lucia, also shared some advice and opinions for Ozone Units of the countries. Colombia indicated that although there are many doubts in the process, they will need to seek funding of other projects for sectors of end users, since to actually achieve a gradual phase-out of ODS in the country the supply must be controlled, but without neglecting the demand generated in these sectors. St. Lucia, meanwhile, said it is important to create a balance of existing energy policies in their countries since the knowledge of these can facilitate the negotiation process and support to resource mobilization. Also, he recommended developing or renewing relationships with energy and climate change units, as many of them do not know about the HPMP activities and how they are linked to their own daily work schedule.

Then the director of the OzonAction Programme of UNEP, Shamila Nair-Bedouelle spoke, she offered a message of support and encouragement to Ozone Officers of the countries. She made some suggestions and questions that might help guide this new role for ozone officers, as well as, their learning. She mentioned, among other things, to consider the national development plan and strategies in each of their countries; fully understand the operation of the service sector; and have great knowledge of the behavior of the energy sector in the RAC areas. She emphasized that there are many innovative and unexplored tasks to be done so that the role of the ozone officers is very important at this moment in the sense that they would have to learn to assess the needs in a broader horizon.

Before having each of the representatives of the countries speak, the moderator gave a summary of what was said by the panelists and identified 4 major areas for discussion: 1 - There is or will be a large amount of funds available in the area of climate change. . 2 - There are different technical, cultural, market barriers that require some effort to eliminate them; 3 - the need to strengthen the coordination of UN agencies, as well as, those of the institutions within countries; and 4 -. Improve the regional cooperation to address the problems and challenges.

Granada's representative identified some needs of the LVC countries on the issue of resource mobilization, among others, to build capacity to address resource mobilization; to think with a broader perspective towards the management of energy; incorporate the whole issue of inventories, banks of unwanted ODS and means of destruction of these and, of course, to structure a pilot project for the sub region as they are all LVC countries.

Venezuela briefly recounted what they did to start and what their objectives are. First they decided that they would not only eliminate HCFCs, but HFCs as well, therefore they needed a mechanism for destruction of these; and further encourage the manufacture and packaging of hydrocarbons to remove the economic barrier of high prices that currently exists. The issue of the destruction was already resolved with a national cement plant, which passed testing and is only awaiting official approval from the Ministry of Environment to initiate the destruction operations. For the issue of hydrocarbons, they raised the issue to those from the energy department that if they helped to make the switch to HC, they would guarantee a 20% reduction of overall demand in the domestic sector. They accepted it and the pilot project will be carried out with the two hotels where all the equipment will be converted to hydrocarbons. However, he acknowledged that even so there are all kinds of barriers, since some producers and importers of R-22 are dedicated to discredit the project.

Costa Rica, meanwhile, expressed some lessons and conclusions obtained from the current session; such as the need to start or improve the approach with the climate change and energy efficiency units to create synergies and enhance available resources; and that the most important steps in the process will be to establish priorities with higher levels and make a road map. He considered that the support and technical capacity will continue to be a priority; because when speaking of energy efficiency to an end user it must be proven with updated information and techniques that are convenient in order to make the change to the recommended technology.

To close the panel, UNIDO and UNDP gave the conclusions and final remarks. UNIDO considered that it should not address all the issues at once, unless you have a strategy and a comprehensive plan, that first you have to select the field, show what incentives can be given to bring about change, and then analyze the issue of funding. For UNDP this is a new form of work that requires an integrated focus within different sectors and entities, that there were different things, but that they always go in the same direction. So now the role of the National Ozone offices is to try to get all these activities to come together, using the MF to take advantage of other sources of funding or mobilize other funds. Another important point is to try to reconstruct the concept of funding because generally speaking when you think about funding grants and funds, but in reality there are other funding sources internally in countries, such as tax exemptions for low-GWP or EE.

### SUMMARY OF THE DAY: OCTOBER 4, 2013

Since the presentations could not be recorded for the preparation of the final report, only the topics presented and discussed during sessions of that day are briefly mentioned.

#### Round group session: Achieving the goals of total elimination of methyl bromide in 2015

Each country representative was corresponded to make a 5 minute presentation on their activities of methyl bromide, which was to include challenges and progress, barriers and opportunities, BM reports for Quarantine and Pre-shipment (QPS) and the assistance required from the Implementing Agencies.

#### Session of individual presentations

The presenter, Mr. Ezra Clark of UNEP spoke briefly on implementation strategies and prevention of illegal trade in ODS and indicated the type of technical assistance and informational materials that they had on the prevention of illicit trafficking. He explained the objective and function of the i-PIC system.

Mr. Clark also developed the theme on Capacity Building and Information Exchange to support phasing out the use of ODS. The presentation included an overview of the products, tools and materials available for capacity building and information sharing.

Next, space was opened for the discussion of assistance needs required for the countries, as well as, to address other topics not included in the agenda.

#### Session of conclusions and recommendations

- 1. Advice was provided to countries on the importance of ratifying the Beijing amendment to the Montreal Protocol. It was emphasized that Parties that have ratified the amendment is not allowed to commercialize HCFCs with non-party states thereof.
- 2. It was reported that the Multilateral Fund reduced the number of meetings to two per year so the funding request submissions for projects must follow the new calendar and the National Ozone Units should consult the respective implementing agencies of the dates for each presentation in order to deliver on time.
- 3. It was advised to review and consider the various proposals for the gradual reduction of hydrofluorocarbons (HFCs) under the Montreal Protocol mechanisms in preparing countries for discussion at the next meeting of the Parties (MOP).
- 4. It was recommended for countries to consider, in the management of the gradual elimination of HCFC, the direct path to alternatives of low global warming potential and that, in addition, offer a minor consumption of electrical energy. Equally, it was advised that for those who have not adopted the standards and energy efficiency labels, to consider establishing the norms for the energy classification of electrical appliances in the RAC sector and the labeling indicating the classification of the apparatus, according to their energy consumption.
- 5. The representative of the Secretariat of the Multilateral Fund has suggested that a review of training plans and capacity development is done to ensure that there is a link with the HCFC phase out plan that ensures the sustainability of the plans based on the goals of elimination or phase out. The quantitative and qualitative performance indicators, as well as, intangible activities (i.e. coordination with other related institutions and control the use of ODS agencies) should be reflected in the progress reports of the projects.
- 6. There is a genuine interest from the countries of the region, in adopting the use of natural refrigerants as alternative technology to HCFCs and HFCs. However, there are limitations in terms of the supply of these products, prices, training of technicians and legal framework for the safe use of these alternatives that need to be addressed.

- 7. It was suggested that there is a need to discuss and coordinate between sub-regional trade groups related to customs and tariff codes for refrigerant gases and RAC teams in each country.
- 8. There exists an opportunity for countries to consider the mobilization of domestic resources and sources other than the Multilateral Fund to build capacity in the National Ozone Unit to develop and implement projects involving the reduction of carbon emissions related to the elimination of the use of HCFCs as well as the energy savings achieved with alternative refrigerants.
- 9. There exists a need for expertise in financial engineering project design and development of the ability to establish economic or financial link between the HCFC phase, energy efficiency and reducing carbon emissions.
- 10. It was recommended to develop a strategy of phasing out the use of HCFCs and HFCs focused on energy savings, which responds directly to the priorities of most countries and provides almost immediate economic benefits that ensure the sustainability of the HPMP.
- 11. It was observed that the use of methyl bromide in the region has been phased out by the joint effort of governments, farmers and the Implementing Agencies of the Multilateral Fund. While there is a strong commitment of countries to comply with the schedule of completely eliminating the use of methyl bromide from 2015, it was recommended to maintain a monitoring system to prevent potential requirements of methyl bromide that can be addressed through alternative technology