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UNEP OzonAction CAP Achievements 2014



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Foreword

It has been a challenging year. Conflicts in north, west, and central Africa, and in the Middle East and the post-conflict situations in certain Asian countries placed further demands on the UNEP OzonAction Compliance Assistance Programme (CAP) staff in delivering timely and appropriate assistance. However, UNEP CAP strived to respond to these challenges and bring to bear its expertise on the multitude of cross-cutting issues facing the implementation of the HCFC Phase-out Management Plans (HPMP) by its partners in developing countries.

This year, UNEP engaged 148 developing countries in implementing 389 ongoing Multilateral Fund projects, delivering 372 compliance assistance services, and supporting various other projects and services.

Around 120 countries were directly served by UNEP-implemented projects. Among them are very large countries (e.g. China and India) and very small countries (e.g. Niue), and included 48 classified as 'Least Developed Countries' (LDCs), 38 classified as Small Island Developing States (SIDS), and several countries facing post-conflict, post-disaster or political issues.

CAP has undertaken various initiatives to give a fresh impetus to compliance assistance and cooperation. These initiatives involved convening groups of communities of practice, technicians and National Ozone Officers (NOO); exploring

new forms of technical partnerships such as setting up 'inter-networks for co-operation', network twinning and promoting south-south cooperation.

In looking to the future technical expertise and practice-oriented tools were developed. Continued efforts will be made to improve the quality and topical relevance of CAP capacity-building tools and publications.

In addressing training and certification of refrigeration technicians, an in depth national/regional analysis is being conducted to ascertain the long-term sustainability of training programmes, institutionalisation of training activities and to identify barriers and incentives.

Significant efforts have also been made to bring on board the necessary partnerships for an effective, holistic HCFC phase-out. However, this has to be reflected at the national level through capacity-building and engagement of the NOUs and governments. CAP will pursue its efforts and widen the scope and outreach to forge new partnerships essential for the phase-out and climate co-benefits.

Shamila Nair-Bedouelle,
Head of OzonAction

Introduction

UNEP DTIE OzonAction assists developing countries and countries with economies in transition (CEITs) to achieve and sustain compliance with the Montreal Protocol on Substances that Deplete the Ozone Layer. It implements over 1,000 projects and services that benefit more than 120 developing countries and seven CEITs.

UNEP, in its capacity as an implementing agency of the Multilateral Fund for the Implementation of the Montreal Protocol, and through its Compliance Assistance Programme (CAP), enables countries to make informed decisions about alternative technologies and ozone-friendly policies.

Bilateral support obtained through partnerships with agencies and governments such as the Czech Republic, Finland, Italy, the Netherlands, Norway, Poland, and Sweden has allowed UNEP to further undertake specific projects with developing countries.



SIGNIFICANT ACHIEVEMENTS

A Climate View

On 20 September 2014, *The Economist* published a global comparison of carbon mitigation efforts, ranking the top 20 policies and courses of action according to the quantities of greenhouse gases reduced. The Montreal Protocol emerged at the top of the list with cumulative emission reductions of 135 billion tonnes of CO₂ equivalent between 1989 and 2013. Its annual emission reduction of 5.6 billion tonnes of CO₂ equivalent were twice as much as the next highest policy/action, which was hydropower.

This incidental but substantial climate-benefit resulted from the fact that many ozone depleting substances (ODS) are also powerful greenhouse gases. As climate change impacts communities, economies, and ecosystems everywhere, it is essential to mitigate this threat

with the same unity of purpose as we have in facing the dangers of ozone depletion. This reasoning inspired the theme for 2014 International Day for the Preservation of the Ozone Layer, which was: "Ozone Layer Protection: The Mission Goes On".

In many ways, this theme also resonates with the work of UNEP OzonAction. In 2014, UNEP strived to respond to the many needs of National Ozone Officers (NOOs) and governments as they prepare for the 2015 reduction step in the consumption and production of HCFC and final phase-out of methyl bromide. OzonAction has provided networking support and expertise on many cross-cutting issues connected to the HCFC phase-out management plans (HPMPs) by partners in developing countries.

Regional Networks

The Regional Networks of National Ozone Units (NOUs) are a path-breaking mechanism for North-South and South-South cooperation developed and used by UNEP OzonAction.

Networking allows NOUs from Article 5 countries to exchange experiences, develop their skills and learn from the expertise of their peers in both developing and developed countries. Conducted at the regional level, this Networking builds the Ozone Officers' skills for implementing and managing their national ODS phase-out activities.

In practical terms, networking entails:

- Annual regional meetings (usually a main network meeting and a thematic meeting for each region);
- Regular communication between UNEP and the Ozone Officers to provide information and assistance in resolving any difficulties;
- Thematic and technical capacity-building group meetings;
- Country-to-country cooperation;
- Technical assistance for ODS phase-out.

OzonAction operates 10 sub-regional Networks which, between them, cover 148 developing countries and 12 developed countries:

- Africa (English Speaking and French Speaking);
- Europe and Central Asia;
- Latin America (Caribbean, Central America, South America);
- Asia and the Pacific (Pacific Island Countries, South Asia, South-East Asia);
- West Asia.



Key Achievements

UNEP CAP's main focus is on providing technical support to NOUs for the timely implementation of their HPMPs. It is the lead agency for HPMPs in 71 countries and the cooperating agency in another 28 countries, covering almost 100 countries. CAP also assists 103 Article 5 countries in institutional strengthening projects.

Within the framework of the Montreal Protocol, in 2014, CAP has sought to reaffirm its specific nature and has taken steps to give a fresh impetus to compliance assistance and cooperation. This has taken the shape of convening groups of communities of practice, technicians and NOOs; and exploring

new forms of technical partnerships, such as setting up 'inter- networks for co-operation' (NETWIN, which stands for Network Twinning and promoting the South-South cooperation).

All efforts under CAP were concentrated on the implementation of the ExCom-endorsed UNEP CAP business plan. Expertise was provided to National Ozone Officers and Parties to formulate, revise and update policies necessary for the HCFC phase-out.

Unwanted ODS disposal in Nepal

Demonstrating how unwanted ODS can be disposed safely and cost-effectively in collaboration with the private sector, leveraging state-of-the-art technologies, operational systems, and when the credits are ultimately sold, carbon finance.

Launch of SEAP national Master Trainer workshop in Good practices in Refrigeration and Air-conditioning Servicing Sector



Clearinghouse function

CAP seeks to raise awareness and promote evidence-based policymaking through a number of information products. The videos and publications on HCFC represent major efforts and successful mobilisation of international, regional and national cooperation with the Refrigeration and Air-Conditioning (RAC) sector stakeholders, including technicians.

Last year was a productive period in terms of the clearinghouse function:

- Evaluated and revised the clearinghouse function and strategy.
- Re-enforced cross networking activities between the 10 sub-regional networks for exchange of technical information, global publications and capacity-building tools addressing needs and common challenges for all Article 5 countries.
- Translated all executive summaries of publications into all official UN languages.
- Designed a new concept of 'putting a face to the ozone layer', in a bid to raise awareness of the adverse effects of ODS on the environment and health and revive political commitments for the accelerated HCFC phase-out. This included the publications: "Regional Highlights: Putting a Face to Ozone Layer Protection" and a specific example of 'Putting a Face to the Ozone Layer Protection in Africa'

Technical and information materials

During this cycle, UNEP reviewed and produced high quality documents, both technical and information materials specifically targeting National Ozone Officers and RAC technicians. Notable information materials included:

- Phasing-out Methyl Bromide in Developing Countries: A Success Story

and Its Challenges

- OzonAction Special Issue 2013 - A Healthy Atmosphere: the Future We Want
- OzonAction Special Issue 2014 – New Responsibilities under the HCFC Phase-out
- OzonAction Publications Catalogue 2014
- Cooling without warming our planet (video available in English, Spanish and Portuguese).
- The Arctic and the Ozone Layer: Stabilising Our Environment and Climate (video)

UNEP also launched new publications with Environment Ministers at the Meeting of the Parties:

- "Achievements and Highlights: 10th Anniversary of the Regional Ozone Network for Europe and Central Asia"
- "National Ozone Officers Guide"
- "Putting a Face to Ozone Layer Protection in Africa"
- "Good Practices in the air-conditioning sector"
- "Financing the Climate Co-benefits of the HCFC Phase-out"

CAP reinforced the role for capacity building in light of new responsibilities under HCFC phase-out and mandate on compliance assistance, and produced a record number of capacity-building tools for compliance, either alone or in cooperation with partners or industry:

- "Ozone Depleting Substances Smuggling and Concealment Case Study Handbook (with Interpol)"
- "Illegal trade in ODS" (video) (with Environmental Investigation Agency)
- "Enforcement Strategies for Combating



the Illegal Trade in HCFCs and Methyl Bromide” (with IGSD)

- “Training Manual for Customs Officers: Saving the Ozone Layer - Phasing out Ozone Depleting Substances in Developing Countries - Third Edition”
- “Informal Prior-Informed Consent (iPIC): Supporting Compliance through prevention of illegal and unwanted trade in ozone depleting substances”
- “Low-GWP Alternatives in Commercial Refrigeration: Propane, CO₂ and HFO Case Studies” (for Climate and Clean Air Coalition - CCAC)
- “UNEP Guide for National Ozone Officers”
- Update of “E-Learning Module for Customs Officers”
- “International Standards in Refrigeration and Air-conditioning: An introduction to their role in the context of the HCFC phase-out in developing countries”

Side-events at OEWG and MOP organised:

- “The sustainability of methyl bromide phase-out” in cooperation with UNDP, UNIDO and World Bank

- “HCFC phase-out in the refrigeration and air-conditioning servicing sectors”
- Scientific side-event on Arctic ozone depletion (with representatives of Scientific Assessment Panel (SAP), World Meteorological Organization (WMO), governments of Norway and Czech Republic and launched a documentary in the Arctic scientific side event in cooperation with Norway “The Arctic and the Ozone Layer: Stabilizing Our Environment and Climate” with UNEP Ozone Secretariat and World Meteorological Organisation (WMO)
- “Methyl bromide phase-out: the final countdown (pending issues, valuable experiences and a way forward)”
- “International standards in refrigeration and air-conditioning: their importance in the HPMP process”
- “Challenges, Successes of HCFC Demonstration Projects under the Multilateral Fund”
- “How Montreal Protocol Protects Health”

Caribbean launch standards initiative in refrigeration servicing sector

Cross-fertilisation between networks and the regions:

Cross-fertilisation between networks and the regions marked programme delivery in 2014:

- The instability in North Africa resulted in a multitude of challenges for the CAP ROA to implement HCFC and methyl bromide phase-out projects in the region. UNEP established the first 'twinning' partnership between North African countries (Tunisia, Egypt, Libya, Algeria and Morocco) and the West Asia team in Bahrain. The first joint meeting between Ozone Officers from the West Asia Network and certain North African countries addressed key challenges (e.g. access to technology, training in handling natural refrigerants and partnerships in the HCFC phase-out). The resulting partnerships will expedite the process of the HCFC phase-out in North Africa.
- Cooperation was established between countries in West Asia, English-speaking Africa, South-East Asia and Eastern and Central European countries on approaches and challenges faced towards reaching a successful phase-out of methyl bromide. The First Global Policy and Technical workshop on methyl bromide brought together National Ozone Officers and experts to address the remaining challenges in pre-harvest (soil), post-harvest and QPS sectors and exchanged international and regional experiences on policies, tools and technical options.
- South-East Asia and West Asia countries cooperated on establishing certification schemes for refrigeration and air-conditioning (RAC) technicians: Cambodia, Oman, Philippines and Saudi Arabia agreed to further explore innovative means of cooperation between countries and regions for the certification of RAC technicians. This South-South cooperation aims to encourage peers to exchange experiences/ideas on setting-up and operating certification systems for servicing technicians to reduce the consumption of HCFCs during equipment servicing.
- The South-South cooperation among the South-East Asia countries is exemplary: the capacity of new Ozone Officers of Brunei was built through having been trained via a cooperation framework with Malaysia; Indonesia supported Timor Leste for the delivery of customs training and a good practices training workshops; Cambodia assisted Myanmar on HPMP implementation; Singapore provided support to the Philippines on capacity building of methyl bromide officers; Timor Leste is facing similar challenges as those faced by the PICs in HPMP management, hence, the Timor Leste NOO is providing specific assistance to PICs in this regard through participation in the PICs thematic workshops.
- South-South cooperation has also taken off among the French-speaking countries in West Africa: NOOs and refrigeration experts from Gabon provided special technical assistance to their counterparts in Equatorial Guinea; likewise, Senegal provided technical assistance to Cape Verde.

Fishing sector-crucial to ODS phase-out

Assessing ODS in land based fish processing facilities dependant on R-22 refrigerated systems and viable options for replacement to longer term alternatives - CAP Pacific Island Fisheries Agency partnership

Enforcement and iPIC

- Informal Prior-Informed Consent (iPIC) has helped to clarify the status of hundreds of intended shipments of ODS since its inception and has been responsible for preventing numerous illegal or unauthorised shipments.
- Currently there are 106 members of iPIC, including major producing/ exporting countries such as China, Singapore and those in the European Union. This informal system has proven to be valuable in facilitating and expediting information exchange and can assist in forging links between responsible staff in importing and exporting countries.
- In 2013, of the reported 111 iPIC consultations, over 53% resulted in rejections or cancellations of the licence request and this prevented unwanted trade in more than 273 metric tonnes of ODS including HCFCs, halons, and HBFCs (hydrobromofluorocarbons).
- The first workshop in cooperation with the Economic Community of West African States (ECOWAS) Commission, was held with the participation of regional technical experts including National Ozone Officers and customs officers on administrative and legal aspects and finalisation of the ODS regulations for the sub-region.
- Illegal trade in ODS continues to be a challenge for the Caribbean countries. Their uniqueness as Small Island Developing States (SIDS) with numerous beaches, coves and bays pose a particular challenge. The first regional training workshop for custom officers and brokers on protecting Caribbean borders from illegal trade in ODS, was held in 2013 in Grenada. This workshop built the capacity of customs officers and provided information on classification of substances to comply with current legislation at the national level, it also provided training in risk management as a tool, that can be implemented through the Automated System for Customs Data (ASYCUDA) to guard against illegal trade in ODS and ODS-based products.
- In collaboration with UNEP Division for Environmental Law and Conventions (DELIC), CAP SEAP organised a joint meeting of Ozone Officers and Customs in Laos to assist SEAP countries in their efforts to ensure compliance with the Montreal Protocol and to combat illegal trade in ODS. DELIC provided financial support to the workshop and managed a parallel session on illegal trade in chemicals and waste.

- UNEP OzonAction CAP in collaboration with the UNEP DELC and the Secretariat of the Basel, Rotterdam and Stockholm Conventions (BRS Secretariat) co-organised a joint meeting for National Ozone Officers and Customs Officers for the Pacific Islands. DELC provided financial support. The meeting was very useful for facilitating mutual understanding and strengthening cooperation between NOUs and Customs officers in the PICs. Data sharing and management, e.g. license/permit, import/export data between NOO and Customs enable the two authorities to better control and monitor imports and any illegal trade in ODS by reconciling the data at national and regional level.

- UNEP ROA in collaboration with INTERPOL and the UNEP DELC organised a side-event at the internal conference on Illegal Trade, showcasing the successful cooperation under the Montreal Protocol, between Custom officers and National Ozone Officers in certain African countries.

- The ECA regional customs cooperation meeting enhanced cooperation between

Customs, Enforcement, and Ozone Officers from the ECA network countries and major trade partners including China, India, and the European Union. The meeting shared cases of illegal trade, seizures, and subsequent prosecution and court decisions as disincentives to potential smugglers. The highlight of this meeting was the ECA ozone protection award 2014 for Customs and enforcement officers. During the period of September 2012 and April 2014, the award winners reported 134 successful seizures of 7,370 items of equipment (appliances and compressors) and 9,523 refrigerant cylinders/containers containing more than 467 metric tonnes of ODS and mixtures. Informal Prior Informed Consent (iPIC) consultations prior to the issuance of trade licenses avoided 67 unwanted/illegal shipments of more than 846 metric tonnes of ODS and mixtures

Mainstreaming the HCFC phase-out into the national policy - Bhutan success

First country to integrate ozone issues into the One UN country programme (UNDAF)

Industries and partners

UNEP reinforced partnerships with industries such as through *Refrigerants, Naturally!*, the Association of Refrigeration European Associations (AREA), the International Institute of Refrigeration (IIR) and Centro Studi Galileo, specifically on training and certification needs in alternative refrigerants, and developing e-learning modules for technicians.

Representatives from AREA and IIR participated in network meetings delivering up-to-date technology and innovation in the refrigeration servicing sectors.

One of the achievements for 2014 was the successful thematic workshop on establishment and operation of Certification Schemes for Technicians, and strengthening of National/Regional RAC Associations for English-speaking African countries. Organised in collaboration with the Association of Refrigeration European Associations (AREA) and Centro Studi Galileo, successful technicians that passed the examinations with over 60% score

were certified according to the European Certification Schemes. The workshop presented a great opportunity for English-speaking African refrigeration technicians to learn the techniques on how to install, maintain and repair refrigeration and air-conditioning/heat pump (RAC/HP) systems containing alternative refrigerants/natural refrigerants, considering both technical and safety issues. It also provided the participants with knowledge on establishment of certification schemes.

In addition, the successful approach of the West Asia High Ambient Temperature project to create the first ever industry unified move to assess low-GWP alternatives for A/C industry, triggered interest among local manufacturers in Egypt to follow a similar approach but at the national level under the HPMP of Egypt. Under the West Asia and national high ambient project, 90% of the A/C industry in the region will be jointly assessed for long-term options.

Addressing high ambient temperature in West Asia

First regional symposium on district cooling, saving environment and energy on technology choices; special attention to considering district cooling as a means to energy conservation, and leapfrog high-GWP refrigerants in different applications like cities, educational campuses, major medical facilities and other large building complexes.

Cooperation with other Implementing Agencies

UNEP CAP has also drawn closer to its United Nations partners and other implementing agencies, with which it has established programmes of co-operation which go beyond mere co-ordination and are aimed at developing truly joint actions at national level. This will be further pursued in the coming years as the HCFC phase-out deadlines approach.

All implementing agencies have participated in CAP network meetings in a collaborative spirit and contributed through specific technical presentations, lessons learnt and updates on the HCFC phase-out.

- First inter-agency cooperation with UNIDO as a partner in 54 African countries: Currently UNEP jointly implements projects with UNIDO in 32 African countries. UNEP and UNIDO co-organised the first joint meeting for National Ozone Officers in Vienna, to address future joint projects in the HCFC phase-out and strengthen partnership and collaboration.
- UNEP and the World Health Organization (WHO) re-launched its collaboration on the publication of the health effects of UV radiation.
- UNEP and UNIDO undertook two joint

missions to DPRK in a bid to address potential non-compliance issues in the HCFC phase-out.

- Despite the early phase-out of methyl bromide in the melon sector in Honduras, the country indicated a potential compliance risk in 2015. CAP stepped up to support the country in cooperation with UNIDO. As a result, the importation of methyl bromide was brought to a halt and the potential non-compliance situation was avoided.
- After three years without a national coordinator, the National Ozone Unit of Algeria re-started activities in November 2013 with brilliant results in terms of licensing and quota system as well as awareness activities. Future cooperation will be pursued with UNIDO.
- Delays in the HPMP and IS project implementation, HCFC quota systems not operating in a timely manner and changes in government officials resulted in Guatemala exceeding their 2013 HCFC baseline consumption. Continuous feedback, missions and support from CAP resulted in a national action plan to resume Montreal Protocol Implementation; and a ministerial resolution is underway to limit 2014 HCFC consumption according to country baseline.



REGIONAL NETWORK UPDATES

The Regional CAP staff provides direct assistance to National Ozone Officers and other priority stakeholders in response to specific needs identified by Article-5 countries. UNEP CAP's primary role is to assist Article-5 countries under the Montreal Protocol.

English-speaking Africa Network: HCFC Phase-out and Compliance with Methyl Bromide Deadline

The 17th Joint Meeting of the Ozone Officers' Network for Africa was organised back-to-back with the English- and French-speaking Africa Networks Meetings at the United Nations Economic Commission for Africa (UNECA) headquarters in Addis Ababa, Ethiopia, from 24-28 March 2014. The meeting addressed, *inter alia*, safe, climate-friendly, and energy-efficient alternatives to HCFCs; resource mobilisation to address climate co-benefits for HCFC phase-out; the European experience in certification of competence in ODS substitutes; and remaining challenges in methyl bromide phase-out.

In addition to plenary sessions, the meeting also held separate parallel sessions for the English-speaking and French-speaking Africa networks to discuss their respective activities. The five-day meeting was attended by 47 representatives of the joint network countries, representatives of the Multilateral Fund Secretariat, the Ozone Secretariat, UNIDO, UNDP, UNEP, GIZ Proklima, USA, EU, Poland, France, refrigeration industries, international experts, and academics.

One outcome of the workshop was a special request by network countries for CAP to urgently organise a thematic

workshop to discuss the procedures for the establishment and operation of RAC certification schemes and RAC associations. As a follow up, ROA CAP organised the *Workshop on the Establishment and Operation of Certification Schemes and National/Regional RAC Associations* from 11 to 13 June 2014 in Kigali, Rwanda. The meeting demonstrated and promoted safe refrigeration and air-conditioning practices for increased co-benefits for ozone and climate protection in Africa. The meeting was attended by 24 representatives from the English-speaking Africa Network, representatives of UNIDO, UNEP, the Air-Conditioning and Refrigeration European Association (AREA), refrigeration experts, industry, and academics.

The meeting held separate sessions where the refrigeration technicians took theoretical and practical examinations at the Refrigeration and air-conditioning unit of the Integrated Polytechnic Institute in Kigali. The technicians that passed the examinations with a score of over 60% were certified according to the European Certification Schemes.

To mark the 2014 International Day for the Preservation of the Ozone Layer, the Ministry of Environment and Sustainable

Development and the Revenue Authority of Mauritius, in collaboration with UNEP CAP, organised a three-day regional train-the-trainer workshop on 'Capacity-Building for Customs Officers of the Small Island Developing States (SIDS) and Island States of the Indian Ocean' from 16 to 18 September 2014. The workshop sought to empower Customs officers of the region to combat illegal trade on substances controlled under the Montreal Protocol. The workshop also enhanced cooperation among countries of the region through the sharing of experiences with regard to best practices and challenges encountered in implementing the Montreal Protocol. A total of 13 participants from Madagascar, Seychelles, Rodrigues, Reunion Island, Comoros, Maldives and Mauritius were trained.

The English-speaking Africa Network promotes cooperation and inter-regional sharing of experiences with other Regional Networks. A global policy and technical workshop on Methyl Bromide with the theme "*Towards a successful*

total phase out of methyl bromide before January 1, 2015: Approaches and Challenges" was held from 23 to 25 February 2014 in Sharm El-Sheikh, Egypt, in collaboration with West Asia Network. The workshop addressed the remaining challenges to achieving complete and sustainable phase-out of methyl bromide in developing countries. The meeting was attended by 22 representatives of Article 5 parties, representatives of regional organisations, UNIDO, UNEP, Methyl Bromide Technical Options Committee, and international experts.

The Network has supported most of the countries in HPMP activities including conducting national training workshops for Customs officers and RAC experts. Several missions were conducted by CAP to assist countries requiring specific support to enable them to achieve compliance with the Montreal Protocol.

The Ozone Officers Network for English-speaking Africa comprises of 28 countries: Angola, Botswana, Egypt, Eritrea, Ethiopia, The Gambia, Ghana, Kenya, Lesotho, Liberia, Libya, Malawi, Mauritius, Mozambique, Namibia, Nigeria, Republic of South Sudan, Rwanda, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Uganda, United Republic of Tanzania, Zambia, and Zimbabwe. Special assistance is provided to two Portuguese-speaking countries in the Network (Angola and Mozambique) mainly through special sessions or meetings or group discussions during network meetings.

French-speaking Africa Network: Certification and Refrigerant choices

The Ozone Officers Network for French-speaking Africa comprises 26 Francophone countries: Algeria, Benin, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo Brazzaville, Cote d'Ivoire, Democratic Republic of Congo, Djibouti, Equatorial Guinea, Gabon, Guinea, Guinea Bissau, Madagascar, Mali, Mauritania, Morocco, Niger, Sao Tome e Principe, Senegal, Togo and Tunisia. Among these 26 countries, three are Portuguese speaking (Cabo Verde, Guinea Bissau and Sao Tome e Principe); and one Spanish speaking country (Equatorial Guinea).

The 17th Joint Meeting of the Ozone Officers' Network for Africa - was held back to back with English- and French-speaking Africa Network Meetings at the United Nations Economic Commission for Africa (UNECA) headquarters in Addis Ababa, Ethiopia, (see p.18-19).

As part of the agreed regional needs identified during the above meeting, the Government of the Republic of Benin and UNEP ROA CAP organised a workshop on Refrigeration Certification and Associations in Cotonou, Benin, from 14 to 16 October 2014. The workshop brought together Ozone Officers from 26 African French Speaking countries, regional refrigeration experts, European Refrigeration Associations, and other technical resource persons and private sector representatives.

The meeting was organised to maximise the use of global/ regional resource persons and institutions with a focus on the challenges and needs of participating countries as identified during the Addis Ababa Network meeting. The topics covered during the meeting included refrigerants and the environment, the current HCFC alternatives in the region, certification of RAC technicians in the servicing sector, technology and knowledge training assessment, and AREA's position on training and certification of low-GWP refrigerants.

Europe and Central Asia Network (ECA network): Enforcement and Combating Illegal Trade

The ECA network spreads from Central Asia, Caucasus to the Balkans and involves the countries with economies in transition (CEITs) in its meetings. The candidate countries Macedonia FYR, Montenegro, Serbia and Turkey are preparing the accession to the European Union. Armenia, Kyrgyzstan and Tajikistan intend to join the Customs Union between Belarus, Kazakhstan and Russia.

Facts and figures for the ECA network as of September 2014:

- 10 of 11 countries are in compliance with the Montreal Protocol phase-out schedules
- All countries have reported ODS import/export licensing and HCFC import quota systems in place
- All countries have ratified all Montreal Protocol amendments (since 2011)
- All countries have reported Article 7 data for 2012 (and 7 already for 2013)
- All countries have reported Country Programme implementation data for 2013
- All countries have reported zero methyl bromide consumption (since 2011)
- 10 of 11 countries have designated Montreal Protocol Customs focal points
- 8 of 11 countries have updated their informal Prior Informed Consent data in 2013 or 2014
- 8 of 11 countries have national RAC associations in place

Selected highlights of the ECA network in 2014 include the following:

Joint UNDP/UNIDO/UNEP meeting on the implications of joining the Customs Union between Belarus, Kazakhstan and Russia, held in Minsk, March 2014. Delegations of the current members of the Customs Union and those from the prospective future members Armenia, Kyrgyzstan and Tajikistan discussed a set of action points on how to enforce the Montreal Protocol provisions in terms of mandatory reporting of imports, exports, production and destruction of ODS, mandatory national import/export licensing systems and trade restrictions with non-Parties. The delegates of the Eurasian Economic Commission explained the Customs Union legislation relevant for the Montreal Protocol implementation.

Ceremony of the ECA Ozone Protection Award (3rd edition) held in Sarajevo, May 2014. The award was presented to customs and law enforcement officers/organisations from Albania, Belarus, Bosnia and Herzegovina, China, Cyprus, European Union, Georgia, Germany, India, Israel, Kyrgyzstan, Montenegro, Russia, Serbia, Spain, Tajikistan, Turkey, Ukraine and Uzbekistan in May 2014.

From September 2012 to April 2014, the countries reported 133 seizures of 7,370 items of equipment and 9,513 refrigerant cylinders/tanks containing more than 467 tonnes of ODS or mixtures. Informal Prior-Informed Consent (iPIC) consultations prior to the issuance of trade licenses helped avoid 67 unwanted/illegal shipments of more than 846 tonnes of ODS or mixtures. In addition, more than 175 tonnes of illegal trade in ODS was detected, which had taken place in the past. The 4th edition of the award was launched during the RILO ECE meeting in Budapest in May 2014 and the award ceremony is scheduled for May 2016 in Ashgabat, Turkmenistan.

Implementation of a regional strategy for ODS waste management and disposal in the ECA region. The UNIDO/UNEP pilot project is funded by Multilateral Fund and aims at disposing waste containing ozone depleting substances (ODS) collected in Bosnia and Herzegovina, Croatia and Montenegro. So far, 25 tonnes of waste has been collected and is awaiting disposal. The capacity-building efforts under the project are expected to improve the waste collection and disposal systems and also ensure their sustainable operation.



Caribbean Network: Setting Standards

The Caribbean Network of Ozone Officers (NOOs) comprises 14 countries: Antigua and Barbuda, the Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago. All of them are operating under Article 5 of the Montreal Protocol. Except for Jamaica and Trinidad and Tobago, the rest are low volume consuming (LVC) countries.

The Caribbean Network Meeting took place in Paramaribo, Suriname, from 7 – 10 April 2014. It focused on building the capacities of NOOs and promoting the exchange of experiences and lessons learnt during the implementation of HCFC phase-out strategies. Countries also discussed topics related to national implications of the recent decisions of the Meeting of the Parties (MOP) to the Montreal Protocol and the Executive Committee of the Multilateral Fund; progress and challenges on the implementation of HCFC phase-out management plans (HPMPs); legislative and enforcement approaches to meet the Montreal Protocol compliance requirements; and trends in market availability and industry demands for energy-efficient, ozone- and climate-friendly refrigeration and air-conditioning alternatives for the Caribbean region.

The meeting also discussed the issue of standards and decided it was a priority to promote the development of standards at the national level. UNEP undertook a technical support activity in St. Kitts related to standards and in the form of field evaluation visits and expert advice

on standards development. This led to the regional thematic workshop held in Panama on 14-16 October 2014 with the participation of refrigeration experts, NOUs and the support of standards experts as resource persons. It sought to define, initiate, and adopt standards in the refrigeration sector that assist in the HCFC phase-out and the introduction of alternatives.

At the national level, countries expressed concern about the non-availability of suitable energy-efficient and climate-friendly alternatives for some RAC applications in the region. In order to start addressing some barriers, National Ozone Officers were asked to examine the Eastern Caribbean Energy Labelling Project, or similar projects, to identify synergies and gaps in the creation of standards in the RAC sector. Network members were also advised to promote sustainability of RAC Associations through training, diversification of membership, hosting of conferences, certification, as well as to continue innovative resource mobilisation strategies.

During the year, training programmes for technicians have also been conducted, and trainees have been provided with tools and equipment for safe handling of ODS.

As 2014 is the international year of Small Island Developing States (SIDS), Network members were encouraged to raise awareness among the high-level authorities attending the Third International Small Island Developing

States Conference in September 2014, on the challenges and successes of the Montreal Protocol.



Central and Latin America Network: Building Capacity for Global Cooperation

Latin America region comprises 19 countries: Argentina, Bolivia (Plurinational State of), Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Rep., Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela (Bolivarian Rep.).

In this sub-region, the range of ODS consumption varies from low to high levels depending on the size of the country and its industrial base, which includes some ODS production facilities in Argentina, Mexico and Venezuela.

During the last years Latin America has been characterised as a dynamic region with sustained growth levels and expanding economies, which in turn led to increased levels of consumption of ODS and related technologies.

Irrespective of ODS consumption levels of countries, the region has focused on enhancing capacities of Customs Officers and other law enforcement officials. The robust institutional framework of countries of Latin America, as well as the experience gained at national level with the ODS import/export control system, has enabled governments to go beyond national commitments under the Montreal Protocol.

Countries are achieving their ODS phase-out goals ahead of schedule. In addition, National Ozone Officers are also engaged

in the prevention of illegal trade in ODS, which is an important contribution to ozone layer protection. This has been possible through NOOs' involvement in the risk analysis implemented by Customs Offices, as well as providing support to oversee papers of imports/exports and attending inspections of ODS shipments.

Gradually more countries are becoming active players in the iPIC mechanism (informal Prior-Informed Consent on Trade of Ozone Depleting Substances), developed by UNEP.

Recently, through consultations between trading partners prior to issuing import and export licenses effectively, fraudulent exports coming from Asia to this region have been prevented. With the help of China's National Management Office of ODS Import and through links facilitated by UNEP, almost 150 tonnes of HCFC exports to two countries were stopped during 2014.

Third SIDS Conference: Implications for the Montreal Protocol

All Small Island Developing States (SIDS) are Parties to the Montreal Protocol. Their compliance obligations to this multilateral environmental agreement are closely related to sustainable developmental priorities of member states. In this regard, natural linkages can be found in the outcomes of the Third International Conference on SIDS held in Apia, Samoa, in September 2014 (<http://www.sids2014.org>). The conference's outcome is captured in the *SIDS ACCELERATED MODALITIES OF ACTION (S.A.M.O.A)* Pathway document. One such link is with decision XIX/6 of the Montreal Protocol. Under similar interpretation, the S.A.M.O.A pathway document details the need to address adaptation to longer term energy-efficient, climate- and ozone-friendly technological alternatives.

These linkages can be drawn from, for example, under article 47 of the S.A.M.O.A document as "We recognize that the phasing-out of ozone-depleting substances is resulting in a rapid increase in the use and the release into the environment of hydrofluorocarbons with a high potential for global warming. We support the gradual phasing down of the consumption and production of hydrofluorocarbons."

A brief study of the S.A.M.O.A. pathway document exploring linkages with the Montreal Protocol responsibilities and implications are summarised in this table:



S.A.M.O.A pathway document (selected items)	Montreal Protocol implications towards adaptation to longer term non-ODS alternatives
Sustainable tourism, food security and nutrition; health and non-communicable diseases	Methyl bromide applications in Plant Quarantine and Pre-shipment (QPS). Refrigeration and air-conditioning (RAC) technological transitions and impacts to food and medicine storage and supply chains
Sustainable energy, climate change sustainable consumption and production, education, capacity building and technology transfers	Required RAC knowledge, skills and capacities in the investment planning, design, selection and servicing stages of technology adaptation
Oceans, seas and biodiversity	Protection of the ozone layer is necessary for a healthy, productive and resilient eco-system
Management of chemicals and waste, including hazardous waste	Management of use, emissions and safe disposal of ODS.
Financing	The Montreal Protocol, Multilateral Fund (MLF) is financially supporting the phase-out of ODS in all SIDS
Trade	HCFC phase-out addressed through supporting the adaptation of best longer-term technological alternatives
Data and statistics	Annual data reporting obligation of each SIDS.
Institutional support for SIDS	MLF is supporting national Institutional Strengthening in SIDS.



South Asia Network: A Mosaic of Achievements

The South Asia Regional Network of Ozone Officers is highly diverse, comprising the giant economies of China and India, newly industrialised Republic of Korea, middle volume consuming countries of Bangladesh, Iran, DPR Korea, Pakistan and Sri Lanka, and low volume consuming countries of Afghanistan, Bhutan, Mongolia, the Maldives and Nepal.

South Asia has some of the world's most dynamic economies. The combined HCFCs in China and India make up more than 80% of global baseline production and almost 60% of the global baseline consumption in Article 5 Parties. Happily, all but one South Asian country are on target in curbing the production and use of HCFCs as per the first control measure of 1 January 2013. And this has resulted in a mosaic of achievements and best practices.

Some highlights:

- The Queen of Bhutan, Her Majesty The Druk Gyaltsuen Jetsun Pema Wangchuck, launched the first formal national curriculum for refrigeration and air-conditioning servicing in June 2014.
- China, as the largest HCFC producer and consumer among Article 5 countries, faces an extremely difficult task of reducing HCFC production and consumption by 10% from its baselines prior to 1 January 2015. However, rising to the challenge, by the end of 2013, China successfully reduced their HCFC consumption by 9% against the baseline of 2009/2010 average through robust action plans. The Foreign Economic Cooperation Office (FECO) of the Ministry of Environmental Protection (MEP) of China is coordinating the national efforts, working with over 100 enterprises and numerous other stakeholders in the central and the local governments, the academic sector and non-governmental organisations. During the Ozone Day celebration meeting, FECO announced the bidding results for the closure of five HCFC production lines for the 2015 deadline for the 10% reduction of HCFCs. The refrigeration industry's operation training has just kicked off in all six training centres in accordance with the requirements of the environmental protection department. The programme will target more than 1,500 technicians (including the trainers) per year from 2014-2015.
- With technical assistance from GIZ, India has shown the world their innovative leap-frogging in the room air-conditioning sector by starting commercial production of R290-based room air-conditioners.
- Iran is facilitating the Teheran Dialogue with Pakistan and Afghanistan on trans-boundary movement of HCFCs and HCFC-based equipment.
- The Maldives, a member of the Climate and Clean Air Coalition (CCAC), aims to advance its HCFC phase-out by 10 years

ahead of schedule as part of attaining carbon neutrality, and wants to find alternatives to HCFCs that have low-GWP.

- The government is the largest public procurer of goods and services in Mongolia. In June 2014, the government took steps to address MOP Decision XIX/6 on climate and energy benefits from HCFC phase-out by setting up the Green Procurement/Green Buildings initiative which seeks zero-ODP and low-GWP alternatives in public procurement.

- In 2013, the first pilot project on ODS disposal in Nepal was completed. The project demonstrates how unwanted ODS can be disposed of safely and cost-effectively in collaboration with the private sector, leveraging state-of-the-

art technologies, operational systems, and when the credits are ultimately sold, carbon finance.

- Sri Lanka has completely phased out using methyl bromide in all tea plantations. Its US\$ 1.5 billion tea industry now uses ozone-friendly substitutes, and proudly serves the world's first ozone-friendly tea. The government launched its "Ozone Friendly Pure Ceylon Tea" logo with which the Ceylon tea industry aims to market the tea as a premium product.

Southeast Asia and the Pacific Network: Pro-active Exemplary South-South Cooperation

Southeast Asia and the Pacific (SEAP) Network of Ozone Officers comprises all 10 members of ASEAN (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam), together with Timor Leste, one rotating Pacific Island country, and two industrialized country partners, Australia and Sweden.

Material preparation

For the first time, the South East Asia and the Pacific (SEAP) Network, in cooperation with the Association of Southeast Asian Nations (ASEAN) Secretariat, developed regional awareness raising materials for celebrating the 2014 International Ozone Day. The materials consist of 3,000 posters and 5,000 notebooks. The

poster depicts the cooperative efforts of ASEAN countries in protecting the ozone layer. Translations of the year's theme (Protection of the Ozone Layer: the Mission Goes On) are shown in the languages of ASEAN countries and that of Timor Leste.

The Philippines' NOU coordinated the designing, printing and delivery of

these materials, which were distributed to schools, provinces and districts for the celebration of the Ozone Day in all SEAP countries. The ASEAN Secretariat is considering the material to be incorporated in the ASEAN Environmental Education Action Plan 2014-2018.

South-South cooperation

Following the joint network meeting in September 2013, CAP/ROAP facilitated several South-South activities.

Highlights:

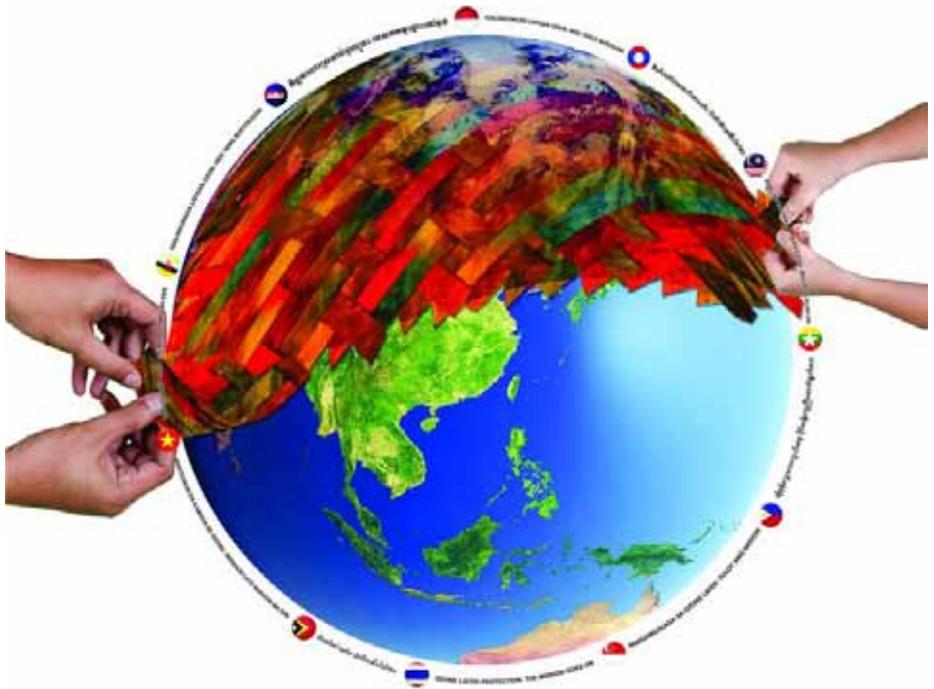
Malaysia-Brunei: From 10 to 14 February 2014, three staff members of Brunei NOU received specific training organised by the NOU of Malaysia. It included an introduction to Malaysia's HCFC phase-out management plan (HPMP), the import and export control system, the E-permit system, the licensing and quota system, a demonstration on the Refrigerant Identifier (RI) and its application on Mobile Air-Conditioning Systems. They also attended an NOU dialogue with the Malaysian Air-Conditioning and Refrigeration Association (MACRA).

Indonesia-Timor Leste: In January 2014, the Indonesian NOU visited Dili, Timor Leste, and assisted in the preparation and delivery of the Customs Training Workshop. The NOU also advised the Timor Leste NOU on various other technical matters. In June 2014, an Indonesian trainer conducted a workshop on good practices in the RAC servicing sector for technicians. In September 2014, the Indonesia NOU built the capacity of the Timor Leste NOU in HCFC import data collection and analysis, and in finalising the 2013 Article-7 data report.

Philippines-Cambodia-Oman-Saudi Arabia: This inter-regional cooperation was held to share experience on the technicians' certificate system. NOUs visited Manila, Philippines, from 17 to 19 March 2014 to review the system of Certification of Refrigeration and Air-conditioning (RAC) technicians of the Philippines. Along with the NOUs, Technical Education and Skills Development Authority (TESDA), the accreditation system, and the Department of Trade and Industry (DTI), visited a certified servicing workshop.

Cambodia-Myanmar: The Cambodian NOU visited Myanmar from 17 to 19 September 2014 to share HPMP implementation experience. The NOU also joined a national stakeholders' consultation workshop, and assisted Myanmar in drafting the HPMP implementation plan.

SEAP has also strengthened its collaboration with the PIC (Pacific) network, thus implementing ExCom decision 56/33 of rotating participation of a PIC country in the SEAP network. At the April meeting, Papua New Guinea participated, and in the October meeting, Palau joined. Also, PIC invited two SEAP countries (Cambodia and Timor Leste) to join its regional HPMP thematic meeting held in August 2014, in Nadi, Fiji.



OZONE LAYER PROTECTION: THE MISSION GOES ON



West Asia Network: ozone and climate in high-ambient temperature countries

CAP at the UNEP Regional Office for West Asia (ROWA) implements either alone or in cooperation with sister IAs three types of MLF-funded projects in West Asian countries (Bahrain, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, Syria and Yemen):

- Institutional Strengthening Projects (ISPs)
- National/Terminal Phase-out Management Plans (NPPs/TPMPs)
- HCFC Phase-out Management Plans (HPMPs)

CAP also initiates and maintains close coordination and cooperation at the national level, as well as with regional and sub-regional organisations and secretariats of the Gulf Cooperation Council (GCC) and the League of Arab States, maintaining the region's compliance with the Montreal Protocol provisions. UNEP/ROWA's focus is to ensure sustained compliance under the Montreal Protocol and address the following regional priorities:

Key Regional Events:

An important milestone of total phase-out of methyl bromide is to be reached in January 2015. UNEP/ROWA, in partnership with the Egyptian Ministry of Environment, organised a Global Workshop on the remaining policy and technical challenges associated with the methyl bromide phase-out by developing countries. Outputs of this workshop were well received by stakeholders.

In cooperation with the American Society of Heating, Refrigerating & Air-Conditioning Engineers (ASHRAE), UNEP/ROWA organised three symposiums

on long-term alternative refrigerants suitable for high-ambient temperature countries. Their aim was to facilitate a regional forum of concerned industries and authorities for setting-up roadmaps and strategies to address technological challenges in the region for adopting suitable long-term alternatives. The fourth symposium on Alternative Refrigerants for High-Ambient Countries was organised in cooperation with the Emirates Authority for Standardization and Metrology (ESMA), on 28 - 29 October 2014 in Dubai.

In September 2014, in cooperation with the Ministry of Environment and Climate Affairs in Oman, UNEP/ROWA organised in Muscat the first Thematic Workshop on the Development of Appropriate National Regulatory and Institutional Frameworks in West Asia Countries of Certification Scheme for RAC Technicians. This was accompanied by two National Training Workshops for Trainers of Refrigeration and Air-conditioning on the Good Practices and on Assessment under Certification Schemes.

PROTECTING OZONE
PROTECTING YOU!



THE MISSION GOES ON

16 September 2014

International Day for the Preservation
of the Ozone Layer



LESSONS LEARNT AND CHALLENGES FACED

- A major challenge for CAP is to turn the momentum created by Ozone Officers through their networks into specific actions under the HCFC phase-out, and sustaining these during the period running up to 2030.
- CAP has the capacity and flexibility to respond quickly to requests from National Ozone Units to help them avoid potential non-compliance situations.
- By developing operational guidelines and methodological guides, CAP has identified common approaches to capacity development in HCFC phase-out and management. These will be pursued further in 2015.
- A key challenge is how to deal with products - particularly in A/C sector – that use refrigerants that have a high global warming potential (GWP). In some regional markets, low-GWP options are not yet widely available.
- Political instability in the West Asia region – especially in Syria, Iraq, and Yemen – has prevented CAP from providing the on-ground technical services. The political situation has also had some direct or indirect impacts on neighbouring countries.
- As all the Pacific Island Countries (PIC) are also SIDS and four are additionally Least Developed Countries (LDCs), they face their own challenges in implementing the Montreal Protocol. These include: a narrow resource base that does not allow economies of scale; small domestic markets and heavy dependence on a few external and remote markets; high costs for energy, infrastructure, transportation, communication and servicing; long distances from export markets and import resources; low and irregular international traffic volumes; high volatility of economic growth; limited opportunities for the private sector growth; and the economies having a relatively higher reliance on the public sector.
- Because PICs have a Regional HPMP framework that involves 12 small island states, the rate of implementation is often determined by the country with slowest rate of progress. There is also a higher risk of non-compliance: suppliers from exporting countries not willing to sell small volume purchases, risk of illegal trade and/or of low quality refrigerants imports, margin of error of two decimal places (0.00) can contribute to a higher non-compliance risk.
- CAP has promoted policy dialogue in various relevant aspects of HCFC phase-out, on the nexus between energy and climate. Countries were also assisted to turn international legal instruments into national policies and laws.
- The cost effectiveness of the regional network meetings was re-evaluated. The general trend is for one network meeting per year and smaller thematic meetings on specific issues or topics.
- Within CAP, cost-effective measures implemented in 2013-2014 include tighter monitoring of staff travel and consultancies; increased use of information and communication technologies and video conferencing; scheduling of meetings back-to-back with regional initiatives and other meetings; and the closer monitoring of publications such as promoting regional technical materials for global outreach.

Acknowledgements

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