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THE MULTILATERAL FUND FOR THE
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UNEP'S COMPLIANCE ASSISTANCE PROGRAMME BUDGET FOR 2020

Introduction

1. UNEP has submitted the budget for its Compliance Assistance Programme (CAP) for 2020 at a total cost of US \$10,113,000, plus agency support costs of US \$809,040.¹ The submission contains the 2019 progress report² and the 2020 work programme. The submission is attached to the present document.
2. The proposed CAP 2020 work plan is submitted for the last year of the revised three-year 2018-2020³ strategy for the CAP, noted at the 80th meeting during the approval of the 2018 budget to accommodate new priorities related to the Kigali Amendment.

2019 CAP progress report

3. The following activities were implemented:
 - (a) Provided compliance assistance to Article 5 countries where required, including assistance for Article 7 and country programme (CP) data reporting to 62 countries; assistance to 40 countries with new national ozone officers (NOOs); and conducting demonstrations on data reporting in network meetings;
 - (b) Supported 104 countries in implementing, monitoring and reporting of institutional strengthening (IS) projects;
 - (c) Supported 72 countries as lead implementing agency and 31 countries as cooperating

¹ This submission is in line with decision 47/24, which limited the increase of UNEP's CAP budget to 3 per cent per annum.

² Covering the period September 2018 to August 2019.

³ The revised 2018-2020 three-year rolling strategy was based on three overarching objectives: assisting countries to comply with their HCFC phase-out commitments; strengthening the refrigeration servicing sector for ozone- and climate-friendly alternatives; and, building capacity to initiate enabling activities for the HFC phase-down. It was supported by a transversal objective on leveraging the clearinghouse mechanism, and included, inter alia the clearinghouse mechanism, regional networking and capacity building.

implementing agency, in the implementation of the HCFC phase-out management plans (HPMPs);

- (d) Managed the operation of regional networks by organizing 36 network (one inter-regional) and thematic meetings to address issues related to *inter alia* HCFC reporting and phase-out commitments; licensing and quota systems, customs training including ODS trade control, informal prior informed consent (iPIC) mechanism, the refrigeration servicing sector and HFC phase-down; developed and operated a network/thematic meeting portal which has facilitated access of documentation to network meetings;
- (e) Introduced the refrigerants literacy e-learning course and sound management of refrigerants and offered to all stakeholders in Article 5 countries; in cooperation with international partners, developed the Universal Training Kit for technicians and the refrigerant management certification programme, being implemented in six countries; provided technical and policy assistance to NOUs in developing and enforcing national certification schemes; supported countries to develop a competency standard under National Qualification Frameworks (NQF) to include good practices competency; and supported RAC industry associations in seven countries to promote certification system with good practices requirements for servicing workshops;
- (f) Disseminated information on safety standards, factsheets, mobile applications and publications relating to flammable and toxic alternative refrigerants; and assisted 13 countries to develop a national work plan for the cooperation with local standards bodies in updating/enforcing relevant standards;
- (g) Developed new global and regional capacity building and information products and services, including guides and publications, factsheets and policy briefs; developed information tools (e.g., videos on how to use and maintain a refrigerant identifier, guidance on safety and best practice and testing procedures); distributed OzonAction newsletter, translated OzonAction publications; and regularly updated the OzonAction website;
- (h) Provided assistance in the implementation of enabling activities for HFC phase-down in 94 countries; conducted missions to 32 countries to assist them with timely implementation, and facilitating multi-stakeholder consultations on the Kigali Amendment; in cooperation with Ozone Secretariat, provided support as needed to countries in the ratification process and, provided documentation and information to NOUs on implications of Kigali ratification; developed a modelling tool (HFC outlook) to assist in understanding of the impact of Kigali Amendment on technology selection and options in the air-conditioning industry; and
- (i) Continued partnerships with industry associations⁴, *inter alia*, on the development and operation of e-learning modules for technicians and the refrigerant driving license (RDL) global refrigeration qualification programme; and developed a guide for laboratories for testing alternative refrigerants.

⁴ The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), Refrigerants Naturally, International Institute of Refrigeration (IIR), Air conditioning, Heating and Refrigeration Institute (AHRI),

Fund disbursement

4. Of the US \$9,863,000 plus agency support costs of US \$789,040 approved for the CAP budget for 2018, UNEP would return US \$1,972,809, plus agency support costs of US \$157,825 to the 84th meeting, in line with decision 35/36(d). The return is included in the report on balances and availability of resources.⁵

2020 CAP work programme

5. For 2020 UNEP will continue implementing the activities identified as part of the revised 2018-2020 three-year rolling strategy and in line with the strategic programme objectives through those listed below:

- (a) Provide over 400 country-specific compliance services to Article 5 countries targeting those at risk of compliance with their Montreal Protocol targets;
- (b) Continue operation of the 10 regional networks of NOU officers, provide assistance for NOOs in the implementation of licensing and quota systems and the use of the online iPIC system;
- (c) Assist NOUs in reviewing Customs and trade regulations and policies in cooperation with relevant national authorities; demonstrate and promote the UNEP-World Customs Organisation (WCO) Montreal Protocol Training for Customs Officers e-learning course, *WhatGas?* mobile application, and Refrigerant Identifier mobile application to NOUs and national Customs agencies;
- (d) Strengthen the servicing sector by further providing training through the RDL, certification scheme for technicians, global training for service technicians; building capacity of regional and national master trainers, and promote gender mainstreaming of female technicians and experts in the RAC sector encouraging their participation in workshops and training organised by CAP and by Article 5 countries;
- (e) Promote the development and implementation of certification programmes for the refrigeration servicing sector in Article 5 countries as part of HPMPs or through CAP services; encourage and assist NOUs to work with their technical and vocational education and training authorities to integrate good servicing practices and into national qualification frameworks;
- (f) Promote the development and enforcement of standards for safe handling of flammable and toxic refrigerants in cooperation with international/regional partners; development of a model national refrigerant code that can be incorporated as stand-alone or as part of local codes (e.g. RAC applications or buildings); and update and outreach of technical information on good practices;
- (g) Provide assistance to Article 5 countries with high ambient temperature (HAT) through piloting the risk assessment model for the safe handling of flammable refrigerants produced under the PRAHA-II project to explore the technical feasibility of lower-GWP alternatives in the commercial and industrial refrigeration sectors;
- (h) Continue implementation of enabling activities in 94 countries to facilitate and support the ratification of Kigali Amendment and build capacity of NOUs to address the HFC phase-down as soon as possible; encourage and support Article 5 countries to ratify the Kigali Amendment through presentations at regional network meetings and other meetings

⁵ UNEP/OzL.Pro/ExCom/84/4

in cooperation with the Ozone Secretariat, and identifying opportunities for joint implementation between HPMPs and HFC phase-down plans;

- (i) Continue global clearinghouse activities through developing publications; organize thematic meetings at international, regional and national fora; facilitating country-to-country cooperation to address specific needs by NOUs; and assisting in the adoption of capacity building tools (i.e. iPIC and RDL); and
- (j) Continue implementation of HPMPs for 103 and institutional strengthening projects for 104 Article 5 countries.

Changes in the CAP 2020 budget

6. The CAP budget for 2020 of US \$10,113,000, plus agency support costs of US \$809,040 is contained in Annex 1D of the submission. The overall CAP budget represented an increase of 1.39 per cent from the 2019 approved budget (i.e., US \$9,974,000, plus support costs of US \$797,920) with a 2 percent increase on staff costs (US \$139,000) due to increases for existing posts in the system, and adjustments to some posts based on expanded roles and responsibilities.

Changes in CAP staff⁶

7. UNEP indicated that the post that was approved for the 2019 CAP budget as ROWA⁷ Montreal Protocol Coordinator for International Partnerships (BL 1132) located in Bahrain would be reassigned to Paris (BL 1112) with no financial implications.

Changes in the programmatic budget:⁸

8. The following reallocations were proposed:

- (a) Policy and technical assistance (BL 3211) at US \$130,000 (an increase of US \$30,000 compared to 2019) to provide for online/smartphone applications (national quotas and licenses, iPIC), a mobile air-conditioner training survey, and development of a model certification programme and a model refrigerant code;
- (b) Outreach and translation (BL 3213) at US \$110,000 (an increase of US \$10,000 compared to 2019), translation of key documents, development of publications/factsheets, production of the OzonAction Scoop (a newsletter for special topics), and development of a publication on the Montreal Protocol and the UN Sustainable Development Goals;
- (c) Legal framework post-Kigali (BL 3214) at no cost (a decrease of US \$75,000 compared to 2019) since this assistance will be provided through CAP staff and during network meetings;
- (d) RDL (BL 3215) at US \$85,000 (an increase of US \$5,000 compared to 2019) to provide for the evaluation of the outcomes of the pilot stage of RDL for small applications and to complete the documentation for the remaining applications; and

⁶ Decision 82/57(c)(iii): UNEP was requested in future submissions of the CAP budget, to continue reporting on the current post levels of CAP staff and inform the Executive Committee of any changes thereto, particularly with respect to any increased budget allocations.

⁷ Regional Office for West Asia

⁸ Decision 82/57(c)(ii): Extending the prioritization of funding between CAP budget lines so as to accommodate changing priorities and providing details, pursuant to decisions 47/24 and 50/26, on the reallocations made;

- (e) Enforcement (BL 3216) at US \$130,000 (an increase of US \$30,000 compared to 2019) to provide for the development of the Montreal Protocol Enforcement and Guidebook on Setting Penalties, and the updating of the UNEP Customs Training Manual and the UNEP-WCO Montreal Protocol Training for Customs Officers e-learning course.

Comparison of the budget for 2018-2020

9. In line with decision 82/57(c)(iv),⁹ UNEP had provided a comparison of the budget for the last three years as shown in Table 1:

Table 1: CAP budget for 2018-2019

Item	2018		2019			2020	
	Approved	Expenditure	Balance	Approved	Estimated expenditure	Estimated balance	Proposed budget
Staff personnel and consultants	6,928,000	5,364,229	1,563,771	7,069,000	6,214,403	854,597	7,208,000
Travel (staff and consultants)	548,000	526,528	21,472	548,000	511,742	36,258	548,000
Regional activities and meetings*	1,262,000	1,147,232	114,768	1,262,000	1,224,823	37,177	1,262,000
Global services**	505,000	379,476	125,524	505,000	433,913	71,087	505,000
Space and equipment (rent and common costs, computers, supplies)	620,000	472,726	147,274	590,000	498,605	91,395	590,000
Sub-total CAP	9,863,000	7,890,191	1,972,809	9,974,000	8,883,486	1,090,514	10,113,000
Programme support costs	789,040	631,215	157,825	797,920	710,679	87,241	809,040
Grand total	10,652,040	8,521,406	2,130,634	10,771,920	9,594,165	1,177,755	10,922,040

* Includes the expenditures on the advisory and consultative meetings budget line.

**Includes outreach and translation, and advisory group meetings.

10. The balances from the 2018 CAP were returned to the Fund.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

11. The Secretariat reviewed the CAP submission and the changes in the programme and staffing in line with decisions 81/38(b)¹⁰ and 82/57(c)¹¹ taking into account the overall structure of the CAP, its operations and regional structure; and other relevant decisions.

⁹ Decision 82/57(c)(iv): UNEP was requested in future submissions of the CAP budget, to continue providing a budget for the year in question and a report on the costs incurred in the year prior to the last year, noting sub-paragraphs (c)(ii) and (c)(iii).

¹⁰ UNEP was requested, when submitting the CAP budget and work plan for 2019 at the 82nd meeting, to describe, for consideration by the Executive Committee, the operationalization of the proposed changes in the overall CAP structure, in line with relevant previous decisions on the CAP and its funding.

¹¹ Decision 82/57(c)(i): Providing detailed information on the activities for which the global funds would be used; decision 82/57(c)(ii), (iii) and (iv): Ibid.

12. Clarifications were sought on the remaining activities for the global projects (i.e., RDL and NOO training), for which final reports were expected at the 82nd meeting. With regard to the RDL programme, UNEP explained that is now gaining ground with training being completed in six pilot countries and other countries are interested in implementing the RDL. With regard to the NOO training, UNEP noted that such training is not only for new NOOs but also for those who have been with the NOU for some time. UNEP further indicated that the RDL provides a strong support to the servicing sector, and the NOO training is essential to strengthening capacity of the NOU; therefore, the continued implementation of these two activities is important to many Article 5 countries.

13. With regard to the transfer of the post for the ROWA Montreal Protocol Coordinator for International Partnerships, the change in duty station for the post was due to the fact that the associated responsibilities were more global in nature therefore it had to be located at the CAP headquarters rather than the regional office. UNEP noted that this move will streamline the structure of the CAP team in West Asia with that of other regions, and will further optimize the provision of CAP services and project support in West Asia.

14. In reviewing the 2020 CAP budget against the 2019 approved budget, the Secretariat noted changes only on line 1999 as shown in Table 2.

Table 2. Comparison of the 2019 approved CAP budget and the 2020 proposed budget (US\$)

Component (BL)	2019 approved	2020 proposal	Difference	Change
1999 (staff personnel)	7,069,000	7,208,000	139,000	2.0
1600 (travel)	548,000	548,000	0	0
2030 (regional activities)	1,262,000	1,262,000	0	0
3200 (Global services/meetings)	505,000	505,000	0	0
5220 (office operations/communication)	590,000	590,000	0	0
Total	9,974,000	10,113,000	139,000	1.39

15. The overall budget was below the allowable level of increase and the changes proposed of the staff are in line with increased responsibilities of the posts.

RECOMMENDATION

16. In the light of the information provided by UNEP and the comments above, the Executive Committee may wish:

- (a) To note the UNEP Compliance Assistance Programme (CAP) 2020 workplan and budget proposal contained in document UNEP/OzL.Pro/ExCom/84/37;
- (b) To approve the UNEP's CAP activities and budget for 2020 in the amount of US \$10,113,000, plus agency support costs of 8 per cent amounting to US \$809,040 noting the adjustments proposed therein;
- (c) To further request UNEP, in future submissions of the CAP budget, to continue:
 - (i) Providing detailed information on the activities for which the global funds would be used;
 - (ii) Extending the prioritization of funding between CAP budget lines so as to accommodate changing priorities, and to provide details, pursuant to decisions 47/24 and 50/26, on the reallocations made;

- (iii) Reporting on the current post levels of staff and informing the Executive Committee of any changes thereto, particularly with respect to any increased budget allocations; and
 - (iv) Providing a budget for the year in question, and a report on the costs incurred in the year prior to the last year, noting sub-paragraphs (c)(ii) and (c)(iii) above.
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**UNITED NATIONS ENVIRONMENT PROGRAMME
COMPLIANCE ASSISTANCE PROGRAMME (CAP)**

**2020 WORKPLAN AND BUDGET PROPOSAL
AND 2019 PROGRESS REPORT**

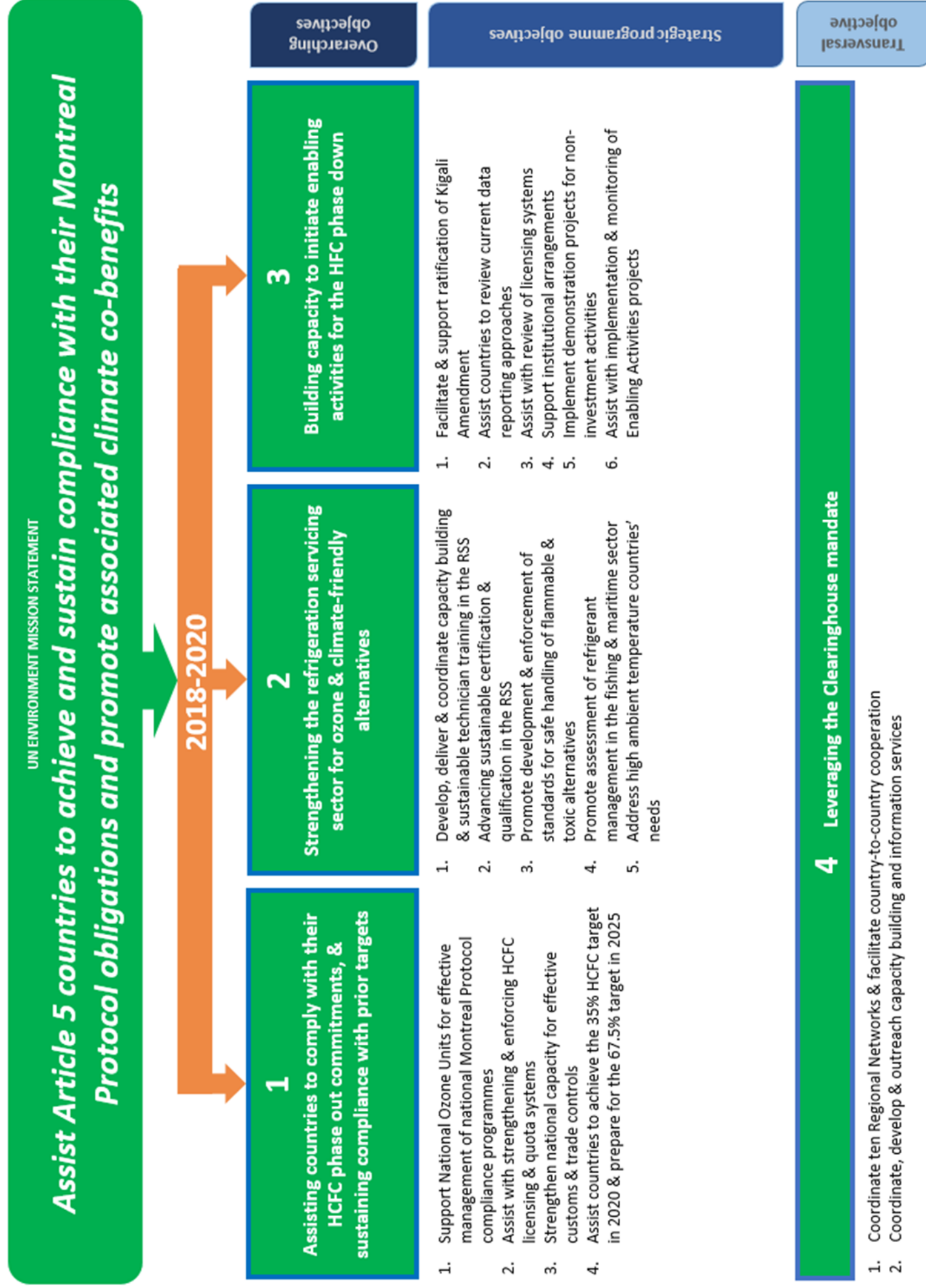
Presented to the
84th
Meeting of the Executive Committee
of the Multilateral Fund for the Implementation
of the Montreal Protocol

21 October 2019

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Figure 1 Overview of CAP 2018–2020 Strategy



PART I: 2020 CAP WORKPLAN

INTRODUCTION

1. UN Environment (UNEP) is submitting this 2020 Compliance Assistance Programme (CAP) Workplan and Budget for the consideration of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol at its 84th meeting. UNEP developed this proposal based on the current and anticipated needs of Article 5 countries drawn from various sources.¹ It takes into account all Executive Committee decisions and recommendations pertaining to UNEP, as well as observations presented in the final report of the overall CAP structure and the associated Executive Committee decisions.² The services outlined in this document reflect UNEP's unique Implementing Agency role to provide the Clearinghouse function as per Article 10 of the Montreal Protocol.³ This document comprises:

- Part I - *2020 CAP Workplan*, including proposed activities and budget, and the associated Annexes 1A-1F, as per Decision 82/57(c)(ii) and (iii).
- Part II - *2019 CAP Progress Report*, and the associated Annexes 2A-2D, as per Decision 66/16(v) requesting UNEP to present its detailed annual progress report on CAP activities in the context of the annual CAP approval, and Decision 82/57 (c)(i), which requests UNEP to provide detailed information on the innovative CAP activities for which the global funds were used.

2. The proposal was developed in the framework of UNEP's 2018-2020 CAP Strategy,⁴ which sets the overall vision and direction of CAP during this period. The 2020 CAP Workplan and Budget represents the third year of implementation of that three-year rolling strategy.⁵ As described in that document, UNEP's main objective is to assist Article 5 countries to achieve and sustain compliance with their Montreal Protocol obligations and promote associated climate co-benefits (Figure 1). It identifies CAP's overarching objectives for this period: (1) Assisting countries to comply with their hydrochlorofluorocarbon (HCFC) phase-out commitments and sustaining compliance with prior targets; (2) Strengthening the refrigeration servicing sector for ozone and climate-friendly alternatives; and (3) Building capacity to initiate enabling activities for the hydrofluorocarbon (HFC) phase-down. A fourth transversal objective, Leveraging the Clearinghouse mandate, cuts across the three overarching

¹ Including *inter alia* direct feedback collected during meetings of the Regional Networks of Ozone Officers and through consultations with National Ozone Units, Implementing Agencies, bilateral agencies, through the Business Planning process, and the advice received during the: Inter-Agency Coordination Meeting, Montreal, Canada, 2-7 September 2018; 30th Meeting of the Parties to the Montreal Protocol, Quito, Ecuador, 5-9 November 2018; 82nd meeting of the Executive Committee, Montreal, Canada, 3-7 December 2018, including decision 82/57 approving the 2019 CAP; Inter-Regional Thematic and Network Meetings for National Ozone Officers, Paris, France, 17-22 February 2019; Inter-Agency Coordination Meeting, Montreal, Canada, 5-7 March 2019; 83rd meeting of the Executive Committee, Montreal, Canada, 27-31 May 2019; and the 41st meeting of the Open-Ended Working Group, Bangkok, Thailand, 1-5 July 2019.

² The Executive Committee noted the strategy (UNEP/OzL.Pro/ExCom/81/20) through Decision 81/38.

³ Article 10, Financial mechanism, established Multilateral Fund to meet agreed incremental costs and to finance the Clearinghouse function to assist Article 5 Parties by: (1) Identifying their needs for co-operation through country specific studies & other technical co-operation (2) Facilitating technical co-operation to meet these identified needs (3) Distributing information & relevant materials, & hold workshops, training sessions, & other related activities (4) Facilitating and monitoring other multilateral, regional & bilateral co-operation. UNEP was given this mandate on 19 June 1991 when it became an Implementing Agency of the Multilateral Fund.

⁴ Decision 80/55.

⁵ UNEP plans to submit the next three-year CAP Strategy covering the period 2021-2023 for the consideration of the Executive Committee's 86th meeting.

objectives and provides supporting services. The strategy also identifies individual strategic programme objectives within each of the four overarching objectives. For 2020, UNEP is proposing specific services in response to Article 5 countries' needs and is presenting them in this document according to this strategic framework. Further details can be found below and in Annex 1A – *Logical Framework Analysis for 2020*.

3. To deliver the planned comprehensive compliance assistance services to Article 5 countries, UNEP requests Executive Committee approval of US\$ 10,922,040, which comprises project costs of US\$ 10,113,000 and programme support costs (PSC) of US\$ 809,040, i.e. 8 per cent. This request is based on a zero-growth scenario for activities and corresponds to a 1.37 per cent increase to cover only inflationary costs related to staff commitments. These increases are in line with the Noblemaire Principle being used by the International Civil Service Commission (ICSC) to have standard salaries for all United Nations staff in the different agencies. Further details are presented in Annex 1D – *2020 CAP budget proposal for 2020* and Annex 1E – *2020 Financial analysis of CAP budget proposal for 2020*.

PLANNED SERVICES IN 2020

4. UNEP will offer CAP assistance to all Article 5 countries, with specific attention being provided for the low-volume consuming countries (LVCs) and very low-volume consuming countries (VLVCs). During 2020, UNEP will provide Article 5 countries with country-specific compliance assistance services (including compliance, policy support, technical assistance, data reporting, Kigali Amendment ratification and associated activities, monitoring and control of trade in ozone depleting substances); operation of ten Regional Networks of Ozone Officers⁶ covering all 147 Article 5 countries plus eight observers; capacity building services; information and outreach services; and facilitation of South-South cooperation. Details of the planned services are provided in Annex 1B - *Country-specific services and CAP support proposed for 2020*.

5. Through CAP, UNEP will also deliver the projects in its 2018-2020 Business Plan, which includes 414 national projects, including HCFC Phase-out Management Plans (HPMPs) and the associated verification projects, Institutional Strengthening (IS) projects, and Enabling Activities projects (Figure 2). UNEP will assist the identified Article 5 countries to develop and submit all relevant projects and activities in line with the Executive Committee's decisions. The list of projects is provided in Annex 1C – *Implementation of UNEP-assisted Article 5 country projects in 2020*.

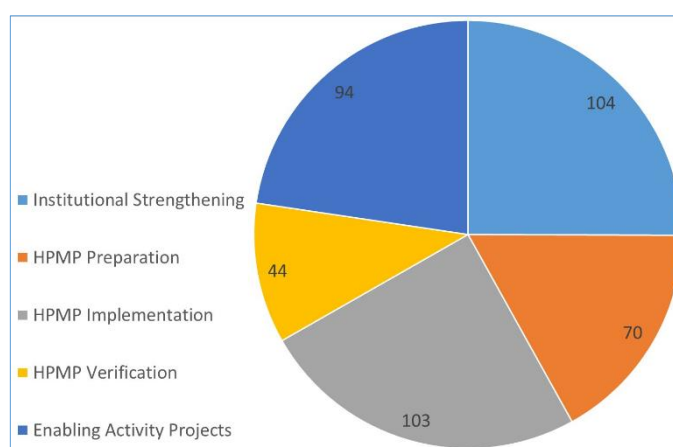


Figure 2 Project support in 2020

⁶ Africa Anglophone; Africa Francophone; Caribbean; Europe and Central Asia; Latin America; Mexico and Central America; Pacific Island Countries; South Asia; South East Asia; and West Asia.

CAP FOCUS IN 2020

6. UNEP will continue implementing the four pillars of the current CAP Strategy according to plan, however it will place additional emphasis in 2020 on certain issues to adjust to the evolving needs of Article 5 countries and the overall Montreal Protocol context. UNEP will focus particular attention in 2020 on the following issues:

- Promoting dialogue and providing assistance related to monitoring, reporting, verification and enforcement (MRVE) to sustain the Montreal Protocol targets already met and to meet future targets.
- Extending cooperation with the enforcement community at the international, regional and national levels to combat illegal trade through awareness, joint activities and coordination.
- Helping National Ozone Units (NOUs) to understand and comply with the changing Article 7 and Country Programme (CP) data reporting requirements, as well as the new Harmonized System (HS) custom codes.
- Prioritizing training and capacity building activities for the refrigeration servicing sector (RSS) through ongoing HPMPs, CAP services, and specific tools already developed or under finalisation.
- Supporting NOUs to address different technical challenges related to adopting and deploying lower-global warming potential (GWP) alternatives including, but not limited to, updating standards/codes, needs of high ambient temperature countries, safety considerations, availability of alternatives for commercial/industrial refrigeration sector, and other technical priorities of Article 5 countries.
- Encouraging linkages between NOUs and Technical Vocational Education and Training (TVET) authorities and increasing the ownership/involvement of national training institutions to deliver training and adopt the curricula developed by UNEP, to further promote the sustainability of the capacity building delivered with Multilateral Fund assistance.
- Assisting countries with the incorporation of Kigali Amendment requirements into their national legal and policy frameworks.
- Building capacity of NOUs to understand and address new obligations under Kigali Amendment.
- Promote gender mainstreaming in refrigeration and air conditioning sector through awareness and outreach.

PLANNED ACTIVITIES IN 2020

7. UNEP proposes to undertake the following activities through CAP in 2020, taking into account the needs of Article 5 countries, the continuity of specific activities in the current CAP Strategy, and the focus areas indicated above:

Overarching Objective 1: Assisting countries to comply with their HCFC phase-out commitments and sustaining compliance with prior targets

Strategic Programme Objective 1: Support National Ozone Units for effective management of national Montreal Protocol compliance programmes

This objective contributes to the following outcomes:

- All IS projects approved for UNEP are implemented in a timely and effective manner.
- Article 5 countries are supported with country-specific services.
- NOUs collect, review and report accurate Article 7 and Country Programme data as per deadlines (or in advance).
- Article 5 countries are supported for compliance and enforcement issues.
- All NOUs requesting compliance assistance to address specific technical, policy, or operational issues are supported by CAP.
- All new Ozone Officers and/or their assistants acquire basic skills, competencies and understanding of the Montreal Protocol and Multilateral Fund.

This will be achieved through the following activities:

1. Provide NOUs with technical assistance to expedite the preparation, implementation, monitoring and reporting of their IS phases.
2. Deliver 414 country-specific services to NOUs as per Annex 1B - *Country-specific services proposed for 2020* and respond to ad hoc requests.
3. Provide support to NOUs for accurate and timely Article 7 and Country Programme data reporting including: on requirements of the new reporting formats and online systems; and assisting NOUs to cross-check their national data from different sources including licensing system, customs data, reports by importers and wholesalers.
4. Encourage and facilitate exchange of experiences on compliance and enforcement relating to controlled substances, implementation and enforcement of bans on the establishment of new HCFC-based manufacturing facilities and import/manufacture of HCFC-based equipment, as per their national context, through *inter alia* Regional Network meetings and country-to-country exchanges.
5. Develop a *Montreal Protocol Enforcement Guidebook* to raise awareness of NOUs about the need for effective enforcement of Montreal Protocol policies and legislation, how to work with the enforcement chain in their countries, identify different enforcement approaches, and promote adoption of best practices.
6. Monitor the status of Montreal Protocol legislation, regulations and policies in Article 5 countries, including those planned to be put in place to help identify gaps and promote harmonised approaches within regions.
7. Develop a *Guidebook on Setting Penalties* to provide guidance, share different approaches, and identify best practices about setting and enforcing penalties for non-compliance with national Montreal Protocol legislation and regulations based on examples in developed and developing countries, that NOUs can share with judges and prosecutors in their legal systems.
8. Offer training to all new Ozone Officers and/or their assistants using the *Introductory Training for Newly-Appointed National Ozone Officers* and/or country-to-country assistance and complete the *Advanced Training for Experienced National Ozone Officers*, pilot it in selected regions, and finalize it based on the feedback received.
9. Assist NOUs to review and enhance their national tracking systems for methyl bromide used for quarantine and pre-shipment (QPS).

Strategic Programme Objective 2: Assist with strengthening and enforcing HCFC licensing and quota systems

This objective contributes to the following outcomes:

- NOUs effectively assess, monitor and operate their HCFC licensing and quota systems as per Montreal Protocol/Multilateral Fund targets.
- Innovative methods are adopted by countries to support enforcement of national licensing systems.
- More countries use the informal Prior Informed Consent (iPIC) mechanism to complement and support their HCFC licensing and quota systems.

This will be achieved through the following activities:

10. Help NOUs assess their licensing and quota systems to identify strengths/weaknesses and share best practices with regard to design, implementation and enforcement, through Network meetings and information materials and promote the enforcement of licensing systems beyond the customs' checkpoint through innovative approaches, e.g. mandatory labelling requirements of cylinders and market surveys.
11. Develop an online and smartphone application to assist NOUs with planning and tracking their national quotas and licenses for controlled substances (mixtures and pure substances).
12. Promote the revised online iPIC system, assist in conducting consultations and following up on responses, produce an annual report of its use, and develop an iPIC mobile application.

Strategic Programme Objective 3: Strengthen national capacity for effective customs and trade controls

This objective contributes to the following outcomes:

- NOUs update, monitor and enforce their national regulations and policies to facilitate and monitor legal HCFC trade and to combat illegal trade.
- Customs agencies and NOUs deliver effective enforcement training workshops and related activities.
- Article 5 countries are encouraged to use appropriate tools to deliver their national customs training.
- Awareness and capacity of Article 5 countries is increasingly built regarding issues of illegal trade to assist them in combatting ODS smuggling.

This will be achieved through the following activities:

13. Encourage and assist NOUs to identify and analyse differences between their country's data and those reported by other countries with whom they trade controlled substances.
14. Encourage and assist NOUs to review and revise customs and trade regulations and policies in cooperation with national customs and trade authorities, including development of a factsheet on terminology used in trade of controlled substances, e.g. country of origin, trans-shipment, transit, import for re-export that can cause data differences.
15. Outreach, demonstrate and promote the *UNEP-World Customs Organisation (WCO) Montreal Protocol Training for Customs Officers* e-learning course, *WhatGas?* mobile application, and *Refrigerant Identifier* mobile application to NOUs and national customs agencies.
16. Support countries to strengthen transboundary cooperation and intelligence sharing in combating illegal trade of controlled substances by organising border dialogues, and/or region-specific enforcement meetings with NOUs and Montreal Protocol customs focal points as well as collection, documentation and sharing of experiences, strategies and best practice on the effective role of customs in monitoring and combatting illegal trade, Cooperate with WCO, including its Regional Intelligence Liaison Offices (RILOs), and other institutions on coordinated enforcement operations aiming to detect and deter illegal trade in controlled substances and/or equipment, and encourage countries to participate the same
17. Encourage information sharing of seizures and related intelligence between customs, NOUs, Regional Intelligence Liaison Offices (RILOs) national contact points in countries of origin, transit countries, seizure location and countries of destination, and encourage publicising of seizures in the media and through websites and reporting to the Ozone Secretariat; provide recognition to customs and enforcement officers to raise awareness of the global enforcement community about Montreal Protocol-related trade restrictions and encourage reporting and publicising successful cases of

enforcement, e.g. through outreach of the results of the *2019 Global Customs Award*, regional or global award schemes, and enforcement meetings.

18. Promote risk profiling and online systems for application and approval of ozone depleting substances (ODS) trade to NOUs and customs authorities through Network meetings.
19. Inform NOUs and customs about disposal options for seized chemicals, equipment and products including auctioning to countries through information materials, national Standard Operating Procedures (SOPs), checklists and Network meetings.

Strategic Programme Objective 4: Assist countries to achieve the 35% HCFC target in 2020 and prepare for 67.5% target in 2025

This objective contributes to the following outcomes:

- Ongoing and new UNEP-assisted HPMP Stage I and Stage II tranches are implemented in a timely and effective manner.
- Completed HPMP tranches are verified in a timely and effective manner.
- All countries requesting UNEP assistance with Stage I or Stage II tranches, or new Stage II HPMPs are supported to prepare, submit and initiate those projects.
- NOUs make informed choices about non-HCFC technologies and policies as they implement their HPMPs.
- National RAC associations are engaged in national phase-out activities, as appropriate.

This will be achieved through the following activities:

20. Conduct review of national HCFC consumption against the phase-out targets at network meetings and provide specific information and advice to NOUs and other stakeholders upon request, including but not limited to technologies and policies; provide NOUs with policy and technical assistance to implement, monitor and report on their ongoing and new HPMP Stages I, II or III.
21. Assist countries to prepare and submit HPMP tranches for Stages I and/or II, and prepare Stages II and III, in coordination with partner Implementing and bilateral agencies.
22. Implement HPMP verification projects as approved by the Executive Committee and follow up with countries on the implementation of recommendations from earlier verification report.
23. Promote collaboration between NOUs and refrigeration and air conditioning (RAC) associations and encourage region-specific support to strengthen local institutions under HPMP Stages I, II and III; involve national RAC associations in selected network activities focusing on new technology trends, safety and performance standards, good practices, training and certification, equipment logbooks, etc.

Overarching Objective 2: Strengthening the Refrigeration Servicing Sector for Ozone- and Climate-Friendly Alternatives

Strategic Programme Objective 1: Develop, deliver and coordinate capacity building and sustainable technician training in the RSS

This objective contributes to the following outcomes:

- Article 5 countries outreach and incorporate training tools and products developed by UNEP and international partners in the training programs for RAC technicians, including under HPMPs, IS and Enabling Activities projects.
- Countries conduct needs assessments for the mobile air conditioning (MAC) servicing sector in Article 5 countries including of the training, certification and institutional needs.
- Different stakeholders in Article 5 countries increasingly use training and tools aiming at upgrading the skills of service practitioners and master trainers, i.e. technicians and engineers, with regard to the sound management of refrigerants
- Countries increasingly give consideration to gender issues in the RAC sector in projects and training.

This will be achieved through the following activities:

24. Outreach the training tools and products described in Annex 2B - *CAP partnerships, products and tools* developed in cooperation with international associations and ensure their incorporation in national projects and activities, and encourage NOUs to integrate them into ongoing and future training programs under HPMPs, IS projects and/or Enabling Activities projects.
25. Complete the assessment of future training and capacity building needs for the MAC servicing sector, including requirements for certification programs.
26. Organise regional national master trainer workshops for capacity building and exchange experiences for the delivery of the national training programme as per regional needs.
27. Promote gender mainstreaming of female technicians and experts the RAC sector to better achieve Montreal Protocol objectives, outreach their examples, and encourage participation of women in workshops and training organised by CAP and by Article 5 countries.

Strategic Programme Objective 2: Advancing sustainable certification and qualification in the RSS

This objective contributes to the following outcomes:

- Technical and policy assistance is offered to support HPMPs with ongoing national certification programs.
- Increased cooperation between NOUs and Technical Vocational Education and Training (TVET) authorities.
- Article 5 countries benefit from piloting the global qualification program for sound management of refrigerants (Refrigerant Driving License – RDL).
- Existing refrigerant environmental certification schemes are shared and outreached.

This will be achieved through the following activities:

28. Promote the development and implementation of sustainable and appropriate certification programmes for RSS in Article 5 countries as part of HPMPs or through CAP services, while understanding national institutional capacities and requirements.
29. Encourage and assist NOUs to work with their TVET authorities to integrate good servicing practices and other key aspects (e.g. safety, recovery, recycling and reclamation, energy efficiency, safe disposal) into their national qualification frameworks (competencies and skills) through curricula updates and certification schemes.
30. Evaluate the outcomes of the pilot stage of *Refrigerant Driver's License (RDL) for Small Applications* in six countries, i.e. Grenada, Maldives, Rwanda, Sri Lanka, Suriname, Trinidad and Tobago.⁷
31. Promote the use of RDL in further pilot countries during 2020 including introduction of RDL as a TVET-recognized program in cooperation with respective authorities and relevant international partners; complete the documentation of RDL for the remaining applications, i.e. Commercial Refrigeration, Commercial Air Conditioning, and Enterprise, as well as finalize the organizational and operational arrangement for the RDL programme for wider application. Encourage Article 5 countries and their implementing agencies to incorporate RDL and other certification programs into their national phase-out programs and HPMPs.
32. Evaluate the model *Refrigerant Environmental Certificate* developed by international partners based on the experience of West Asia, pilot it in three countries, and promote it to other Article 5 countries.

Strategic Programme Objective 3: Promote development and enforcement of standards for safe handling of flammable and toxic alternatives

This objective contributes to the following outcomes:

- Countries have increased awareness of relevant standards at national and regional levels.

⁷ See Annex 2A – *Progress report on four global CAP activities*.

- Uptake by countries of national refrigerant codes based on a model code.
- Increased awareness of standards for safe handling of flammable and toxic alternatives through technical information materials.

This will be achieved through the following activities:

33. Organize Network sessions on refrigerants, standards and RAC applications in cooperation with international/regional partners, as per the need of each region.
34. Develop a model *National Refrigerant Code* that can be incorporated stand-alone or as part of relevant local codes (e.g. RAC or buildings).
35. Update and outreach technical information on good practices including flammable refrigerants, safety and handling, maintenance and leak detection, reducing use/emissions and enhancing energy efficiency in refrigeration servicing sector.

Strategic Programme Objective 4: Address high ambient temperature country's needs

This objective contributes to the following outcomes:

- Capacity of high ambient temperature (HAT) countries is strengthened with regard to air conditioning technology options.
- NOUs and industry stakeholders are aware of the outcomes of the PRAHA-II and EGYPRA projects and those results help inform national decision making in other HAT countries.
- Understanding of safe handling of flammable refrigerants in HAT countries enhanced.
- Commercial and industrial refrigeration sectors in HAT countries are assisted to explore the technical feasibility of lower-GWP alternatives in consultation with respective NOUs and industry players.

This will be achieved through the following activities:

36. Share knowledge from PRAHA-I and II projects with all 35 high ambient temperature (HAT) countries through a special training event to be implemented in conjunction with 6th High Ambient Symposium (2-4 March 2020) including different tracks for countries with manufacturing and servicing sectors and countries with only servicing sector.
37. Develop and outreach policy briefs about the outcomes of PRAHA and EGYPRA projects including comparisons with other relevant programs.
38. Pilot the *Risk Assessment Model for the Safe Handling of Flammable Refrigerants* produced under the PRAHA-II project in 2-3 HAT countries for the installation, operation and servicing of small applications.
39. Organize the 6th International Symposium on “Alternative Refrigerants for HAT Countries” with participation of international associations and all Article 5 HAT countries.
40. Assist HAT countries with larger consumption of HCFCs/HFCs in the commercial and industrial refrigeration sectors to explore the technical feasibility of lower-GWP alternatives for the refrigeration sector.

Overarching Objective 3: Building capacity to initiate enabling activities for the HFC phase-down

Strategic Programme Objective 1: Facilitate and support ratification of Kigali Amendment

This objective contributes to the following outcomes:

- Ozone Officers better understand HFC issues and the implications of the Kigali Amendment for their national ODS phase-out programmes.
- Ratification of the Kigali Amendment is promoted in close collaboration with the Ozone Secretariat.

- Article 5 countries review their institutional arrangements for efficient implementation of HFC phase-down activities.
- Article 5 countries identify and address synergies and linkages between the national HCFC phase-out, overall national refrigerant use, non-ODS, non-HFC alternative consumption patterns and elaborate future the HFC phase down national strategies.

This will be achieved through the following activities:

41. Raise awareness of NOUs about the Kigali Amendment before and after ratification, including assisting them to better understand the reasons and benefits of ratifying, and the legal, administrative, cost and technology implications, through Network meetings, information materials, etc.
42. In cooperation with the Ozone Secretariat, encourage and support Article 5 countries to ratify the Kigali Amendment through presentations at Regional Network meetings, joint missions, bilateral meetings with countries, communications with Ozone Officers, etc.
43. In collaboration with Implementing Agencies and Multilateral Fund Secretariat, draft guidelines, organize special sessions in Network meetings to discuss how countries might address overlapping issues and identify opportunities between HPMPs and HFC phase-down plans.

Strategic Programme Objective 2: Assist countries to review current data reporting approaches

This objective contributes to the following outcome:

- Article 5 countries are better informed and have their capacity enhanced regarding data collection, cross-checking and reporting of current ODS requirements and future HFC reporting requirements.

This will be achieved through the following activities:

44. Finalize the *Updated Data Reporting Handbook* in cooperation with Ozone Secretariat and Multilateral Fund Secretariat to help strengthen the capacity of NOUs to reflect new Article 7 and CP reporting requirements and specific technical issues related to the Kigali Amendment (blends, CO₂ equivalent tonnes, etc.).
45. Raise the awareness of NOUs on the importance to have their accurate and reliable HFC baselines and provide guidance about how to establish them; assist NOUs to identify practical methodologies for HFC data collection, analysis and reconciliation to ensure data accuracy, even in the absence of an HFC licensing system, through Network meetings, regional or sub-regional thematic workshops, and/or country missions.
46. Provide the opportunity for the Ozone Secretariat to present the new online reporting system for Article 7 data during Network meetings, including possible hands-on clinics.
47. Update *WhatGas?* and *GWP-ODP Calculator* mobile applications to include addition useful information to help NOUs differentiate between ‘actual’ GWPs and GWPs of mixtures in the context of the Kigali Amendment.

Strategic Programme Objective 3: Assist with review of licensing systems

This objective contributes to the following outcomes:

- Improved capacity of NOOs and enforcement authorities to monitor and control ODS trade including HFCs.
- Improved HFC licensing and quota systems through sharing of experiences.
- Increased awareness of the need national customs codes for inclusion of HFCs and low-GWP alternatives for monitoring HFC imports until the new 2022 HS codes are approved by the World Customs Organisation (WCO).

This will be achieved through the following activities:

48. Assist NOUs to review their existing licensing and quota systems upon request; share regional experiences and good practices on ODS and HFC licensing and quota systems through Network meetings.
49. Encourage countries to introduce voluntary HFC licensing systems even prior to the ratification of the Kigali Amendment.
50. Encourage countries to review their national customs codes in the context of the 2022 HS code update to facilitate their future adoption of HFC codes. Update and share information on the 2022 update of WCO's HS codes for HFCs and mixtures and provide guidance about what countries/regions should do prior to the release of those codes; support individual countries and/or work with regional customs organizations to assign specific customs codes (additional digits) for HFCs in their current national HS code systems as a temporary measure.
51. Encourage countries to establish mandatory reporting by importers and wholesalers which usually provides more reliable import data than those only based on HS codes.
52. Update the *UNEP Customs Training Manual* and the *UNEP-WCO Montreal Protocol Training for Customs Officers* e-learning course to include information on HFCs and Kigali Amendment.

Strategic Programme Objective 4: Support institutional arrangements

This objective contributes to the following outcomes:

- Countries have strengthened institutional arrangements for the implementation of activities, including consultations with relevant national government authorities who are responsible for climate change, energy efficiency, etc.
- Countries develop more effective national policies and regulations.

This will be achieved through the following activities:

53. Assist countries to understand the legal implications of the Kigali Amendment with regard to strengthening existing national laws, regulations and policies and identify new options needed to meet those commitments, through various means including participation of legal experts in Network meetings and development of an assessment tool. Assist countries to map new partners for the ratification and implementation of the Kigali Amendment.
54. Upon request, and within available resources, provide direct expert guidance to help review existing legislation and regulations that need to be amended to phase down HFCs, with priority being given to countries that have ratified Kigali Amendment.
55. Collect and share through an online resource of existing Montreal Protocol legislation and policies (including but not limited to HFC-related ones) in Article 5 countries to share information and experiences.

Strategic Programme Objective 5: Implement demonstration projects for non-investment activities

This objective contributes to the following outcome:

- Increased awareness in countries of demonstration projects for non-investment activities.

This will be achieved through the following activities:

56. Showcase the results of the Egypt and Kuwait demonstration projects, about not-in-kind technologies for district cooling and central air conditioning applications, through factsheets and sessions at Network meetings.
57. Support other Implementing Agencies to showcase of outcomes of completed demonstration projects through joint development of factsheets and sessions at Network meetings.

Strategic Programme Objective 6: Assist with implementation and monitoring of Enabling Activities projects

This objective contributes to the following outcome:

- Effective implementation of UNEP-assisted Enabling Activity projects as per Executive Committee guidelines thus preparing country for implementing Kigali Amendment commitments and ratification of the Amendment.

This will be achieved through the following activities:

58. Provide technical support to 94 UNEP-assisted countries to implement and report on their Enabling Activity projects and provide assistance to other countries upon request. Develop guidance and templates to assist countries in implementing and reporting on different activities and achievements under their projects and to document the lessons learned about how the fast-start activities can support early action on ratifying and implementing the Kigali Amendment.
59. Review the progress and challenges from the implementation of UNEP-assisted Enabling Activities projects during Network meetings or thematic workshops, subject to fund availability.
60. Produce information materials to assist countries in identifying and mapping the most appropriate and relevant CAP knowledge product/tool available to support implementation of each UNEP-assisted Enabling Activities component.
61. Complete the second phase of the *HFC Outlook Model* in eight countries (Bosnia and Herzegovina, Dominican Republic, Gabon, Guatemala, Honduras, Mali, Senegal and Sri Lanka) and offer it to other interested Article 5 countries, with a focus on LVCs.
62. In cooperation with international RAC association partners, and in support of the data collection and analysis work under the Enabling Activities projects, pilot the *Cold Chain Database Model* in 6-8 Article 5 countries as a comprehensive tool to survey and analyze the commercial/industrial refrigeration sectors in terms of technologies, use of refrigerants and other parameters.

Transversal Objective 4: Leveraging the Clearinghouse mandate

Strategic Programme Objective 1: Coordinate ten Regional Networks and facilitate country-to-country, South-South cooperation

This objective contributes to the following outcomes:

- Participation of 147 developing countries in Network and Thematic meetings.
- Capacity of NOUs and other stakeholders is built, including in enabling activities needed in Article 5 countries to address both HCFCs and HFCs.
- Rapid take-up of lower-GWP, energy efficient technologies is promoted through various fora
- Where appropriate, Article 5 countries benefit from Country-to-Country cooperation (e.g. site visits, study tours, technology transfer, border dialogues).

This will be achieved through the following activities:

63. Organise Regional Network meetings in all ten regions for all NOUs that include the Ozone Secretariat, Multilateral Fund Secretariat, Implementing Agencies, selected international experts and relevant stakeholders (customs, RAC associations, energy officials, building planners, etc.) as appropriate to address priority issues, e.g. data reporting, customs codes, MRVE, standards, licensing and quota systems, illegal trade, good servicing practices, safety for flammable refrigerants, policy developments, energy efficiency, etc.
64. Organise thematic meetings in different regions for some/all NOUs on specific priority themes, depending on needs of countries and available resources.

65. Organize “Ozone2Climate Technology Exhibitions and Industry Roundtables” in different regions back-to-back with large industry events to encourage the rapid take-up of lower-GWP, energy efficient technologies, depending on needs of countries and available resources.
66. Facilitate country-to-country cooperation, e.g. site visits, capacity building, study tours, technology transfer, border dialogues, etc. to address specific priority needs articulated by NOUs.

Strategic Programme Objective 2: Coordinate, develop and outreach capacity building and information services

This objective contributes to the following outcomes:

- Increased awareness, understanding and enhanced capacity of NOUs and other relevant stakeholders (e.g. Technicians/servicing sector, Trade and enforcement)
- Countries supported for implementation of IS, HPMPs, enabling activities projects and other MLF-funded projects.
- NOOs and other stakeholders remain informed and up to date with latest news, UNEP activities, policy and science related to the Montreal Protocol.

This will be achieved through the following activities:

67. Create new and updated information materials, e.g. fact sheets, policy briefs, publications, smartphone applications, in response to emerging needs of Article 5 countries.
68. Conduct outreach of Montreal Protocol issues at key international, regional and national fora.
69. Maintain and enhance OzonAction web services including the OzonAction website (www.unenvironment.org/ozonaction) and OzonAction Meeting Portal (www.ozonactionmeetings.org).
70. Outreach the publications, products and services developed by CAP to ensure that they are well promoted and accessible to Article 5 countries as well as all Implementing Agencies; Encourage NOUs to translate, adapt and disseminate existing materials produced by OzonAction.
71. Encourage and support national celebrations of *World Ozone Day* on 16 September 2020; Develop, translate and outreach materials related to *World Refrigeration Day* on 26 June 2020.
72. Continue to develop and disseminate on a bi-weekly basis the *OzoNews* e-newsletter; Continue to develop and disseminate three times per year the *OzonAction Scoop* on topical subjects. Collect Montreal Protocol success stories and outreach them at global, regional and national levels
73. Translate prioritized publications into French and Spanish, and other UN languages, depending on regional priorities and available resources.

PART II: 2019 CAP PROGRESS REPORT

INTRODUCTION

This report provides details of the progress made by UNEP in the implementation of the CAP and results achieved for the period September 2018 - August 2019, i.e. since the submission of the previous CAP Progress Report. Together with the attached annexes it provides an overview of programme implementation of the main results achieved during the first eight months of 2019, which corresponds to the last four months of 2018 and the first eight months of 2019. Progress is presented according to the Overarching Objectives and Specific Project Objectives (SPOs) indicated in the CAP Strategy.

SUBMITTED AND APPROVED PROJECTS

- UNEP assisted countries with preparing and submitting **8** HPMP Stage I tranches, **3** HPMP Stage II tranches, **17** HPMP Stage II preparation, **21** HPMP stage I verification reports, **18** Institutional Strengthening projects, and **9** technical assistance projects (Enabling Activities), approved at the 82nd Executive Committee meeting.
- UNEP assisted countries with preparing and submitting **10** HPMP Stage I tranches, **3** HPMP Stage II tranches, **9** HPMP Stage II preparation, as well as Institutional Strengthening projects for **23** countries, and **1** technical assistance project (Enabling Activities) approved at the 83rd Executive Committee meeting.

OVERARCHING OBJECTIVE 1: Assisting countries to comply with their HCFC phase-out commitments and sustaining compliance with prior targets

SPO 1: Support National Ozone Units for effective management of national Montreal Protocol compliance programmes

SPO 2: Assist with strengthening & enforcing HCFC licensing & quota systems

SPO 3: Strengthen national capacity for effective customs & trade controls

SPO 4: Assist countries to achieve the 35% HCFC target in 2020 and prepare for 67.5% target in 2025

SPO 1: Support National Ozone Units for effective management of national Montreal Protocol compliance programmes

- Supported National Ozone Officers and Governments with Article 7 and CP data reporting and sustaining compliance: CAP assisted countries to prepare and submit the CP reports and Article 7 data by reviewing the drafts (as appropriate for the individual country) to ensure the accuracy and comprehensiveness as per reporting requirements prior to submission to the Ozone Secretariat and the Multilateral Fund Secretariat; including informing on the newly approved Article 7 Data Reporting Forms.
- Responded to specific queries from countries regarding reporting issues and CAP encouraged and facilitated analysis of trade data reported by exporting and importing countries
- Followed up on outstanding CP data for 2017 for countries with political instability or other late submissions:

Africa Anglophone: Somalia, South Sudan, Sudan, Libya. *Africa Francophone:* Congo, Guinea Bissau, Cape Verde, Guinea, Equatorial Guinea, Algeria, Mauritania, Burund, Central African Republic. *Caribbean:* Dominica, Haiti and Saint Kitts and Nevis. *Europe and Central Asia:* Turkey Russia, Tajikistan, Ukraine, Uzbekistan.

- Provided additional data reporting support to:

Africa Francophone: Congo, Guinea, Guinea Bissau, Equatorial Guinea, Cape Verde, Burundi, Mali. *Caribbean:* Belize, Suriname, Barbados, St. Kitts and Nevis, Dominica. *Europe and Central Asia:* Tajikistan, Turkey, Uzbekistan, Armenia, Montenegro. *Latin America, Mexico and Central America:* Nicaragua, Bolivia. *Pacific Island Countries:* Cook Islands, Kiribati, Fiji, Micronesia, Marshall Islands, Nauru, Niue, Palau, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu. *South Asia:* Afghanistan, Bangladesh, DPR Korea, Nepal, Maldives, Mongolia, Pakistan. *South East Asia:* Brunei Darussalam, Cambodia, Lao PDR, Myanmar, Thailand, Timor Leste. *West Asia:* Bahrain, Iraq, Jordan, Kuwait, Oman, Qatar, Saudi Arabia, Syria.
- Further assisted Bolivia with revision of its Article 7 and CP data reports carried out from 2013 to 2017 – officially submitted revised reports to the Ozone Secretariat and Multilateral Fund Secretariat.
- Provided support to Cambodia and Fiji for reviewing their draft Article 7 reporting based on the approved new data reporting form (including HFCs) as per Decision XXX/10.
- Provided guidance on data sources and specific ‘hands-on’ training to newly appointed Ozone Officers of Micronesia and Tuvalu to prepare their Article 7 data and CP reports.
- Provided specific focused assistance to DPR Korea on Article 7 data reporting under the Kigali Amendment.
- Supported and encouraged NOUs to use the Multilateral Fund online data report format and provided specific support to the new National Ozone Officers and assisting with forgotten passwords.
- Provided specific assistance to countries with new Ozone Officers:

Africa Anglophone: Ethiopia. *Africa Francophone:* Cape Verde, Guinea Bissau, Equatorial Guinea, Sao Tome. *Caribbean:* Belize, Dominica Haiti, Jamaica, Suriname. *Latin America, Mexico and Central America:* Nicaragua, Guatemala, Bolivia. *Pacific Island Countries:* Cook Islands, Kiribati, Fiji, Micronesia, Marshall Islands, Nauru, Niue, Palau, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu. *South Asia:* Afghanistan, Bhutan, Maldives, Mongolia, Nepal, Pakistan, Sri Lanka. *South East Asia:* Brunei Darussalam, Cambodia, Lao PDR, Myanmar, Thailand and Timor Leste. *West Asia:* Iraq and Syria
- Included a special session on data reporting, including ‘hands-on’ sessions and demonstrations where required in Regional Network and thematic meetings in all regions.
- All HPMP projects in countries with agreed Plans of Action for which UNEP was the HPMP Lead Agency progressed according to plan except:

Africa Francophone: Central African Republic, Cote d’Ivoire, Guinea. *Caribbean:* Antigua and Barbuda, Haiti. *Europe and Central Asia:* Ukraine, Kazakhstan (both CEIT countries). *Pacific Island Countries:* Nauru. *South East Asia:* Myanmar. *West Asia:* Bahrain, Kuwait, Iraq, Qatar.
- Provided technical assistance and support to NOUs, as required, to expedite the preparation, implementation, monitoring and reporting of their IS phases. Specific assistance was given to:

Africa Francophone: Cape Verde, Guinea Bissau, Equatorial Guinea, Sao Tome, Guinea. *Caribbean:* Antigua and Barbuda, Haiti, Jamaica, Dominica (including a specific country mission to Dominica). *Europe and Central Asia:* Albania, Kyrgyzstan, Moldavia. *Pacific Island Countries:* Cook Islands, Fiji, Kiribati, Micronesia, Marshall Islands, Nauru, Niue, Palau, Samoa, Solomon Islands, Tuvalu, Tonga, Vanuatu. *South Asia:* Afghanistan, Bhutan,

- Maldives, Mongolia, Nepal. *South East Asia*: Brunei Darussalam, Cambodia, Lao PDR, Myanmar, Philippines, Timor Leste, Viet Nam. *West Asia*: Bahrain, Kuwait, Iraq.
- Delivered specific compliance assistance and capacity building services to NOUs as per the plan in the CAP Work Programme and *ad hoc* requests
 - Specific missions were made to the following countries to assist them with timely implementation of enabling activities projects:
 - Africa Anglophone*: Ghana, Mozambique, Sierra Leone, Nigeria and Zambia. *Africa Francophone*: Cape Verde, Guinea Bissau, Sao Tome, Equatorial Guinea, Mauritania, Guinea. *Caribbean*: Dominica. *Europe and Central Asia*: Turkmenistan, Georgia. *Latin America, Mexico and Central America*: Nicaragua and Bolivia. *Pacific Island Countries*: Tuvalu, Marshall Islands and Micronesia, Kiribati and Tonga. *South Asia*: Afghanistan, Bangladesh, India, Mongolia, Sri Lanka, Nepal, Pakistan, Iran, Maldives. *South East Asia*: Cambodia, Brunei Darussalam.
 - Training provided to 51 new Ozone Officers and/or their assistants (using the newly-developed training modules where appropriate):
 - Africa Anglophone*: 12 countries- Angola, Botswana, Eswatini, Ethiopia, Ghana, Lesotho, Mauritius, Mozambique, Namibia, Seychelles, Tanzania, Zambia and Zimbabwe. *Africa Francophone*: Guinea, Cote d'Ivoire, Congo, DRC and Burundi. *Pacific Island Countries*: 11 countries - Cook Islands, Micronesia, Fiji, Kiribati, Marshall Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, and Vanuatu. *South Asia & South East Asia*: 14 countries - Afghanistan, Bhutan, Indonesia, Lao PDR, Maldives, Mongolia, Myanmar, Pakistan, the Philippines, Sri Lanka, Timor Leste, Thailand and Vietnam.
 - In addition, training to new NOOs was conducted during country missions in Brunei and Tuvalu to provide hands-on training to the new NOOs.
 - Monitored the phase-out status in all A5 countries and provided assistance through individual missions and special sessions in Network Meetings, conducted specific missions to the following countries to assist them with implementation of phase-out projects:
 - Africa Anglophone*: Ethiopia, Lesotho, Liberia, Malawi and Rwanda. *Caribbean*: Antigua and Barbuda, The Bahamas. *Pacific Island Countries*: Kiribati, Micronesia, Marshall Islands, Tuvalu. *South Asia*: Afghanistan, Bangladesh, China, India, Iran, Maldives, Mongolia, Nepal, Pakistan, and Sri Lanka. *South East Asia*: Cambodia and Brunei and Timor Leste.
 - More specifically, the missions in Micronesia, Marshall Islands and Tuvalu further monitored the HCFC use in the fishery sector
 - Held focused bilateral discussions during the Network meetings with the countries as required
 - Explored need-based IT solutions to support NOU operations through discussions during Network meetings including online CP data reporting, electronic licensing system, equipment logbooks/database;
 - Developed a Network/thematic meeting portal which has been used to support all CAP meetings. In this period the OzonAction Meeting Portal efficiently provided 3,031 people with meeting documentation for 22 meetings and workshops organised by CAP, totalling 8,814 sessions and 60,831 page views.
 - Specific missions to share experience on data collection and quota and licensing systems:
 - Africa Francophone*: Gabon, Senegal. *Pacific Island Countries, South Asia, South East Asia*: Thailand to Mongolia (data collection and quota and licensing system); Cambodia to Solomon Islands, Marshall Island, Micronesia, Samoa and Vanuatu (online ODS licensing systems). *West Asia*: Bahrain and Kuwait (HFCs outlook); Bahrain and Oman (e-licensing system).

- CAP provided *ad-hoc* assistance, response to queries and provision of information to counties as required on a range of issue (e.g. clarification of Methyl Bromide reporting, use of R-504, institutionalization of good Servicing Practices into TVET systems of countries, certification requirements for RSS technicians)
- Represented UNEP as an Implementing Agency in 14 major meetings organized by other organisations, including two Executive Committee Meetings, two Inter-Agency Coordination Meetings, one Meeting of the Parties, one Open-Ended Working Group Meeting, one UNODC meeting, two WCO meetings, one Green Customs meeting and four RAC sector partners' meetings (*see Annex 2D: Meetings and workshops*).

SPO 2: Assist with strengthening & enforcing HCFC licensing & quota systems

- Included the issue of Licensing and quota systems in the inter-regional network meeting in Jan 2019 in Pairs, with specific sessions also organised during various network meetings including e-licensing systems, and south-south cooperation, sharing experiences and lessons learned on different licensing modalities among the countries and to identify actions to address these challenges to strengthen the enforcement of the licensing and quota system
- Applied lessons learned from verification, data reporting and monitoring to address strengthening and enforcement of HCFC licensing and quota system and progress towards extension of imports/export licensing and quota systems to cover HFCs, mechanisms to monitor the utilisation of quota and license and track the actual import/export, reconciliation of data among different sources, development of online licensing systems for ODSs, HFCs and RAC equipment, free zone, transit and other special customs regimes, provided specific support to:
 - Africa Francophone:* Equatorial Guinea. *Caribbean:* St. Vincent and the Grenadines and Suriname (electronic systems), Suriname (electronic Systems and strengthening implementation); Dominica (strengthening the enforcement of LQS). *Pacific Island Countries:* Fiji and Vanuatu (Implementation and enforcement of the licensing and quota systems); Cook Islands and Fiji (Customs and Enforcement Officers training including NOU roles in monitoring licensing and quotas). *South Asia & South East Asia:* Mongolia NOU with Thailand (discussed and reviewed the Thai online licensing system for ODS trade to share experiences).
- During network meetings, thematic meetings and country missions, CAP undertook comprehensive reviews of the existing licensing and quota system for countries to identify strengths/weaknesses of their HCFC licensing and quota systems, and recommended approaches for improvement of the existing system and procedures, specific assistance was provided to:
 - Africa Francophone:* Equatorial Guinea, Mauritania. *Caribbean:* Dominica. *Pacific Island Countries:* Kiribati, Micronesia, Marshall Islands, Tuvalu. *South Asia:* Nepal, Mongolia, Pakistan, Sri Lanka. *South East Asia:* Brunei, Timor Leste. *West Asia:* Jordan and Syria.
- CAP ROAP further developed a self-assessment questionnaire on licensing and quota system and conducted interviews with NOUs of Afghanistan, Bangladesh, Mongolia, Malaysia, Pakistan, Sri Lanka, Iran with the view of identifying gaps and needs, best practices with aims to develop recommendations for improvement; ECA translated the questionnaire into Russian and included a session in the forthcoming ECA network meeting in Kiev.
- Thematic meetings and border dialogues were held to address facilitating ODS trade control through e-licensing systems; facilitated south-south cooperation to exchange experiences on the development and operation of online licensing; raising awareness of the advantages of e-licensing systems, etc
- CAP held a Joint Customs Officers and Ozone Officers boarder dialogue workshop for SADC countries in October 2018 for SADC countries and facilitated a Botswana -Zimbabwe boarder dialogue workshop, a border dialogue workshop was held in Benin in October 2018 for 11

countries, as well as National Ozone Unit and Customs Twinning Workshop & Back to Back Parallel Border Dialogues for Countries of South Asia and South-East Asia Networks, Thailand; CAP organised bilateral discussions on data differences, and collaboration between countries to strengthen the trade control. A border dialogue between Ozone and Customs Officers of Cambodia and Viet Nam to Strengthen the Cooperation in ODS and HFC Trade Control, Cambodia was organised. CAP also organized South-south cooperation between Thailand and Mongolia between Cambodia and Micronesia, Solomon Islands, Marshall Islands, Samoa, and Vanuatu: Sharing experiences in the development and operation of online licensing system

- Facilitation of iPIC (informal prior informed consent procedure) consultations for participating countries, inclusion of successful iPIC consultations preventing unwanted or illegal trade in the Montreal Protocol Award for Customs and Enforcement Officers including:
 - Africa Anglophone:* Angola, Kenya, South Africa, Zimbabwe. *Africa Francophone:* Burkina Faso, Benin, Togo. *Caribbean:* Barbados, Belize. *Europe and Central Asia:* Belarus, Bosnia and Herzegovina, Croatia, European Union Estonia, Kazakhstan, Kyrgyzstan, Moldova, Montenegro, Republic of North Macedonia, Russia, Serbia, Turkey, Turkmenistan, Uzbekistan and several countries from other regions. *Latin America, Mexico and Central America:* Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Mexico, Panama, Paraguay, Uruguay and Venezuela. *Pacific Island Countries:* Fiji. *South Asia:* Bangladesh, China, India, Iran, Pakistan. *South East Asia:* Singapore, Thailand. *West Asia:* Saudi Arabia, United Arab Emirates. *Other:* Australia, Croatia, European Union, Israel and New Zealand.
- Specific sessions in network meetings were organised on iPIC; regularly included iPIC presentation in various meetings, iPIC has also being promoted as part of the HPMP implementation (e.g. in China); a side-event organised by UNEP OzonAction on Enforcement of ODS Licensing System beyond Customs Check Points at OEWG 41, the iPIC mechanism was extensively discussed
- iPIC is also part of reporting through performance indicators under the Institutional Strengthening (in all countries) and HPMP projects (for China, 5 South Asia countries: Afghanistan, Bhutan, Maldives, Mongolia and Nepal and in regional HPMP of 12 Pacific Island Countries).
- ECA coordinated the Global Montreal Protocol award for customs and enforcement officers and prepared case descriptions for 587 seizures reported by 24 countries (255 tonnes of ODS/HFCs and 28,000 items of equipment)
- CAP supported countries to develop and improve online licensing systems, including Cambodia and Mongolia

SPO 3: Strengthen national capacity for effective customs & trade controls

- Provided policy support and CAP assistance to NOUs to support customs and trade regulations and policies, including: mandatory labelling requirements, analysis of confiscated refrigerants, establishment of market on-site inspection teams, MOUs between NOU and the Customs, review of regulations and policy documents (e.g. on ban of HCFC based equipment), control of methyl bromide used for QPS, extending import and export acts to include HFCs
- Joint Customs Officers and Ozone Officers boarder dialogues and Regional Workshop for Customs Officers and National Ozone Officers to support to the effective monitoring of cross border trade.
- During network and thematic meetings, presented analysis on differences/discrepancies of reported HCFC trade data as well as examination of possible reasons of discrepancies with countries for identification of actions to be taken (supported by Ozone Secretariat); cooperating mechanisms to reduce the data differences and address illegal trade
- Provided support to A5 countries, including technical assistance as required, to assist with the delivery of national customs training workshops under HPMPs:

Africa Anglophone: SADC countries. *Caribbean:* 13 out of the 14 Caribbean countries were supported as part of HPMP customs training activities. *Europe and Central Asia:* Albania, Armenia, Kyrgyzstan, Moldova, Serbia, Turkey (including environmental inspectors). *Latin America, Mexico and Central America:* Chile, Colombia, Dominican Republic, Ecuador, El Salvador and Guatemala. *Pacific Island Countries:* Cook Islands, Kiribati, Micronesia, Marshall Islands. *South Asia:* Afghanistan. *South East Asia:* Lao PDR, Myanmar, Timor Leste. *West Asia:* Bahrain, Kuwait, Iraq and Oman.

- CAP also assisted countries to include ODS issues in its training of newly recruited customs officers from Afghanistan, Bhutan, China, Cambodia, Fiji, Iran, Maldives, Solomon Islands, Sri Lanka, Pakistan, Timor Leste.
- Presented the OzonAction smartphone application “WhatGas?” and Refrigerant Identifier Video application to customs and enforcement officers to facilitate customs in the inspection of refrigerant during the clearance process.
- Presented and encouraged the use of the WCO – UNEP e-learning customs training modules to NOUs and national customs agencies during the Customs and enforcement officers’ trainings and Network/Thematic meetings as well as external customs meeting such as the UNDOC regional meeting of SA customs officers and the WCO Regional Workshop on Combating Environmental Crime and Debriefing of WCO Operation "Demeter IV".
- Launched and outreached the Global Montreal Protocol Award for Customs and Enforcement Officers; ECA prepared the case descriptions for 47 successful iPIC consultations (from 12 countries) for validation by the expert panel, preventing illegal/unwanted trade of more than 2,000 tonnes of ozone-depleting substances.
- ECA: RILO Western Europe (WE), Eastern and Central Europe (ECE) and Commonwealth of Independent States (CIS) are longstanding partners of the ECA network, attending relevant meetings and publishing Montreal Protocol articles in their news bulletins. ECA attended RILO ECE meeting of national contact points
- Included sustaining customs training in the agenda of the national training workshops of customs and enforcement officers and in joint customs-NOU events, as well as during country missions.
- Continued WCO and RILO cooperation, sharing of information, attending relevant meetings and customs trainings, and inviting WCO/RILO to participate in CAP meetings; participating in an enforcement operation on the monitoring and control of cross-border movements of waste and illegal trade in ozone-depleting substances and HFCs; Word Customs Organization sent a technical officer to participate in the Regional Workshop for Customs Officers and National Ozone Officers of Latin America on HCFC/HFC Controls and Illegal Trade Prevention, in Paraguay.
- Cooperated with RILO A/P to following up on specific issues related to suspicious shipments of ODS and the operation of ODS trade controls between Iran, Pakistan and Afghanistan through a Free Trade Zone in Dubai.
- RILO Western Europe (WE), Eastern and Central Europe (ECE) and Commonwealth of Independent States (CIS) are longstanding partners of the ECA network, attending relevant meetings and publishing Montreal Protocol articles in their news bulletins. ECA attended June 2019 RILO ECE meeting of national contact points
- Discussed procedures for dealing with seizures in network/thematic meetings (including in the Border Dialogues and Risk Profiling workshops); Information shared with all NOUs on the need to inform the Ozone Secretariat on the seizures and the processes of dealing with them (assisting countries as required)
- CAP Participated in the UNDOC regional meeting of SA customs officers with the participation of 60 customs officers from Bangladesh, Pakistan, Sri Lanka, Maldives, and delivered a training

session on MP related issues; in collaboration with Oceania Customs Organization, initiated discussion on ODS risk profiling in the PICs.

SPO 4: Assist countries to achieve the 35% HCFC target in 2020 and prepare for 67.5% target in 2025

- NOUs provided with technical assistance to expedite implementation, monitoring and reporting on their ongoing and new HPMP Stage I and Stage II tranches, provided additional/specific assistance to:
 - Africa Francophone:* Mauritania. *Caribbean:* Antigua and Barbuda, Haiti, Dominica, Grenada and Suriname. *Europe and Central Asia:* Moldova, Kyrgyzstan, Serbia, Albania, Armenia. *Latin America, Mexico and Central America:* Dominican Republic, El Salvador, Guatemala, and Honduras. *Pacific Island Countries:* Kiribati, Micronesia, Marshall Islands, Nauru, Solomon Islands, Tuvalu. *South Asia:* Afghanistan, Bangladesh, China, India, Iran, Nepal, Maldives, Pakistan. *South East Asia:* Brunei, Cambodia, Lao PDR, Myanmar, Timor Leste. *West Asia:* Bahrain, Iraq, Qatar and Saudi Arabia.
- CAP carried out regular discussions with NOUs including through country missions on HPMP implementation, monitoring and reporting, also providing assistance on an *ad hoc* basis and through bilateral discussion during relevant meetings, provided additional/specific assistance to:
 - Africa Francophone:* Mauritania, DRC, Guinea Bissau. *Caribbean:* Antigua and Barbuda, Belize, Barbados, Dominica, Grenada, Haiti, Suriname and St. Vincent and the Grenadines. *Europe and Central Asia:* ECA network meetings in Paris. *Latin America, Mexico and Central America:* Colombia, Chile, Ecuador, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay and Peru. *Pacific Island Countries:* Kiribati, Tuvalu, Cook Islands, Marshall Islands, Micronesia and Vanuatu. *South Asia:* Pakistan, Afghanistan, India, China, Mongolia, Nepal and Sri Lanka. *South East Asia:* Cambodia, Brunei, and Timor Leste. *West Asia:* Bahrain, Iraq, Qatar and Saudi Arabia.
- Maintained regular coordination with other Implementing Agencies and Bilateral Agencies on jointly implemented Projects (UNIDO, UNDP, GIZ, France, Japan.)
- UNEP assisted countries with preparing and submitting **18** HPMP Stage I tranches, **6** HPMP Stage II tranches, **26** HPMP Stage II preparation, HPMP stage I verification reports for **21** countries, **41** Institutional Strengthening projects, and **10** technical assistance projects (enabling activities), approved at ExCom-82.
- Provided platform for discussion of technology trends at the Second Global Inter-Regional Meeting and ‘Join the Experts’ Sessions for National Ozone Officers February 2019: January 2019 in Paris, as well as at Network and other Meetings (technology roundtables and exhibitions, site visits, meetings with NOOs and RAC associations; Including sessions to support Article 5 countries to achieve the 35% HCFC target post-Kigali, and specific meetings/sessions focusing on Compliance with the Montreal Protocol Post-Kigali and Enabling Conditions for HFC Phase-down while Phasing out HCFCs.
- Provided specific targeted information services on technologies and policies based on needs identified by NOUs in relation to the alternatives for HAT.
- Included market analysis and readiness for zero ODP and low GWP technologies as an activity in all Enabling Activity projects in which UNEP is the lead agency, in both MAC and RAC Sectors.

OVERARCHING OBJECTIVE 2: Strengthening the refrigeration servicing sector for ozone & climate-friendly alternatives

SPO 1: Develop, deliver & coordinate capacity building & sustainable technician training in the RSS

SPO 2: Advancing sustainable certification & qualification in the RSS

SPO 3: Promote development & enforcement of standards for safe handling of flammable & toxic alternatives

SPO 4: Promote assessment of refrigerant management in the fishing and maritime sector

SPO 5: Address high ambient temperature country's needs

SPO 1: Develop, deliver & coordinate capacity building & sustainable technician training in the RSS

- Provided support to NOUs to engage with the RAC Associations to support outreaching to RAC technicians and support in the delivery of good practices training programme under HPMPs, including as part of Institutional Strengthening and HPMP Projects, provided additional/specific support to:
 - Africa Francophone:* Madagascar, Comoros, Guinea Bissau, Equatorial Guinea, Mauritania, Senegal, Burkina Faso, Benin. *Latin America, Mexico and Central America:* Bolivia, El Salvador, Honduras, Guatemala and Nicaragua. *Pacific Island Countries:* Fiji, PNG, Samoa, and Solomon Islands, Palau. *South Asia:* Bangladesh, China, India, Maldives, Mongolia, Nepal, Pakistan. *South East Asia:* Lao PDR, Myanmar. *West Asia:* Bahrain, Kuwait, Oman and Iraq.
- Included training needs assessments on the MAC servicing sector as an activity in Enabling Activity projects (Technology penetration trends of MAC and RAC Sector and Existing infrastructure of RAC and MAC sector).
- Introduced the *Refrigerants Literacy e-Learning Course* and *Sound Management of Refrigerants* and offered to all stakeholders in Article 5 countries, through outreach, side events and network/thematic meetings (see Annex 2A: *Progress report on four global CAP activities*). The course was translated into Spanish by ASHRAE with Technical review from the NOU of Costa Rica.
- Developed, in cooperation with international partners, the “Universal Training Kit” which provides a comprehensive modular training package the good practices for different types of applications and refrigerants. (See Annex 2A: *Progress report on four global CAP activities*)
- Held a number of specific workshops for trainers and instructors on good servicing practices, and flammable refrigerants (see Annex 2D: *Meetings and workshops*).

SPO 2: Advancing sustainable certification & qualification in the RSS

- Provided technical and policy assistance to NOUs in developing and enforcing national certification schemes as regular part of the agendas of meetings as well as the focus of thematic workshops, engagement with local stakeholders, national consultations, sharing examples between countries and discussing the establishment of national qualification frameworks for integration in training and certification of RAC technicians (See Annex 2A: *Progress report on four global CAP activities* & Annex 2D: *Meetings and workshops*); provided specific/additional assistance to:
 - Europe and Central Asia:* Albania, Armenia, Kyrgyzstan, Moldova. *Latin America, Mexico and Central America:* Honduras. *Pacific Island Countries:* Solomon Islands, Vanuatu. *South Asia:* Afghanistan, Bangladesh, China, India, Mongolia, Nepal, Pakistan, Sri Lanka. *South East Asia:* Timor Leste, Brunei, Cambodia, Lao PDR. *West Asia:* Bahrain, Kuwait, Iraq and Oman.

- Developed the Refrigerant Management Certification Program “*Refrigerant Driving License*” in cooperation with international partners. Selected countries are currently in the pilot stage: Grenada, Maldives, Rwanda, Sri Lanka, Suriname, Trinidad & Tobago. (*See Annex 2A: Progress report on four global CAP activities*).
- Carried out review of the existing infrastructure in the certification system in selected countries to identify the modality as to how the RAC certification can be integrated into the existing system or the need to establish a stand-alone certification system:
 - Europe and Central Asia:* Albania, Armenia, Kyrgyzstan, Moldova. *South Asia:* Mongolia.
 - South East Asia:* Brunei Darussalam and Lao PDR.
- Assisted countries with the development of Refrigerant Management Certification Program in cooperation with international partners.
- Supported countries to develop a competency standard under National Qualification Frameworks (NQF) to include good practice competency; Supported Refrigeration and Air Conditioning Industry Associations to promote certification system with good practices requirements for servicing workshops:
 - Caribbean:* Guyana. *Pacific Island Countries:* Solomon Islands. *South Asia:* China, Mongolia.
 - South East Asia:* Timor Leste. *West Asia:* Bahrain and Oman.

SPO 3: Promote development & enforcement of standards for safe handling of flammable & toxic alternatives

- Disseminated information on safety standards, factsheets, mobile applications and publications to NOUs and relevant stakeholders
- Translated the “Quick Guide on Good Servicing Practice for Flammable Refrigerants” into Russian
- During network and thematic meetings, initiated national level discussion for the review and adoption of relevant safety standards, including the new IEC standards for commercial refrigeration and air-conditioner applications, standard operating procedures, etc
- Supported Iran in organizing the National consultation workshop on standards in October 2018. An MoU with the Standards Bureau of Iran and NOU was signed for cooperation on these issues; ongoing work in cooperation with the League of Arab States to update the Unified Codes for RAC and Insulation for the wide use by all countries
- Assisted countries to develop a national work-plan for the initiating the cooperation with local standardization bodies and ensure cooperation in updating/enforcing relevant standards:
 - Africa Anglophone:* Malawi, Mozambique, Zimbabwe. *South Asia:* Afghanistan, Bangladesh, China, India, Iran, Maldives, Mongolia, Pakistan, Nepal. *South East Asia:* Cambodia.

SPO 4: Promote assessment of refrigerant management in the fishing and maritime sector

- UNEP completed this specifically-funded global CAP activity in 2018 as reported in the 2018 CAP Progress Report. However, CAP continued its work related to refrigerant management in the fishery sector, especially in the Pacific Island Country region: During the Network and Thematic Meetings of the Pacific Islands Countries’ Ozone Officers data collection on ODS (and HFC) usage in the fisheries sector was discussed. Bilateral discussions with fisheries authority and fisheries industry were also conducted during country missions.
- With UNEP’s CAP’s assistance, the Pacific Islands Forum Fisheries Agency (FFA) presented a proposal to the Marine Stewardship Council (MSC) to approve two (2) new columns on the FFA Vessel Register application form. i.e. (i) Type of refrigerant; and ii) Capacity of refrigerant system (Kilograms). The proposal was approved and adopted by the MSC through a MCSWG20 Decision

in March 2018 and has been implemented by the FFA member countries, noting that this only applies to newly registered vessels after the adoption of the decision.

- Under the HPMP Stage II preparation project, CAP assisted the PIC National Ozone Officers in developing a specific questionnaire to collect data from the fisheries sector, in particular vessel information, type of refrigerants, holding capacity and etc. taking into account challenges identified from the meeting in 2018.

SPO 5: Address high ambient temperature country's needs

- Included EGYPRA and PRAHA-II projects detailed analysis and comparison of HAT testing in relevant meetings: completed all tests were which were validated by two international experts, developed, reviewed and finalized the final report and shared with all stakeholders
- Used the outcomes of the EGYPRA project to inform Stage-II of the HPMP of Egypt and the preparation for the A/C conversion project planned for submission to ExCom-84; Organised several sessions to present the outcomes of the project at network meetings and relevant international events
- PRAHA-II project: Completed work on optimisation and tests of PRAHA-I prototypes in cooperation with international institutes; organised two expert workshops for building the risk assessment model as part of PRAHA-II; Data collected from two countries for installation and servicing conditions on residential split A/Cs used to assist in drafting the first model; prepared draft Risk Assessment model and included this in the PRAHA-II report; Preliminary report was submitted to ExCom-83. Final report is drafted and will be ready for submission to ExCom-84.

OVERARCHING OBJECTIVE 3: Building capacity to initiate enabling activities for the HFC phase-down

SPO 1: Facilitate and support ratification of Kigali Amendment

SPO 2: Assist countries to review current data reporting approaches

SPO 3: Assist with review of licensing systems

SPO 4: Support institutional arrangements

SPO 5: Implement demonstration projects for non-investment activities

SPO 6: Assist with implementation & monitoring of Enabling Activities projects

SPO 1: Facilitate and support ratification of Kigali Amendment

- Conducted specific missions to countries to participate in multi-stakeholder consultations on Kigali Amendment:
Africa Francophone: Chad, Guinea Bissau, Cape Verde, Equatorial Guinea, Senegal, Guinea, Mauritania, São Tome & Principe. *Pacific Island Countries:* Solomon Islands. *South Asia:* Afghanistan (high level ministerial meeting), Bangladesh, Mongolia, Nepal, Sri Lanka (high level ministerial meeting), Pakistan (high level ministerial meeting). *South East Asia:* Brunei Darussalam, Cambodia, Timor Leste (high level ministerial meeting), Vietnam. *West Asia:* Oman, Iraq, Saudi Arabia, Syria.
- Exchanged information during network and thematic meetings, provided documentation and information to NOUs on implications of Kigali ratification; assisted countries with relevant information to initiate the process. Provided support as needed (in cooperation with Ozone Secretariat) to countries in the ratification process, provided specific assistance to:
Africa Francophone: Mauritania, Guinea Bissau, Cape Verde, Chad, Equatorial Guinea, Senegal and Sao Tome & Principe. *Caribbean:* Guyana, Saint Lucia, St. Vincent and the Grenadines, Suriname, Dominica. *Europe and Central Asia:* Georgia, Kyrgyzstan,

Turkmenistan. *Pacific Island Countries:* Cook Islands, Nauru, Fiji. *South Asia:* Bhutan. *West Asia:* Oman, Iraq, Saudi Arabia and Syria.

- Developed, in cooperation with Bahrain and Kuwait and international partners, a special modelling tool (HFC outlook) to assist in the understanding of the impact of Kigali Amendment on technology selection and options in air-conditioning industry. Following this, a simplified version of the model is being piloted in ten (10) Article-5 countries in Latin America, Africa, South Asia, West Asia and East Europe. Organised training and orientation workshops to experts from the eight countries including face-to-face and remote sessions. Completed the data collection phase in most countries and validation/review is ongoing.

SPO 2: Assist countries to review current data reporting approaches

- Developed and incorporated guidelines on data collection, data verification and reporting including recent changes, into the new National Ozone Officers Training Programme; continued outreach of the “GWP-ODP calculator” smartphone and desktop application to assist in the understanding of reporting pure substances and mixtures
- Review of Quota & Licensing systems by developing a self-assessment questionnaire, checklist and interviews with NOUs of Afghanistan, Bangladesh, Mongolia, Malaysia, Pakistan, Sri Lanka, Iran with the view of identifying gaps and needs, best practices and develop recommendations for improvement
- Included activities on data collection (and loopholes and challenges), including tools and information available during country missions and network meetings and included in Enabling Activity Projects.

SPO 3: Assist with review of licensing systems

- Supported A5 countries in reviewing the existing legislation on HCFC control and provide advice on options, included as topic in network and thematic meetings
- As part of activities of Enabling Activities Projects with UNEP as implementing agency, CAP has advised countries to review and amend the existing ODS licensing system to strengthen the implementation of HCFC control and to include HFC import and export control, provided specific additional assistance to:
Caribbean: Dominica, Guyana, St. Vincent and the Grenadines. *Europe and Central Asia:* Georgia, Kyrgyzstan, Turkmenistan. *Pacific Island Countries:* Tonga and Vanuatu. *South Asia:* Afghanistan, Bhutan, Mongolia, Nepal, Sri Lanka and Pakistan. *South East Asia:* Cambodia and Lao PDR.
- Provided information to countries on including suggested WCO (World Customs Organization) HS (harmonised system) code additional sub-headings for HFCs and HFC blends; shared regional and national experiences provided guidance on approaches countries should adopt prior to release of specific HS codes for HFCs; CAP further shared information about HS codes regularly with countries through e-forums, bilateral consultations, country missions and included the issue in the Enabling Activity project activities.
- Supported the 14 PICs to prepare a proposal for the Oceania Customs Organisation to amend the Pacific Harmonized Commodity Description and Coding System 2017 by including specific HS Codes for HFCs and HFC blends based on the WCO recommendations; supported Cambodia in the successful development of online licensing system for HCFC, HFC and RAC equipment.
- Invited a specialist in Customs Codes from the WCO to attend the thematic meeting of Latin America in Asuncion, Paraguay, August 2019 to present the issues of HS codes for HFCs
- Review of national data reporting approaches included in Enabling Activities projects of for HFC Phase-down; include components related to reviewing licensing and quota systems to include HFCs

- Facilitated the sharing of experiences in the implementation of licensing systems through Network and thematic meetings and through South-South cooperation amongst countries, provided specific/additional assistance to Dominica, Fiji and Vanuatu, Cambodia, Micronesia, Marshall Islands and Samoa, Senegal, Gabon and Congo DR.

SPO 4: Support institutional arrangements

- Reviewed and discussed institutional arrangements and policy options and regulations to address commitments taken under Kigali Amendment during Network and thematic meetings; shared national HFC policy and legislative options during meetings and monitored progress
- Included institutional arrangements and policy options specifically HFC-related policies and regulations in Enabling Activity projects. CAP is working with countries to review and identify (i) policy and regulation needs for HFC phase-down implementation – ODS related regulations, climate change, energy efficiency, safe adoption of alternatives, chemical and waste and RAC/MAC related regulations; and (ii) national institutional arrangement and partnerships.

SPO 5: Implement demonstration projects for non-investment activities

- Completed two demo projects, in cooperation with UNIDO, to examine feasibility of 1) use of not-in-kind technology in District Cooling applications in Egypt and 2) use of not-in-kind technology in Central A/C applications in Kuwait
- The models included: Technical feasibility of the suggested technologies compared to conventional (vapor compression) technology; Financial feasibility of the suggested technologies compared to conventional (vapor compression) technology; Model regulatory and institutional framework to promote and manage district cooling facilities including promoting lower-GWP options; Development of national code for A/C installations including reduction of emissions and promotion of lower-GWP alternatives
- Organised several technical sessions to present the outcomes of the two studies at network meetings as well as international events

SPO 6: Assist with implementation and monitoring of Enabling Activities projects

- Implemented, as the Lead Agency, 90 Enabling Activities projects
- Presented and discussed the implication of developing national strategies for HFC phase-down during national stakeholder workshops and network/thematic meetings and included in proposals of Enabling Activity projects, providing regular support with the project implementation
- Held meetings/sessions specifically focusing on Enabling Activities projects most regions

OVERARCHING OBJECTIVE 4: Leveraging the Clearinghouse mandate

SPO 1: Coordinate ten Regional Networks and facilitate country-to-country cooperation

SPO 2: Coordinate, develop & outreach capacity building and information services

SPO 1: Coordinate ten Regional Networks & facilitate country-to-country cooperation

- Held a Second Global Inter-Regional Meeting and ‘Join the Experts’ Sessions for National Ozone Officers (315 participants), and Parallel Network Meetings for all National Ozone Officers, was organised in Paris, France, February 2019
- Held 36 Network and Regional thematic meetings (as well as trainings and border dialogues) for all regions (*See Annex 2D: Meetings and workshops*).

- Carried out NOO training using the new National Ozone Officers Training Programme for new NOOs in SADC countries, PIC Network comprising 11 countries, South Asia and Southeast Asia Networks comprising 13 countries
- CAP facilitated south-south cooperation activities to strengthen capacity of the NOUs and local stakeholders:
 - Africa Francophone:* Gabon and DRC Ozone Officers to Senegal. *Caribbean:* St. Vincent and the Grenadines and Suriname (electronic systems). *Pacific Island Countries, South Asia & South East Asia:*
 - China –training on flammable refrigerants consultation for RSS master trainers for 23 Asian countries
 - China - Bangladesh: training of 19 master trainers and instructors on flammables and R-290 technologies
 - Cambodia – Viet Nam: border dialogue Meeting between Ozone and Customs Officers
 - Fiji and Vanuatu: implementation and enforcement of the licensing and quota system
 - Cook Islands and Fiji: Customs and Enforcement Officers training
 - Cambodia and Micronesia, Solomon Islands, Marshall Islands, Samoa, and Vanuatu: Sharing experiences in the development and operation of online licensing systems
 - Fiji and Solomon Islands / Malaysia – Timor Leste: development of national qualification framework for good servicing practices in RAC sector
 - Afghanistan, Iran and Pakistan - border dialogue
 - India assisted the delivery workshop on ammonia technology in dairy industry in Bhutan
 - Philippines assisted Afghanistan for the technician certification system.
 - West Asia:* Jordan and Oman: Licensing and enforcement
 - Jordan and UAE: phasing out ODS in the foam sector.
- Partnered with the Kigali Cooling Efficiency Programme (K-CEP) for capacity Building for National Ozone Officers and Technical Support for Linking Energy Efficiency with Montreal Protocol Objectives during back-to-back meeting following the Second Global Inter-Regional and Parallel Network Meetings, as well as during network meetings (*See Annex 2D: Meetings and workshops*).

SPO 2: Coordinate, develop & outreach capacity building and information services

- Developed a range of new global and regional capacity building and information products and services, including guides and publications, factsheets and policy briefs
 - HS Codes for HFCs - Advice for countries in advance of the 2022 HS code update (to assist countries understand the issue of HS codes for HFCs and to implement WCO recommendation to insert additional subdivisions in the national HS to distinguish between HFCs and mixtures)
 - New Refrigerants Designations and Safety Classifications Update 2019 (to ensure NOOs and other stakeholders are up to date with new refringent blends and their characteristics)
 - Women in the Refrigeration and Air-conditioning Industry: Personal Experiences and Achievements (and information resource addressing gender issues in the RAC sector)
 - Self-assessment questionnaire on the review of quota and licensing systems (to assist countries in analysing and improving the functioning of their systems)
 - World Ozone Day information package and guidance (information materials to be used by NOUs in carrying out awareness raising activities)
 - OzonAction – UN Environment Taking Action on the Montreal Protocol (awareness raising on the roles and activities of OzonAction)
- Developed innovative information tools including:
 - Refrigerant Identifier Video Series: - short instructional videos showing how to use and maintain a refrigerant identifier, guidance on safety and best practice, understanding the difference between different identifier units, testing procedures and identification of results
 - Update and improvement of the informal prior informed consent (iPIC) platform to simplify and streamline operation and improve security of the platform

- Compiled and disseminated twice-monthly OzonAction newsletter (OzoNews) for 22 editions (including 2 double editions) and OzonAction Scoop (1 edition)
- Translated OzonAction publications:
 - Quick Guide on Good Servicing Practices for Flammable Refrigerants” into Russian.
- Presented and demonstrated capacity building and information materials and online trainings at network meetings and further outreached
- CAP partnered with different RAC stakeholders to develop and outreach end-products that can be used by A5 countries to address the RSS training needs on alternative refrigerants: Developed two online courses on Refrigerants one for non-specialists (translated into Spanish); and another one for engineers/technicians
- Regularly updated the OzonAction website throughout the period, during which time 81,045 users accessed the site resulting in 164,534 page views.
- Outreached outcomes of specific projects complementary to Multilateral Fund to NOUs and other stakeholders to support HPMPs and assist countries to achieve climate co-benefits (e.g. Kigali Cooling Efficiency Fund projects).

EXPECTED OUTCOME:

ARTICLE 5 COUNTRIES ACHIEVE AND SUSTAIN COMPLIANCE WITH THEIR MONTREAL PROTOCOL OBLIGATIONS AND ACHIEVE CLIMATE CO-BENEFITS

Objectives	Outcomes	Planned Outputs	Assumptions and Risks
OVERARCHING OBJECTIVE 1: Assisting countries to comply with their HCFC phase-out commitments and sustaining compliance with prior targets			
<p>SPO 1 Support National Ozone Units for effective management of national Montreal Protocol compliance programmes</p>	<ul style="list-style-type: none"> • All IS projects approved for UNEP are implemented in a timely and effective manner. • Article 5 countries are supported with country-specific services. • NOUs collect, review and report accurate Article 7 and Country Programme data as per deadlines (or in advance). • Article 5 countries are supported for compliance and enforcement issues. • All NOUs requesting compliance assistance to address specific technical, policy, or operational issues are supported by CAP. • All new Ozone Officers and/or their assistants acquire basic skills, competencies and understanding of the Montreal Protocol and Multilateral Fund. 	<ol style="list-style-type: none"> 1. Provide NOUs with technical assistance to expedite the preparation, implementation, monitoring and reporting of their IS phases. 2. Deliver 414 country-specific services to NOUs as per Annex 1B - Country-specific services proposed for 2020 and respond to ad hoc requests. 3. Provide support to NOUs for accurate and timely Article 7 and Country Programme data reporting including: on requirements of the new reporting formats and online systems; and assisting NOUs to cross-check their national data from different sources including licensing system, customs data, reports by importers and wholesalers. 4. Encourage and facilitate exchange of experiences on compliance and enforcement relating to controlled substances, implementation and enforcement of bans on the establishment of new HCFC-based manufacturing facilities and import/manufacture of HCFC-based equipment, as per their national context, through inter alia Regional Network meetings and country-to-country exchanges. 5. Develop a Montreal Protocol Enforcement Guidebook to raise awareness of NOUs about the need for effective enforcement of Montreal Protocol policies and legislation, how to work with the enforcement chain in their countries, identify different enforcement approaches, and promote adoption of best practices. 6. Monitor the status of Montreal Protocol legislation, regulations and policies in Article 5 countries, including those planned to be put in place to help identify gaps and promote harmonised approaches within regions. 7. Develop a Guidebook on Setting Penalties to provide guidance, share different approaches, and identify best practices about 	<p><i>Assumptions</i></p> <ul style="list-style-type: none"> • High level political commitment • Stable political and economic conditions in countries • Operational National Ozone Unit (NOU) with dedicated and skilled staff at appropriate level • Government commitment to approve and adopt ODS legislation • Cooperation of national enforcement authorities and sub-regional trade and economic organisations • Constructive cross-border cooperation between customs and enforcement agencies in neighbouring countries • Controls to prevent illegal trade of ODS and ODS-based equipment are in place and effective <p><i>Risks</i></p> <ul style="list-style-type: none"> • Uncertainties in security situations • Unstable political and economic situation in countries • Frequent turn-over of Ozone Officers and changes in administration • Limited capacities of NOUs • Delays due to administrative procedures by IA and country administrations • Administrative or legal issues that may prevent fund disbursements and delay HPMP implementation

Objectives	Outcomes	Planned Outputs	Assumptions and Risks
		<p>setting and enforcing penalties for non-compliance with national Montreal Protocol legislation and regulations based on examples in developed and developing countries, that NOUs can share with judges and prosecutors in their legal systems.</p> <p>8. Offer training to all new Ozone Officers and/or their assistants using the Introductory Training for Newly-Appointed National Ozone Officers and/or country-to-country assistance and complete the Advanced Training for Experienced National Ozone Officers, pilot it in selected regions, and finalize it based on the feedback received.</p> <p>9. Assist NOUs to review and enhance their national tracking systems for methyl bromide used for quarantine and pre-shipment (QPS).</p>	<ul style="list-style-type: none"> • Delay or incomplete progress reporting by some countries due to the long process of data verification at national level (particularly in countries with political instability) • Unstable currency markets fluctuating during project implementation • Unreliability of information technology in some developing countries; access to email and prompt communication very limited in some countries
<p>SPO 2 Assist with strengthening & enforcing HCFC licensing & quota systems</p>	<ul style="list-style-type: none"> • This objective contributes to the following outcomes: • NOUs effectively assess, monitor and operate their HCFC licensing and quota systems as per Montreal Protocol/Multilateral Fund targets. • Innovative methods are adopted by countries to support enforcement of national licensing systems. • More countries use the informal Prior Informed Consent (iPIC) mechanism to complement and support their HCFC licensing and quota systems. 	<p>10. Help NOUs assess their licensing and quota systems to identify strengths/weaknesses and share best practices with regard to design, implementation and enforcement, through Network meetings and information materials and promote the enforcement of licensing systems beyond the customs' checkpoint through innovative approaches, e.g. mandatory labelling requirements of cylinders and market surveys.</p> <p>11. Develop an online and smartphone application to assist NOUs with planning and tracking their national quotas and licenses for controlled substances (mixtures and pure substances).</p> <p>12. Promote the revised online iPIC system, assist in conducting consultations and following up on responses, produce an annual report of its use, and develop an iPIC mobile application.</p>	
<p>SPO 3 Strengthen national capacity for effective customs & trade controls</p>	<ul style="list-style-type: none"> • NOUs update, monitor and enforce their national regulations and policies to facilitate and monitor legal HCFC trade and to combat illegal trade. • Customs agencies and NOUs deliver effective enforcement training workshops and related activities. • Article 5 countries are encouraged to use appropriate tools to deliver their national customs training. • Awareness and capacity of Article 5 countries is increasingly built regarding issues of illegal trade to assist them in combatting ODS smuggling 	<p>13. Encourage and assist NOUs to identify and analyse differences between their country's data and those reported by other countries with whom they trade controlled substances.</p> <p>14. Encourage and assist NOUs to review and revise customs and trade regulations and policies in cooperation with national customs and trade authorities, including development of a factsheet on terminology used in trade of controlled substances, e.g. country of origin, trans-shipment, transit, import for re-export that can cause data differences.</p> <p>15. Outreach, demonstrate and promote the UNEP-World Customs Organisation (WCO) Montreal Protocol Training for Customs Officers e-learning course, WhatGas? mobile application, and Refrigerant Identifier mobile application to NOUs and national customs agencies.</p> <p>16. Support countries to strengthen transboundary cooperation and intelligence sharing in combating illegal trade of controlled substances by organising border dialogues, and/or region-specific enforcement meetings with NOUs and Montreal Protocol customs focal points as well as collection, documentation and sharing of experiences, strategies and best practice on the effective role of customs in monitoring and</p>	

Objectives	Outcomes	Planned Outputs	Assumptions and Risks
		<p>combatting illegal trade, Cooperate with WCO, including its Regional Intelligence Liaison Offices (RILOs), and other institutions on coordinated enforcement operations aiming to detect and deter illegal trade in controlled substances and/or equipment, and encourage countries to participate the same</p> <p>17. Encourage information sharing of seizures and related intelligence between customs, NOUs, Regional Intelligence Liaison Offices (RILOs) national contact points in countries of origin, transit countries, seizure location and countries of destination, and encourage publicising of seizures in the media and through websites and reporting to the Ozone Secretariat; provide recognition to customs and enforcement officers to raise awareness of the global enforcement community about Montreal Protocol-related trade restrictions and encourage reporting and publicising successful cases of enforcement, e.g. through outreach of the results of the 2019 Global Customs Award, regional or global award schemes, and enforcement meetings.</p> <p>18. Promote risk profiling and online systems for application and approval of ozone depleting substances (ODS) trade to NOUs and customs authorities through Network meetings.</p> <p>19. Inform NOUs and customs about disposal options for seized chemicals, equipment and products including auctioning to countries through information materials, national Standard Operating Procedures (SOPs), checklists and Network meetings.</p>	
<p>SPO 4 Assist countries to achieve the 35% HCFC target in 2020 and prepare for 67.5% target in 2025</p>	<ul style="list-style-type: none"> • This objective contributes to the following outcomes: • Ongoing and new UNEP-assisted HPMP Stage I and Stage II tranches are implemented in a timely and effective manner. • Completed HPMP tranches are verified in a timely and effective manner. • All countries requesting UNEP assistance with Stage I or Stage II tranches, or new Stage II HPMPs are supported to prepare, submit and initiate those projects. • NOUs make informed choices about non-HCFC technologies and policies as they implement their HPMPs. • National RAC associations are engaged in national phase-out activities, as appropriate. 	<p>20. Conduct review of national HCFC consumption against the phase-out targets at network meetings and provide specific information and advice to NOUs and other stakeholders upon request, including but not limited to technologies and policies; provide NOUs with policy and technical assistance to implement, monitor and report on their ongoing and new HPMP Stages I, II or III.</p> <p>21. Assist countries to prepare and submit HPMP tranches for Stages I and/or II, and prepare Stages II and III, in coordination with partner Implementing and bilateral agencies.</p> <p>22. Implement HPMP verification projects as approved by the Executive Committee and follow up with countries on the implementation of recommendations from earlier verification report.</p> <p>23. Promote collaboration between NOUs and refrigeration and air conditioning (RAC) associations and encourage region-specific support to strengthen local institutions under HPMP Stages I, II and III; involve national RAC associations in selected network activities focusing on new technology trends, safety and performance standards, good practices, training and certification, equipment logbooks, etc.</p>	

Objectives	Outcomes	Planned Outputs	Assumptions and Risks
OVERARCHING OBJECTIVE 2: Strengthening the refrigeration servicing sector for ozone and climate-friendly alternatives			
<p>SPO 1 Develop, deliver & coordinate capacity building & sustainable technician training in the RSS</p>	<ul style="list-style-type: none"> Article 5 countries outreach and incorporate training tools and products developed by UNEP and international partners in the training programs for RAC technicians, including under HPMPs, IS and Enabling Activities projects. Countries conduct needs assessments for the mobile air conditioning (MAC) servicing sector in Article 5 countries including of the training, certification and institutional needs. Different stakeholders in Article 5 countries increasingly use training and tools aiming at upgrading the skills of service practitioners and master trainers, i.e. technicians and engineers, with regard to the sound management of refrigerants Countries increasingly give consideration to gender issues in the RAC sector in projects and training. 	<ol style="list-style-type: none"> 24. Outreach the training tools and products described in Annex 2B - CAP partnerships, products and tools developed in cooperation with international associations and ensure their incorporation in national projects and activities, and encourage NOUs to integrate them into ongoing and future training programs under HPMPs, IS projects and/or Enabling Activities projects. 25. Complete the assessment of future training and capacity building needs for the MAC servicing sector, including requirements for certification programs. 26. Organise regional national master trainer workshops for capacity building and exchange experiences for the delivery of the national training programme as per regional needs. 27. Promote gender mainstreaming of female technicians and experts the RAC sector to better achieve Montreal Protocol objectives, outreach their examples, and encourage participation of women in workshops and training organised by CAP and by Article 5 countries. 	<p><i>Assumptions</i></p> <ul style="list-style-type: none"> Skilled nationals for the servicing of equipment, particularly for 'longer term' alternatives Climate friendly and energy efficient alternatives are commercially available Availability of alternatives and affordable technologies Cooperation and active participation of other stakeholders <p><i>Risks</i></p> <ul style="list-style-type: none"> Increased trend of introducing high-GWP alternatives due to lower prices and commercial availability compared to low/lower GWP options particularly for RAC Technology and economic related concerns for high-ambient operating conditions Difficulties related to harmonising standards and codes at the regional level Limited engagement from external project Partners The availability and quality of technical input and/or regional and/or national input into the various activities not forthcoming Weak infrastructure of the RAC servicing sector in most developing countries; the RAC servicing sector often not recognised as a professional field. The Environment Ministry, commonly housing the NOU do not have mandate for setting/certification of national skills, energy management, safety etc. Unreliability of information technology in some developing countries; access to email and prompt communication very limited in some countries.
<p>SPO 2 Advancing sustainable certification & qualification in the RSS</p>	<ul style="list-style-type: none"> Technical and policy assistance is offered to support HPMPs with ongoing national certification programs. Increased cooperation between NOUs and Technical Vocational Education and Training (TVET) authorities. Article 5 countries benefit from piloting the global qualification program for sound management of refrigerants (Refrigerant Driving License - RDL). Existing refrigerant environmental certification schemes are shared and outreached. 	<ol style="list-style-type: none"> 28. Promote the development and implementation of sustainable and appropriate certification programmes for RSS in Article 5 countries as part of HPMPs or through CAP services, while understanding national institutional capacities and requirements. 29. Encourage and assist NOUs to work with their TVET authorities to integrate good servicing practices and other key aspects (e.g. safety, recovery, recycling and reclamation, energy efficiency, safe disposal) into their national qualification frameworks (competencies and skills) through curricula updates and certification schemes. 30. Evaluate the outcomes of the pilot stage of Refrigerant Driver's License (RDL) for Small Applications in six countries, i.e. Grenada, Maldives, Rwanda, Sri Lanka, Suriname, Trinidad and Tobago. 31. Promote the use of RDL in further pilot countries during 2020 including introduction of RDL as a TVET-recognized program in cooperation with respective authorities and relevant international partners; complete the documentation of RDL for the remaining applications, i.e. Commercial Refrigeration, Commercial Air Conditioning, and Enterprise, as well as finalize the organizational and operational arrangement for the RDL programme for wider application. Encourage Article 5 countries and their implementing agencies to incorporate RDL and other certification programs into their national phase-out programs and HPMPs. 32. Evaluate the model Refrigerant Environmental Certificate developed by international partners based on the experience of 	<p><i>Assumptions</i></p> <ul style="list-style-type: none"> Skilled nationals for the servicing of equipment, particularly for 'longer term' alternatives Climate friendly and energy efficient alternatives are commercially available Availability of alternatives and affordable technologies Cooperation and active participation of other stakeholders <p><i>Risks</i></p> <ul style="list-style-type: none"> Increased trend of introducing high-GWP alternatives due to lower prices and commercial availability compared to low/lower GWP options particularly for RAC Technology and economic related concerns for high-ambient operating conditions Difficulties related to harmonising standards and codes at the regional level Limited engagement from external project Partners The availability and quality of technical input and/or regional and/or national input into the various activities not forthcoming Weak infrastructure of the RAC servicing sector in most developing countries; the RAC servicing sector often not recognised as a professional field. The Environment Ministry, commonly housing the NOU do not have mandate for setting/certification of national skills, energy management, safety etc. Unreliability of information technology in some developing countries; access to email and prompt communication very limited in some countries.

Objectives	Outcomes	Planned Outputs	Assumptions and Risks
		West Asia, pilot it in three countries, and promote it to other Article 5 countries.	
SPO 3 Promote development & enforcement of standards for safe handling of flammable & toxic alternatives	<ul style="list-style-type: none"> • This objective contributes to the following outcomes: • Countries have increased awareness of relevant standards at national and regional levels. • Uptake by countries of national refrigerant codes based on a model code. • Increased awareness of standards for safe handling of flammable and toxic alternatives through technical information materials. 	<ol style="list-style-type: none"> 33. Organize Network sessions on refrigerants, standards and RAC applications in cooperation with international/regional partners, as per the need of each region. 34. Develop a model National Refrigerant Code that can be incorporated stand-alone or as part of relevant local codes (e.g. RAC or buildings). 35. Update and outreach technical information on good practices including flammable refrigerants, safety and handling, maintenance and leak detection, reducing use/emissions and enhancing energy efficiency in refrigeration servicing sector. 	
SPO 4 Address high ambient temperature country's needs	<ul style="list-style-type: none"> • Capacity of high ambient temperature (HAT) countries is strengthened with regard to air conditioning technology options. • NOUs and industry stakeholders are aware of the outcomes of the PRAHA-II and EGYPRA projects and those results help inform national decision making in other HAT countries. • Understanding of safe handling of flammable refrigerants in HAT countries enhanced. • Commercial and industrial refrigeration sectors in HAT countries are assisted to explore the technical feasibility of lower-GWP alternatives in consultation with respective NOUs and industry players. 	<ol style="list-style-type: none"> 36. Share knowledge from PRAHA-I and II projects with all 35 high ambient temperature (HAT) countries through a special training event to be implemented in conjunction with 6th High Ambient Symposium (2-4 March 2020) including different tracks for countries with manufacturing and servicing sectors and countries with only servicing sector. 37. Develop and outreach policy briefs about the outcomes of PRAHA and EGYPRA projects including comparisons with other relevant programs. 38. Pilot the Risk Assessment Model for the Safe Handling of Flammable Refrigerants produced under the PRAHA-II project in 2-3 HAT countries for the installation, operation and servicing of small applications. 39. Organize the 6th International Symposium on “Alternative Refrigerants for HAT Countries” with participation of international associations and all Article 5 HAT countries. 40. Assist HAT countries with larger consumption of HCFCs/HFCs in the commercial and industrial refrigeration sectors to explore the technical feasibility of lower-GWP alternatives for the refrigeration sector. 	

Objectives	Outcomes	Planned Outputs	Assumptions and Risks
OVERARCHING OBJECTIVE 3: Building capacity to initiate enabling activities for the HFC phase-down			
SPO 1 Facilitate and support ratification of Kigali Amendment	<ul style="list-style-type: none"> This objective contributes to the following outcomes: Ozone Officers better understand HFC issues and the implications of the Kigali Amendment for their national ODS phase-out programmes. Ratification of the Kigali Amendment is promoted in close collaboration with the Ozone Secretariat. Article 5 countries review their institutional arrangements for efficient implementation of HFC phase-down activities. Article 5 countries identify and address synergies and linkages between the national HCFC phase-out, overall national refrigerant use, map non-ODS, non-HFC alternative consumption patterns and elaborate future the HFC phase down national strategies. 	<ol style="list-style-type: none"> Raise awareness of NOUs about the Kigali Amendment before and after ratification, including assisting them to better understand the reasons and benefits of ratifying, and the legal, administrative, cost and technology implications, through Network meetings, information materials, etc. In cooperation with the Ozone Secretariat, encourage and support Article 5 countries to ratify the Kigali Amendment through presentations at Regional Network meetings, joint missions, bilateral meetings with countries, communications with Ozone Officers, etc. In collaboration with Implementing Agencies and Multilateral Fund Secretariat, draft guidelines, organize special sessions in Network meetings to discuss how countries might address overlapping issues and identify opportunities between HPMPs and HFC phase-down plans. 	<p><i>Assumptions</i></p> <ul style="list-style-type: none"> High level political commitment Government commitment to approve and adopt amendment Stable political and economic conditions in countries Operational National Ozone Unit (NOU) with dedicated and skilled staff at appropriate level Controls to monitor and control trade of HFCs are in place and effective/can be implemented <p><i>Risks</i></p> <ul style="list-style-type: none"> Uncertainties in security situations Unstable political and economic situation in countries Limited capacities/frequent turn-over of Ozone Officers and changes in administration Unstable currency markets fluctuating during project implementation Unreliability of information technology in some developing countries; access to email and prompt communication very limited in some countries Lack of specific customs codes (HS codes) for HFCs prior to control measures.
SPO 2 Assist countries to review current data reporting approaches	<ul style="list-style-type: none"> Article 5 countries are better informed and have their capacity enhanced regarding data collection, cross-checking and reporting of current ODS requirements and future HFC reporting requirements. 	<ol style="list-style-type: none"> Finalize the Updated Data Reporting Handbook in cooperation with Ozone Secretariat and Multilateral Fund Secretariat to help strengthen the capacity of NOUs to reflect new Article 7 and CP reporting requirements and specific technical issues related to the Kigali Amendment (blends, CO2 equivalent tonnes, etc.). Raise the awareness of NOUs on the importance to have their accurate and reliable HFC baselines and provide guidance about how to establish them; assist NOUs to identify practical methodologies for HFC data collection, analysis and reconciliation to ensure data accuracy, even in the absence of an HFC licensing system, through Network meetings, regional or sub-regional thematic workshops, and/or country missions. Provide the opportunity for the Ozone Secretariat to present the new online reporting system for Article 7 data during Network meetings, including possible hands-on clinics. Update WhatGas? and GWP-ODP Calculator mobile applications to include addition useful information to help NOUs differentiate between ‘actual’ GWPs and GWPs of mixtures in the context of the Kigali Amendment. 	
SPO 3 Assist with review of licensing systems	<ul style="list-style-type: none"> Improved capacity of NOOs and enforcement authorities to monitor and control ODS trade including HFCs. Improved HFC licensing and quota systems through sharing of experiences. Increased awareness of the need national customs codes for inclusion of HFCs and low-GWP alternatives for monitoring HFC imports until the new 2022 HS codes are approved by the World Customs Organisation (WCO). 	<ol style="list-style-type: none"> Assist NOUs to review their existing licensing and quota systems upon request; share regional experiences and good practices on ODS and HFC licensing and quota systems through Network meetings. Encourage countries to introduce voluntary HFC licensing systems even prior to the ratification of the Kigali Amendment. Encourage countries to review their national customs codes in the context of the 2022 HS code update to facilitate their future adoption of HFC codes. Update and share information on the 2022 update of WCO’s HS codes for HFCs and mixtures and 	

Objectives	Outcomes	Planned Outputs	Assumptions and Risks
		<p>provide guidance about what countries/regions should do prior to the release of those codes; support individual countries and/or work with regional customs organizations to assign specific customs codes (additional digits) for HFCs in their current national HS code systems as a temporary measure.</p> <p>51. Encourage countries to establish mandatory reporting by importers and wholesalers which usually provides more reliable import data than those only based on HS codes.</p> <p>52. Update the UNEP Customs Training Manual and the UNEP-WCO Montreal Protocol Training for Customs Officers e-learning course to include information on HFCs and Kigali Amendment.</p>	
<p>SPO 4 Support institutional arrangements</p>	<ul style="list-style-type: none"> • Countries have strengthened institutional arrangements for the implementation of activities, including consultations with relevant national government authorities who are responsible for climate change, energy efficiency, etc. • Countries develop more effective national policies and regulations. 	<p>53. Assist countries to understand the legal implications of the Kigali Amendment with regard to strengthening existing national laws, regulations and policies and identify new options needed to meet those commitments, through various means including participation of legal experts in Network meetings and development of an assessment tool. Assist countries to map new partners for the ratification and implementation of the Kigali Amendment.</p> <p>54. Upon request, and within available resources, provide direct expert guidance to help review existing legislation and regulations that need to be amended to phase down HFCs, with priority being given to countries that have ratified Kigali Amendment.</p> <p>55. Collect and share through an online resource of existing Montreal Protocol legislation and policies (including but not limited to HFC-related ones) in Article 5 countries to share information and experiences.</p>	
<p>SPO 5 Showcase demonstration projects for non-investment activities</p>	<ul style="list-style-type: none"> • Increased awareness in countries of demonstration projects for non-investment activities. 	<p>56. Showcase the results of the Egypt and Kuwait demonstration projects, about not-in-kind technologies for district cooling and central air conditioning applications, through factsheets and sessions at Network meetings.</p> <p>57. Support other Implementing Agencies to showcase of outcomes of completed demonstration projects through joint development of factsheets and sessions at Network meetings.</p>	
<p>SPO 6 Assist with implementation & monitoring of Enabling Activities projects</p>	<ul style="list-style-type: none"> • Effective implementation of UNEP-assisted Enabling Activity projects as per Executive Committee guidelines thus preparing country for implementing Kigali Amendment commitments and ratification of the Amendment. 	<p>58. Provide technical support to 94 UNEP-assisted countries to implement and report on their Enabling Activity projects and provide assistance to other countries upon request. Develop guidance and templates to assist countries in implementing and reporting on different activities and achievements under their projects and to document the lessons learned about how the fast-start activities can support early action on ratifying and implementing the Kigali Amendment.</p>	

Objectives	Outcomes	Planned Outputs	Assumptions and Risks
		59. Review the progress and challenges from the implementation of UNEP-assisted Enabling Activities projects during Network meetings or thematic workshops, subject to fund availability. 60. Produce information materials to assist countries in identifying and mapping the most appropriate and relevant CAP knowledge product/tool available to support implementation of each UNEP-assisted Enabling Activities component. 61. Complete the second phase of the HFC Outlook Model in eight countries (Bosnia and Herzegovina, Dominican Republic, Gabon, Guatemala, Honduras, Mali, Senegal and Sri Lanka) and offer it to other interested Article 5 countries, with a focus on LVCs. 62. In cooperation with international RAC association partners, and in support of the data collection and analysis work under the Enabling Activities projects, pilot the Cold Chain Database Model in 6-8 Article 5 countries as a comprehensive tool to survey and analyze the commercial/industrial refrigeration sectors in terms of technologies, use of refrigerants and other parameters.	
TRANSVERSAL OBJECTIVE 4: Leveraging the Clearinghouse mandate			
SPO 1 Coordinate ten Regional Networks & facilitate country-to-country, south-south cooperation	<ul style="list-style-type: none"> • Participation of 147 developing countries in Network and Thematic meetings. • Capacity of NOUs and other stakeholders is built, including in enabling activities needed in Article 5 countries to address both HCFCs and HFCs. • Rapid take-up of lower-GWP, energy efficient technologies is promoted through various fora • Where appropriate, Article 5 countries benefit from Country-to-Country cooperation (e.g. site visits, study tours, technology transfer, border dialogues). 	63. Organise Regional Network meetings in all ten regions for all NOUs that include the Ozone Secretariat, Multilateral Fund Secretariat, Implementing Agencies, selected international experts and relevant stakeholders (customs, RAC associations, energy officials, building planners, etc.) as appropriate to address priority issues, e.g. data reporting, customs codes, MRVE, standards, licensing and quota systems, illegal trade, good servicing practices, safety for flammable refrigerants, policy developments, energy efficiency, etc. 64. Organise thematic meetings in different regions for some/all NOUs on specific priority themes, depending on needs of countries and available resources. 65. Organize “Ozone2Climate Technology Exhibitions and Industry Roundtables” in different regions back-to-back with large industry events to encourage the rapid take-up of lower-GWP, energy efficient technologies, depending on needs of countries and available resources. 66. Facilitate country-to-country cooperation, e.g. site visits, capacity building, study tours, technology transfer, border dialogues, etc. to address specific priority needs articulated by NOUs.	<i>Assumptions</i> <ul style="list-style-type: none"> • Operational National Ozone Unit (NOU) with dedicated and skilled staff at appropriate level • Cooperation and active participation of other stakeholders • High level political commitment • Stable political and economic conditions in countries <i>Risks</i> <ul style="list-style-type: none"> • Limited engagement from external project Partners • Frequent turn-over of Ozone Officers and changes in administration • Limited capacities of NOUs • The availability and quality of technical input and/or regional and/or national input and participation into the various activities not forthcoming • Limited engagement from external project Partners

Objectives	Outcomes	Planned Outputs	Assumptions and Risks
<p>SPO 2 Coordinate, develop & outreach capacity building and information services</p>	<ul style="list-style-type: none"> • Increased awareness, understanding and enhanced capacity of NOUs and other relevant stakeholders (e.g. Technicians/servicing sector, Trade and enforcement) • Countries supported for implementation of IS, HPMPs, enabling activities projects and other MLF-funded projects. NOOs and other stakeholders remain informed and up to date with latest news, UNEP activities, policy and science related to the Montreal Protocol. 	<ol style="list-style-type: none"> 67. Create new and updated information materials, e.g. fact sheets, policy briefs, publications, smartphone applications, in response to emerging needs of Article 5 countries. 68. Conduct outreach of Montreal Protocol issues at key international, regional and national fora. 69. Maintain and enhance OzonAction web services including the OzonAction website (www.unenvironment.org/ozonaction) and OzonAction Meeting Portal (www.ozonactionmeetings.org). 70. Outreach the publications, products and services developed by CAP to ensure that they are well promoted and accessible to Article 5 countries as well as all Implementing Agencies; Encourage NOUs to translate, adapt and disseminate existing materials produced by OzonAction. 71. Encourage and support national celebrations of World Ozone Day on 16 September 2020; Develop, translate and outreach materials related to World Refrigeration Day on 26 June 2020. 72. Continue to develop and disseminate on a bi-weekly basis the OzoNews e-newsletter; Continue to develop and disseminate three times per year the OzonAction Scoop on topical subjects. Collect Montreal Protocol success stories and outreach them at global, regional and national levels 73. Translate prioritized publications into French and Spanish, and other UN languages, depending on regional priorities and available resources. 	<ul style="list-style-type: none"> • Unreliability of information technology in some developing countries; access to email and prompt communication very limited in some countries.

ANNEX 1B – COUNTRY-SPECIFIC SERVICES AND CAP SUPPORT PROPOSED FOR 2020

NETWORK AND THEMATIC MEETINGS

UNEP provides CAP support to all NOUs and other stakeholders to participate in the meetings of the Regional Networks of Ozone Officers, and to specific NOUs for thematic meetings, depending on the focus of those meetings. In 2020, UNEP anticipates providing services in this category to the following Article 5 countries (noting that the topics of some thematic meetings will be defined later)

Africa – Anglophone

- Network meetings – Joint Network Meeting of African Ozone Officers
- Thematic Meetings of National Ozone Officers of English-speaking African Countries on certification and standards and Support to female RAC technicians

Africa – Francophone

- Network meetings – Joint Network Meeting of African Ozone Officers.
- Thematic meetings – *tbc*

Caribbean

- Network meetings – All 14 countries in the region.
- Thematic meetings- 6 countries: The Bahamas, Dominica, Guyana, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines.

Europe and Central Asia

- Network meeting with NOOs and representatives of national RAC associations, and other experts: customs and enforcement officers, energy experts and building planners possibly in the margin of an international RAC conference – All 11 countries in the region (plus 7 self-funded CEIT countries)
- Network meeting with NOOs – All 11 countries in the region (plus 7 self-funded CEIT countries)

Latin America

- Network meetings – All 19 countries in the region.
- Thematic meetings -- HFC license/quota system enforcement

South Asia

- Network meetings – All 13 countries in the region.

- Thematic workshop - Strengthening legal aspects of MP implementation (regulation of quota and licensing and monitoring systems, enforcement, RSS management regulation, coordination and synergies with other policies for effective policymaking) with all SA countries

South East Asia

- Network meeting – All 11 countries in the region.
- Thematic meetings – Twinning Workshop for the SEA Ozone and Customs Officers on Strengthening Monitoring and Enforcement Mechanism for ODS and HFC Trade Control with all 11 SEA countries

Pacific Island Countries

- Network meeting – All 14 countries in the region.
- Thematic workshop on finalization of Regional HPMP Stage II (12 PICs), back-to-back with Thematic twinning workshop of NOOs and Technical and Vocational Education and Training (TVET) Focal Point of the Pacific Islands Countries on Enhancing and Sustaining Capacity Building of RAC Servicing Sector (12 PICs)

West Asia

- Network meetings – All 11 countries (plus one observer country) in the region.
- Thematic meeting – All 11 countries (plus one observer country) in the region– Safety Standards for the Safe Handling, Storage, Transportation and Disposal of Flammable Refrigerants and RAC Certification Systems.
- Thematic meeting – Enabling Activities projects Implementation – 5 countries working with UNEP

COMPLIANCE

UNEP provides compliance assistance services through CAP to NOUs upon request or identified needs to help the Ozone Officers ensure that national compliance commitments under the Montreal Protocol are met in a timely and efficient manner. In 2020, UNEP anticipates providing services in this category to the following Article 5 countries:

Africa – Anglophone

- Compliance monitoring – All 28 countries in the region.
- Focused assistance – Portuguese speaking: Angola and Mozambique jointly with Cape Verde, Guinea Bissau, Equatorial Guinea.

Africa – Francophone

- Compliance monitoring – All 26 countries in the region.
- Focused assistance – Portuguese speaking countries, Mali, Mauritania, Cape Verde, Guinea Bissau, Equatorial Guinea and Sao tome and Principe.

Caribbean

- Compliance monitoring – All 14 countries in the region.
- Focused assistance – 5 countries: Antigua and Barbuda, Dominica, Haiti, St. Kitts and Nevis, Suriname.

Europe and Central Asia

- Compliance monitoring – All 11 countries in the region (plus 7 associated CEIT countries).
- Monitoring the plan of actions to return to compliance – Kazakhstan, Ukraine (CEIT countries).

Latin America

- Compliance monitoring – All 19 countries in the region.
- Focused assistance - Bolivia, Guatemala, Nicaragua, Peru.

South Asia

- Compliance monitoring – All 13 countries in the region.
- Focused assistance – Data reporting support to all 13 countries; DPRK for potential non-compliance; Maldives for the complete HCFC phase-out.

South East Asia

- Compliance monitoring – All 11 countries in the region.
- Focused assistance – Data reporting support to all 11 countries; Myanmar, Viet Nam (special attention to meet compliance with 2020 reduction target).

Pacific Island Countries

- Compliance monitoring – All 14 countries in the region.
- Focused assistance – Data reporting support to all 14 countries; Nauru (special attention to ensure smooth and continued operation of the NOU); Fiji and PNG (special attention to meet compliance with 2020 reduction target).

West Asia

- Compliance monitoring – All 11 countries (plus one observer country) in the region.
- Focused assistance – 5 countries: Iraq, Saudi Arabia, Syria, Yemen and State of Palestine as an observer country.

POLICY SUPPORT

UNEP provides CAP support to NOUs upon request or identified need to help the Ozone Officers design, review, modify and/or enforce national legislation and policies needed to comply with the Montreal Protocol. In 2020, UNEP anticipates providing services in this category to the following Article 5 countries:

Africa – Anglophone

- 25 countries will be supported to design, review, modify and/or enforce national legislation and policies needed to comply with the Montreal Protocol.

Africa – Francophone

- All 26 countries in the region.

Caribbean

- All 14 countries in the region.

Europe and Central Asia

- All 11 countries in the region (plus 7 associated CEIT countries); Review of HCFC / HFC policy measures in place, planned to be put in place and not planned to exchange experience and to harmonize.

Latin America

- 10 countries: Bolivia, Colombia, Chile, Dominican Republic, El Salvador, Ecuador, Guatemala, Honduras, Paraguay, Peru.

South Asia

- Targeted assistance with policy review, revision and development for their strengthening and also inclusion of HFCs control in Afghanistan, Bangladesh, Bhutan, Iran, Maldives, Mongolia, Nepal, Sri Lanka and Pakistan.

South East Asia

- All 11 countries in the region (MRVE, strengthening legal framework as well as licensing system to include HFC control, strengthening prosecution capacity)
- Approach to assign specific HS code for HFCs and mixtures containing HFCs under the ASEAN HS codes (11 countries)
- Provide assistance for the review and revision of the Act/Regulation to control HFC in Brunei, Lao PDR, Myanmar and Timor Leste.

- Support establishment of regulation to ban the import the HCFC based equipment in Brunei, Lao PDR Myanmar and Timor Leste

Pacific Island Countries

- All 14 countries in the region (MRVE, strengthening legal framework as well as licensing system to include HFC control, Standard Operating Procedures to deal with the seizure, strengthening prosecution capacity).
- Adoption of specific HS code for HFCs and mixtures containing HFCs under the Pacific Harmonized Commodity Description and Coding System 2017.
- Establishment of risk profiling of ODS and HFC control in all 14 countries
- Development of Standard Operating Procedures for processes of seizures/confiscations and levying penalties in all 14 countries.

West Asia

- Assistance with policy review and regulations update to include HFCs controls as appropriate in: Bahrain, Jordan, Kuwait, Iraq, Oman, Qatar, Saudi Arabia, Syria, and State of Palestine as an observer country.

TECHNICAL ASSISTANCE

UNEP provides CAP support to NOUs, the refrigeration and air conditioning sector, customs, and other industry and government stakeholders with technical support for specific issues (e.g. technology, refrigerant management, standards, certification, safety, energy efficiency awareness) upon request. In 2020, UNEP anticipates providing services in this category to the following Article 5 countries:

Africa – Anglophone

- All 28 countries will be provided with support to establish RAC standards and certification schemes. Special assistance will be provided to female RAC technicians in capacity building in refrigerant management

- All 11 countries in the region (plus 7 associated CEIT countries).

- Implementation of HPMP tranches – Albania, Armenia, Moldova, Kyrgyzstan, Serbia, Turkey.

Africa – Francophone

- All 28 countries in the region.

Latin America

- 7 countries: Bolivia, Dominican Republic, Ecuador, Guatemala, Honduras, Paraguay, Peru. Themes: RAC service sector certification and safety standards.

Caribbean

- All 14 countries in the region in safety standards for safe handling of refrigerants. Subject to partnership with CARICOM.

South Asia

- All 11 countries of SA will receive technical assistance:
- Assistance with integration of good and safe servicing practices including handling

Europe and Central Asia

- Involvement of representatives of RAC associations / experts in ECA network meeting

flammable refrigerants into national curriculum and certification systems in Afghanistan, Bangladesh, Iran, Pakistan, Nepal, Mongolia and Maldives.

- Assist development of Standard Operating Procedures for safe handling (including storage and transportation) of flammable refrigerants for Iran, Bangladesh and Pakistan.
- Assistance with the inclusion of HFCs into the HS codes in 8 countries with the EA projects
- Training on good and safe practices in handling various low GWP alternatives in RAC application (e.g. ammonia, CO₂).

South East Asia

- All 11 countries in the region. Issues include:
- Sustaining RAC servicing sector through integration of good servicing practices and flammable refrigerant into training curriculum/module and RAC certification.
- Training on good practices in handling low GWP alternatives (NH₃) in RAC application for Myanmar, Cambodia.

Pacific Island Countries

- All 14 countries in the region. Issues include:
- Sustaining RAC servicing sector through integration of good servicing practices and flammable refrigerant into training curriculum/module and RAC certification
- Standard Operating Procedures for safe handling (storage and transportation) of flammable refrigerants.
- Exploring disposal mechanisms of confiscated and unwanted ODS.

West Asia

- All 11 countries (plus one observer country) in the region. Focus will be on development/update of related standards and sound management and safe handling of refrigerants including the adoption and operation of certification schemes for RAC technicians.

DATA REPORTING

UNEP provides CAP assistance to Ozone Officers to help them comply with data reporting requirements under Article 7 of the Montreal Protocol (including the new Ozone Secretariat's online reporting system for Article 7 data, when launched) and Country Programme data under the Multilateral Fund. The priority is on countries where UNEP implements the IS project, however support is available to any country requesting CAP's support. CAP also assists NOUs upon request for support with responding to Implementation Committee requests. In 2020, UNEP anticipates providing services in this category to the following Article 5 countries:

Africa – Anglophone

- All 28 countries in the region.

Africa – Francophone

- All 26 countries in the region.

Caribbean

- All 14 countries in the region.

Europe and Central Asia

- Monitoring and follow-up on data reporting and assistance upon request - All 11 countries in the region (plus 7 associated CEIT countries).

Latin America

- 9 countries – Bolivia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Paraguay, Peru.

South Asia

- All 13 countries in the region: on-line report of Article 7 and CP data with new reporting formats.

South East Asia

- All 11 countries in the region.

Pacific Island Countries

- All 14 countries in the region.

West Asia

All 11 countries (plus State of Palestine as an observer country) in the region

AWARENESS AND INFORMATION

In addition to global information, communication and education services, UNEP also provides CAP assistance to support awareness and information activities at the national and regional levels, both within and outside of the Institutional Strengthening projects. In 2020, UNEP anticipates providing services in this category to the following Article 5 countries:

Africa – Anglophone

- All 28 countries in the region; Disseminate and outreach UNEP awareness materials through ROA-E Network meetings and regular communication within the Network.

Africa – Francophone

- All 26 countries in the region.

Caribbean

- All 14 countries in the region.

Europe and Central Asia

- All 11 countries in the region (plus 7 associated CEIT countries).
- Outreach of a-Montreal Protocol related awareness materials produced by OzonAction or other partners through ECA dissemination lists and meeting USBs

Latin America

- All 19 countries in the region. Global communication products and capacity building tools translated to Spanish.

South Asia

- All 13 countries in the region; Targeted assistance on communication and outreach to selected SA countries as model for further replication and adoption by other countries

(Afghanistan, Bangladesh and Sri Lanka, Pakistan).

South East Asia

- All 11 countries in the region
- Guide on preparation of 2020 World Ozone Day and World Refrigeration Day, outreach and disseminate global information, awareness and capacity building products
- Cambodia and Viet Nam; to raise awareness of Customs on border trade of ODSs and HFCs

Pacific Island Countries

- All 14 countries in the region.
- Guide on preparation of 2020 World Ozone Day and World Refrigeration Day
- Regional competition for RAC technicians to be organized as part of the celebration
- Outreach and disseminate global information, awareness and capacity building products
- Raise awareness of traders and RAC technicians on mislabelled refrigerant.

West Asia

- All 11 countries (plus State of Palestine as an observer country) in the region.
- Special assistance to regional organisations for enhanced engagement in MP work

KIGALI RATIFICATION AND ASSOCIATED ACTIVITIES

UNEP provides CAP assistance to support Article 5 countries on Kigali Amendment-related issues including monitoring the status of ratification, helping Ozone Officers understand its implications for their countries, supporting the ratification process and/or initial activities required to implement its provisions, including assistance with Enabling Activities projects. In 2020, UNEP anticipates providing services in this category to the following Article 5 countries:

Africa – Anglophone

- 22 countries in the region.
- Support countries to fast-track implementation of Enabling Activities and reporting.
- Review status of ratification of Kigali Amendment and provide special assistance to remaining countries to ratify.

Africa – Francophone

- All 26 countries in the region.

Caribbean

- All 14 countries in the region.

- Focused assistance: 8 countries: The Bahamas, Belize, Dominica, Guyana, Saint Lucia, St. Vincent and the Grenadines, St. Kitts and Nevis, Suriname.

Europe and Central Asia

- Review of status of Kigali Ratification and sharing of lessons learned - All 11 countries in the region (plus 7 associated CEIT countries).
- Implementation of enabling activities – Georgia, Kyrgyzstan, Turkmenistan.

Latin America

- All 19 countries in the region.
- Focused assistance – 8 countries: Bolivia, Chile, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Paraguay.

South Asia

- All 13 countries in the region.
- Focused assistance -8 countries with the EA projects.

South East Asia

- All 11 countries in the region.

- Focused assistance - Lao PDR and Cambodia (reporting of HFC consumption and establishment of licensing system for HFCs), Brunei, Myanmar, Timor Leste (support needed to facilitate ratification).

Pacific Island Countries

- All 14 countries in the region.
- Focused assistance - Cook Islands, Kiribati, Marshall Islands, Micronesia, Niue, Palau, Samoa, Tonga, Tuvalu and Vanuatu (reporting of HFC consumption and establishment of licensing system for HFCs), Solomon Islands, PNG, Fiji, Nauru (support needed to facilitate ratification).

West Asia

- All 12 countries in the region.
- Focused assistance to 5 countries where CAP is implementing Enabling Activities projects

SOUTH-SOUTH COOPERATION

UNEP provides CAP assistance upon request to facilitate cooperation between two or more countries to address specific targeted needs identified by Ozone Officers. This cooperation may take the form of bilateral country-to-country (South-South, North-South) assistance or arrangement involving several countries, depending on the needs. The cooperation may entail visits, technical missions, or study tours and varies in nature from one year to another. In 2020, UNEP anticipates providing services in this category to the following Article 5 countries (activities will be determined upon a case-by-case basis and upon assessing the needs of the countries):

Africa – Anglophone

- Study visit for Malawi, Mozambique and Zambia to Zimbabwe to discuss the adoption of Zimbabwe certification standards.

Africa – Francophone

- Subject to fund availability and resources upon request (countries encouraged to exchange and suggest requirements).

Caribbean

- Grenada-St. Vincent and the Grenadines to exchange best practices regarding establishment of and implementation of an e-licensing and quota system. Subject to fund availability and resources.

Europe and Central Asia

- Subject to fund availability and resources upon request.

Latin America

- Subject to fund availability and resources upon request.

South Asia

- Iran, Afghanistan, Pakistan a regional customs training in Bandar Abbas, Iran.
- Training for master trainers on flammables in China and/or India.
- Philippines expert to support the development of certification in Afghanistan and trainings on GSP and flammables.
- China and India on R-290 technology in the application of the room air conditioning sector.

South East Asia

- Malaysia – Brunei: Brunei NOO to visit Malaysia NOU to increase knowledge of

operation of the NOU, enforcement of licensing system, project implementation, and engagement with national stakeholders.

- Malaysia – Brunei: Malaysia experts to deliver training of Brunei’s master trainer on good servicing practices on flammable refrigerants.
- Malaysia – Timor Leste: Trainer of Timor Leste to attend the RAC workshop in Malaysia to gain experiences in the delivery of training on good servicing practices.
- Cambodia-Timor Leste: Customs expert of Cambodia to visit Timor Leste to share their experiences in the integration of ODS control in the risk profiling system.
- Thailand – Lao PDR: TVET expert from Thailand to visit Lao PDR to support the development of national qualification framework only specific for RAC sector.

Pacific Island Countries

- Samoa/Micronesia - Marshall Islands: RAC expert from Samoa/Micronesia to visit to Marshall Islands to deliver Good Service Practice for RAC technician
- Fiji-Solomon Islands: Experts from Fiji to visit Solomon Islands to share their experiences in the establishment and implementation of permit to handle refrigerant
- Fiji-Nauru, Tuvalu and Marshall Islands: NOO of Nauru, Tuvalu and Marshall Islands to visit Fiji NOU to learn operation of the NOU, enforcement of licensing system, project implementation, and engagement with national stakeholders

West Asia

- Consultation and experience exchange between Bahrain, Kuwait, Oman, Jordan, Lebanon, Syria, Saudi Arabia Development of specific HS code for HFCs in cooperation with RILO.

MONITORING AND CONTROL OF ODS TRADE

UNEP provides CAP assistance to support NOUs, customs and enforcement officers in their work to implement their national licensing and quota systems for substances controlled under the Montreal Protocol, to detect and prevent illegal trade in these chemicals, and to facilitate the legal trade. In 2020, UNEP anticipates providing services in this category to the following Article 5 countries:

Africa – Anglophone

- All 28 countries in the region.

Africa – Francophone

- All 26 countries in the region.

Caribbean

- All 14 countries in the region.

Europe and Central Asia

- Regional Montreal Protocol award for customs and enforcement officers, Montreal Protocol customs focal points, analysis of trade data, regional, iPIC - All 11 countries in the region (plus 7 associated CEIT countries).

Latin America

- 11 countries – Bolivia, Colombia, Chile, Dominican Republic, El Salvador, Ecuador, Guatemala, Honduras, Nicaragua, Paraguay, Peru.

South Asia

- All 13 countries in the region.
- Promote iPIC and risk profiling for ODS trade
- Mongolia and China Border issues for ODS control –border dialogue.

South East Asia

- All 11 countries in the region: promote iPIC and risk profiling for ODS trade.
- Brunei, Myanmar and Timor Leste (inspection and monitoring of refrigerants in domestic market).
- Myanmar and Timor Leste (implementation of post-clearance reporting requirement for cross checking information).

Pacific Island Countries

- All 14 countries in the region.
- Specific activities:
- Solomon Islands, Vanuatu (inspection and monitoring of refrigerants in domestic market)
- Solomon Islands (implementation of post-clearance reporting requirement for cross checking information).

West Asia

- 10 countries: Bahrain, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria and United Arab Emirates.

NOU CAPACITY BUILDING

UNEP provides CAP assistance to support learning and skill growth of Ozone Officers and their staff through sharing the collective wisdom of the wider community of Ozone Officers who are leading NOUs. In 2020, UNEP anticipates providing services in this category to the following Article 5 countries (noting that for some regions, it will be determined upon a case-by-case request by countries and upon assessing the needs of the countries):

Africa – Anglophone

- To be determined by case-by-case requests by countries and upon assessing the needs. Special attention will be to new ozone officers

Africa – Francophone

- To be determined by case-by-case requests

Caribbean

- Introductory training in Belize, Dominica, Haiti, Jamaica, Saint Kitts and Nevis.
- Advanced training in Antigua and Barbuda, the Bahamas, Grenada, Guyana, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago. Subject to fund availability and resources

Europe and Central Asia

- Need-based and tailor-made training of new staff of NOUs upon request and subject to fund availability and resources. All 11 countries in the region.

Latin America

- 3 countries: Bolivia, Guatemala and Nicaragua.

South Asia

- New NOO trainings for Bangladesh, China, Maldives, Mongolia, Nepal, Pakistan, Sri Lanka
- Advanced NOU trainings for 11 countries

South East Asia

- Introductory training for Brunei, Indonesia, Malaysia, Myanmar, Timor Leste and Viet Nam

Pacific Island Countries

- Introductory training for Tuvalu, Marshall Islands, Nauru and Tuvalu NOOs

West Asia

- Subject to availability of funding; 5 countries: Jordan, Saudi Arabia, Qatar, Syria and State of Palestine (observer country).
- Dedicated support to the NOU in Syria in order to put the Montreal Protocol portfolio back on track.
- Dedicated support to the NOU in State of Palestine (observer country) to establish the required infrastructure for implementing the Montreal Protocol

ANNEX 1C – IMPLEMENTATION OF UNEP-ASSISTED ARTICLE 5 COUNTRY PROJECTS IN 2020

Key:

- ^ Projects in UNEP's Business Plan being planned for implementation in 2020.
- ° HPMP verification projects submitted for the consideration of the 84th Executive Committee meeting
- * In cases where UNEP is the Cooperating agency (not indicated in the table), it will assist in the preparation of Stage II and the Lead agency will submit the project.
- ** As of 31 August 2019.
- *** Under development

Country	Institutional Strengthening project implementation	HPMP preparation*	HPMP (Stages I and II) implementation	HPMP Verification	Enabling Activity Project (HFCs) implementation**
Afghanistan	X	X	X	X	X
Albania	X		X		
Algeria	X				
Angola	X				X
Antigua and Barbuda	X	X	***		X^
Argentina					
Armenia			X		
Bahamas	X	X^	X	X	X
Bahrain	X		X	X	X
Bangladesh			X		X
Barbados	X	X^	X		
Belize	X	X	X	X	
Benin	X	X^	X		X
Bhutan	X		X		X
Bolivia, Plurinational State of	X				X
Bosnia and Herzegovina					
Botswana	X	X	X	X	X
Brazil					
Brunei Darussalam	X	X	X		X
Burkina Faso	X	X^	X	X°	
Burundi	X	X^	X		
Cambodia	X		X	X°	X (Completed)
Cameroon	X				
Cape Verde	X	X	X		X
Central African Republic	X				X^
Chad	X	X	X		X
Chile			X		X
China			X		X
Colombia			X		
Comoros	X	X^	X	X	X
Congo	X	X	X		
Congo, Democratic Rep. of	X	X	X		X

Country	Institutional Strengthening project implementation	HPMP preparation*	HPMP (Stages I and II) implementation	HPMP Verification	Enabling Activity Project (HFCs) implementation**
Cook Islands	X	X	X	X°	X
Costa Rica					
Côte d'Ivoire	X	X^	X	X	X
Cuba					
Djibouti	X	X^	X	X	X
Dominica	X	X^	X		X
Dominican Republic	X		X		X
Ecuador	X	X	X		X
Egypt			X		X
El Salvador ⁸	X		X		
Equatorial Guinea	X	X^	X		X
Eritrea	X	X^	X	X	X
Eswatini, Kingdom of	X	X	X	X	X
Ethiopia	X	X	X		X
Fiji	X		X		
Gabon	X	X^	X	X	X
Gambia	X	X	X	X	
Georgia					X
Ghana					X
Grenada	X	X	X	X	
Guatemala	X	X	X		X
Guinea	X	X^	X		X^
Guinea-Bissau	X	X	X	X	X
Guyana	X		X		X
Haiti	X	X^	X		X^
Honduras	X	X	X		X
India			X		
Indonesia					
Iran, Islamic Republic of			X		X
Iraq	X	X	X	X	X
Jamaica	X		X		
Jordan					
Kenya	X				X
Kiribati	X	X	X	X°	X
Korea, Democratic People's Republic of	X				
Kuwait	X	X^	X	X	X
Kyrgyzstan	X		X		X

⁸ The IS project of El Salvador is combined with the HPMP.

Country	Institutional Strengthening project implementation	HPMP preparation*	HPMP (Stages I and II) implementation	HPMP Verification	Enabling Activity Project (HFCs) implementation**
Lao People's Democratic Republic	X	X	X	X	X
Lebanon					
Lesotho	X				X
Liberia	X				
Libya					
Madagascar	X	X^	X	X	X
Malawi	X	X	X	X	X
Malaysia					
Maldives	X		X		X
Mali	X	X^	X		X
Marshall Islands	X	X	X	X°	X
Mauritania	X		X		X
Mauritius	X				X
Mexico			X		X
Micronesia, Federated States of	X	X	X	X°	X
Moldova, Rep. of	X		X		
Mongolia	X	X	X	X	X
Montenegro					
Morocco	X				
Mozambique	X	X^	X		X
Myanmar	X	X	X		X
Namibia	X				X
Nauru	X	X	X	X°	X
Nepal	X	X	X	X	X
Nicaragua	X		X		
Niger	X	X	X		
Nigeria					X
Niue	X	X	X	X°	X
North Macedonia, Rep. of					
Oman			X		X
Pakistan			X		X
Palau	X	X	X	X	X
Panama					
Papua New Guinea					
Paraguay	X	X	X		X
Peru	X		X		
Philippines	X				
Qatar		X	X		X
Rwanda	X	X	X		X

Country	Institutional Strengthening project implementation	HPMP preparation*	HPMP (Stages I and II) implementation	HPMP Verification	Enabling Activity Project (HFCs) implementation**
Saint Kitts and Nevis	X	X^	X	X	X
Saint Lucia	X	X	X	X	X
Saint Vincent & Grenadines	X		X	X	X
Samoa	X	X	X	X	X
Sao Tome and Principe	X	X	X	X	X
Saudi Arabia	X	X^	X		X
Senegal	X	X^	X		X
Serbia			X		
Seychelles	X				
Sierra Leone	X	X^	X		X
Singapore					
Solomon Islands	X	X	X	X	X
Somalia	X				
South Africa					
South Sudan	X	X^	X	X°	X
Sri Lanka			X		X
Sudan	X				X
Suriname	X	X	X		X
Syrian Arab Republic			***		X
Tanzania, United Republic of	X	X	X	X	X
Thailand					
Timor-Leste	X		X		X
Togo	X	X	X	X	X
Tonga	X	X	X	X	X (completed)
Trinidad and Tobago					
Tunisia			X		
Turkey			X		
Turkmenistan					X
Tuvalu	X	X	X	X°	X
Uganda	X	X	X	X	X
United Arab Emirates					
Uruguay					
Vanuatu	X	X	X	X°	X
Venezuela, Bolivarian Republic of					
Viet Nam	X				
Yemen	X				
Zambia	X	X	X	X	X
Zimbabwe	X	X	***		X
Total	104	70	103	44	94

ANNEX 1D – CAP BUDGET PROPOSAL FOR 2020

Budget line	Component	Location	w/m	Grade	CAP 2019 approved	CAP 2020 proposed
10 PROJECT PERSONNEL						
	Title/Description					
1101	Head of Branch	Paris	12	D1	266,000	271,000
1102	Senior Environment Officer - Network & Policy	Paris	12	P5	261,000	268,000
1103	Montreal Protocol Senior Programme Management Officer - Capacity Building	Paris	12	P5	261,000	268,000
1105	Montreal Protocol Programme Officer	Paris	12	P4	228,000	232,000
1106	Montreal Protocol Senior Coordination Officer-ExCom	Paris	12	P5	261,000	268,000
1107	Montreal Protocol Programme Officer - non ODS Help Desk	Paris	12	P3	191,000	195,000
1108	Montreal Protocol Programme Officer	Paris	12	P3	191,000	195,000
1111	ECA Montreal Protocol Regional Coordinator	Paris / ECA	12	P4	228,000	232,000
1112	Montreal Protocol Coordinator International Partnerships	Paris	12	P5	234,000	268,000
1121	ROAP Montreal Protocol Regional Senior Coordinator - Asia Pacific	Bangkok	12	P5	220,000	224,000
1122	ROAP Montreal Protocol Regional Coordinator - SEAP + PICs	Bangkok	12	P4	193,000	197,000
1123	ROAP Montreal Protocol Programme Officer	Bangkok	12	P4	193,000	197,000
1124	ROAP Montreal Protocol Programme Officer (SEAP + PICs)	Bangkok	12	P3	156,000	159,000
1125	ROAP Montreal Protocol Programme Officer - (SA-SEAP)	Bangkok	12	P3	156,000	159,000
1131	ROWA Montreal Protocol Regional Coordinator (West Asia)	Manama	12	P4	222,000	226,000
1133	ROWA Montreal Protocol Programme Officer	Manama	12	P3	214,000	218,000
1141	ROA Montreal Protocol Regional Senior Coordinator (Francophone)	Nairobi	12	P5	245,000	250,000
1142	ROA Montreal Protocol Regional Senior Coordinator (Anglophone)	Nairobi	12	P5	245,000	250,000
1143	ROA Montreal Protocol Programme Officer (Anglophone)	Nairobi	12	P3	171,000	173,000
1144	ROA Montreal Protocol Programme Officer (Francophone)	Nairobi	12	P3	171,000	173,000
1145	ROA Montreal Protocol Associate Officer (Anglophone)	Nairobi	12	P2	101,000	103,000
1146	ROA Montreal Protocol Associate Officer (Francophone)	Nairobi	12	P2	101,000	103,000
1147	Montreal Protocol Programme Officer (Admin and Finance)	Nairobi	12	P3	156,000	173,000
1151	ROLAC Montreal Protocol Regional Coordinator (Latin America)	Panama	12	P4	194,000	198,000
1152	ROLAC Montreal Protocol Regional Coordinator (Caribbean)	Panama	12	P4	194,000	198,000
1153	ROLAC Montreal Protocol Information Manager	Panama	12	P4	194,000	198,000
1154	ROLAC Montreal Protocol Programme Officer (Caribbean)	Panama	12	P3	165,000	168,000
1155	ROLAC Montreal Protocol Programme Officer (Latin America)	Panama	12	P3	165,000	168,000
1301	Principal Assistant HOB	Paris	12	G6	117,000	119,000
1302	Programme Assistant - Regional Networks	Paris	12	G6	117,000	119,000
1303	Programme Assistant (Clearinghouse)	Paris	12	G6	117,000	119,000
1305	Programme Assistant	Paris / ECA	12	G5	105,000	105,000
1306	Programme Assistant - Capacity Building/iPIC	Paris	12	G6	117,000	119,000

		1307	Programme Assistant	Paris	12	G5	104,000	105,000
		1312	Budget & Finance Assistant	Paris	12	G7	124,000	126,000
		1317	Temporary assistance CAP			N/A	88,000	50,000
		1321	ROAP Programme Assistant (SA)	Bangkok	12	G6	68,000	69,000
		1322	ROAP Programme Assistant (SEAP)	Bangkok	12	G5	55,000	56,000
		1324	ROAP Administrative Assistant	Bangkok	12	G7	76,000	77,000
		1332	ROWA Programme Assistant	Manama	12	G6	76,000	77,000
		1341	ROA Administrative Assistant	Nairobi	12	G7	61,000	62,000
		1342	Montreal Protocol Global Administrative Assistant	Nairobi	12	G5	37,000	38,000
		1343	ROA Programme Assistant	Nairobi	12	G6	46,000	47,000
		1344	ROA Programme Assistant (Francophone)	Nairobi	12	G6	46,000	47,000
		1345	Montreal Protocol Global Administrative Assistant	Nairobi	12	G5	37,000	38,000
		1351	ROLAC Administrative Assistant	Panama	12	G5	39,000	40,000
		1352	ROLAC Administrative Assistant	Panama	12	G7	62,000	63,000
			Subtotal Staff Personnel				7,069,000	7,208,000
	1600	TRAVEL						
		1601	Paris staff travel*	Paris			171,000	171,000
		1610	ECA staff travel	Paris / ECA			25,000	25,000
		1620	ROAP staff travel (SA)	Bangkok			33,000	33,000
		1621	ROAP staff travel (SEAP)	Bangkok			33,000	33,000
		1622	ROAP staff travel (PIC)	Bangkok			50,000	50,000
		1630	ROWA staff travel	Manama			45,000	45,000
		1640	ROA staff travel (Francophone)	Nairobi			60,500	60,500
		1641	ROA staff travel (Anglophone)	Nairobi			60,500	60,500
		1650	ROLAC staff travel (Caribbean)	Panama			35,000	35,000
		1651	ROLAC staff travel (Latin America)	Panama			35,000	35,000
			Subtotal Travel				548,000	548,000
20/30 REGIONAL ACTIVITIES								
		CONTRACT SERVICE COMPONENT						
		2210	ECA Network Thematic Meetings/South South cooperation/Regional awareness raising	Paris / ECA			130,000	130,000
			Subtotal ECA				130,000	130,000
		2220	ROAP Network Thematic Meetings/South South cooperation/Regional awareness raising (SA)	Bangkok			92,000	92,000
		2221	ROAP Network Thematic Meetings/South South cooperation/Regional awareness raising (SEAP)	Bangkok			70,000	70,000
		2222	ROAP Network Thematic Meetings/South South Cooperation/Regional awareness raising (PIC)	Bangkok			105,000	105,000
			Subtotal ROAP				267,000	267,000
		2230	ROWA Network Thematic Meetings/South South cooperation/Regional awareness raising	Manama			100,000	100,000
			Subtotal ROWA				100,000	100,000
		2240	ROA Network Thematic Meetings/South South cooperation/Regional awareness raising (Francophone)	Nairobi			175,000	175,000

		2241	ROA Thematic Meetings/South South cooperation/Regional awareness raising (Anglophone)	Nairobi			175,000	175,000
			Subtotal ROA				350,000	350,000
		2250	ROLAC Network Thematic Meetings/South South cooperation/Regional awareness raising (Caribbean)	Panama			130,000	130,000
		2251	ROLAC Network Thematic Meetings/South South cooperation/Regional awareness raising (Latin America)	Panama			120,000	120,000
			Subtotal ROLAC				250,000	250,000
			Subtotal Regional activities				1,097,000	1,097,000
GLOBAL SERVICES/ CAPACITY DEVELOPMENT PORTFOLIO								
		3210	NOO Training				50,000	50,000
		3211	Policy & Technical Assistance				100,000	130,000
		3213	Outreach & Translation				100,000	110,000
		3214	Legal Framework post Kigali				75,000	0
		3215	Refrigerant Drivers Licence				80,000	85,000
		3216	Enforcement				100,000	130,000
			Subtotal Global Services				505,000	505,000
MEETINGS								
50		4210	Advisory and Consultative Meetings and Stakeholders Workshops (Emerging needs/Refrigeration Servicing Sector)	Paris/Regions			165,000	165,000
			Subtotal Meetings				165,000	165,000
			Subtotal Global Services/Meetings				670,000	670,000
OFFICE OPERATIONS								
60		5210	Office Operations/Communication (equipment, rental, supplies & maintenance)	Paris			290,000	290,000
		5220	Office Operations/Communication (equipment, rental, supplies & maintenance)	Regions			300,000	300,000
			Subtotal Office Operations				590,000	590,000
99 TOTAL DIRECT PROJECT COST							9,974,000	10,113,000
<i>Programme support costs (8%)</i>							<i>797,920</i>	<i>809,040</i>
90 GRAND TOTAL							10,771,920	10,922,040

*1601 Participation in meetings: Executive Committee, Inter-Agency Coordination, Network Meetings, OEWG, MOP and Outreach activities based on needs of 7 Paris staff members

**3210 - 3215 activities and budget to be carried to 2021

Note on all other Budget Lines unspent balances will be returned

ANNEX 1E – FINANCIAL ANALYSIS OF CAP BUDGET PROPOSAL FOR 2020

This annex consists of three parts: Overview of the proposed 2020 CAP budget, Budget re-prioritisation, and Staffing lines and structure.

Part I – Overview of the proposed 2020 CAP budget

1. While developing this budget proposal, UNEP took into account feedback from Article 5 countries about their needs related to meeting the 35% phase-out target for HCFCs in 2020 and their new Kigali Amendment responsibilities, as well as recent developments under the Montreal Protocol. The proposal also reflects UNEP's internal analysis of the CAP structure, staff roles and responsibilities, the distribution of resources within CAP (i.e. between the individual regions, as well as between the regions and Paris), and whether the level and type of services provided by the current CAP team match the new circumstances. It also takes into account the funds returned to the previous Executive Committee as an indication of actual expenditures. UNEP continues to exercise due diligence and optimise activities and costs to ensure the most efficient use of funds.

2. To deliver the planned comprehensive compliance assistance services to Article 5 countries during 2020, the third-year of the 2018-2020 CAP Strategy, UNEP requests Executive Committee approval of US\$ 10,922,040 which includes a project cost of US\$ 10,113,000 and programme support costs (PSC) of US\$ 809,040, i.e. 8 per cent. This request is based on a zero-growth scenario for activities and corresponds to a 1.37 per cent increase to cover only inflationary costs related to staff commitments. These increases are in line with the Noblemaire Principle being used by the International Civil Service Commission (ICSC) to have standard salaries for all United Nations staff in the different agencies.

3. The proposed percentage increase in the 2020 CAP budget represents falls well below the maximum 3% increase limit that is allowed by the Executive Committee under Decision 47/24 (a)(iii), which limits the increase in the CAP budget to 3 per cent unless the Executive Committee is given evidence that inflationary pressures justify otherwise. The proposed value is also less than the amount indicated in the approved UNEP Business Plan for 2020.

4. UNEP undertook an in-depth review of the actual annual expenditures for the CAP for the period 2018-2019 and this was compared with the partial expenditures for the current year up to August 2019 in order to have projections for 2020. In accordance with Decision 82/57 (c)(iv), the following table presents the approved CAP budgets for 2018 and 2019, the actual or estimated expenditures for those years, and the proposed 2020 budget.

Table 1: CAP budget data for the years 2018-2020, as of 21 October 2019

Cost item	2018			2019			2020
	Approved	Expenditure	Balance	Approved	Estimated Expenditure	Estimated Balance	Proposed Budget
Staff personnel and consultants	6,928,000	5,364,229	1,563,771	7,069,000	6,214,403	854,597	7,208,000
Travel (staff and consultants)	548,000	526,528	21,472	548,000	511,742	36,258	548,000
Regional activities and meetings*	1,262,000	1,147,232	114,768	1,262,000	1,224,823	37,177	1,262,000
Global services**	505,000	379,476	125,524	505,000	433,913	71,087	505,000
Space & Equipment (rent and common costs, computers, supplies, etc.)	620,000	472,726	147,274	590,000	498,605	91,395	590,000
Sub-total CAP	9,863,000	7,890,191	1,972,809	9,974,000	8,883,486	1,090,514	10,113,000
Total Programme Support Costs	789,040	631,215	157,825	797,920	710,679	87,241	809,040
Grand Total	10,652,040	8,521,406	2,130,634	10,771,920	9,594,165	1,177,755	10,922,040

* Includes the expenditures on the advisory and consultative meetings budget line.

**Includes Outreach and Translation, and Advisory Group Meetings.

5. The proposed budget represents an overall increase of 1.37 per cent compared to the approved 2019 budget.⁹ Based on the projected requirements, UNEP proposes a 2020 budget level that is both realistic and sufficient to cover CAP operations, noting that UNEP continues to return all unspent balances from CAP to the Executive Committee in a timely manner in accordance with Decisions 35/36 (d) and 73/53(b)(ii).

6. UNEP is operationalizing various actions stemming from the *Review of the CAP*¹⁰ in line with decision 77/38(c), including those related to staffing. Following Executive Committee approvals of staff changes in recent CAP Work Programme and Budgets, all recruitments are currently underway, several have been completed in 2019, and the remaining are expected to be finalised in 2020.

Budget re-prioritisation

7. As per Decision 82/57 (c)(ii), UNEP continues to extend the prioritization of funding between CAP budget lines so as to accommodate these changing priorities. After considering the needs and challenges facing Article 5 countries at this point in time, UNEP proposes the following budget reallocations for 2020:

- Budget line 3210 - NOO Training remains at the same level as 2019, i.e. US\$ 50,000, to provide for completion and piloting of the *Advanced Training for Experienced National Ozone Officers*.

⁹ The budget reflects a 1.9 per cent increase in the Personnel component and a zero per cent increase in the Travel, Regional Activities, Global Services, Meetings, and Office Operations components. When averaged over the entire budget, this yields 1.37 per cent.

¹⁰ UNEP/OzL.Pro/ExCom/80/28.

- Budget line 3211 - Policy and Technical Assistance is proposed at a level of US\$ 130,000 (an increase of US\$ 30,000 compared to 2019) to provide for online/smartphone applications (national quotas and licenses, iPIC), a MAC training survey, and development of a model certification programme and a model refrigerant code.
- Budget line 3213 - Outreach and Translation is proposed at a level of US\$ 110,000 (an increase of US\$ 10,000 compared to 2019) to provide for outreach activities, translation of key documents, development of short publications/factsheets, production of the OzonAction Scoop, and development of a publication on Montreal Protocol and Sustainable Development Goals.
- Budget line 3214 - Legal Framework post Kigali is proposed at a zero budget (a decrease of US\$ 75,000 compared to 2019) since this assistance will be provided through CAP staff time and other budgetary resources including Network meetings, etc.
- Budget line 3215 - Refrigerant Drivers Licence is proposed at a level of US\$ 85,000 (an increase of US\$ 5,000 compared to 2019) to provide for the evaluation of the outcomes of the pilot stage of RDL for Small Applications and to complete the documentation for the remaining applications.
- Budget line 3216 - Enforcement is proposed at a level of US\$ 130,000 (an increase of US\$ 30,000 compared to 2019) to provide for the development of the Montreal Protocol Enforcement, and Guidebook on Setting Penalties, and the updating of the UNEP Customs Training Manual and the UNEP-WCO Montreal Protocol Training for Customs Officers e-learning course.

Note that all of the above proposed activities are indicated in the narrative in section of the document in "Planned Activities in 2020."

Staffing lines and structure

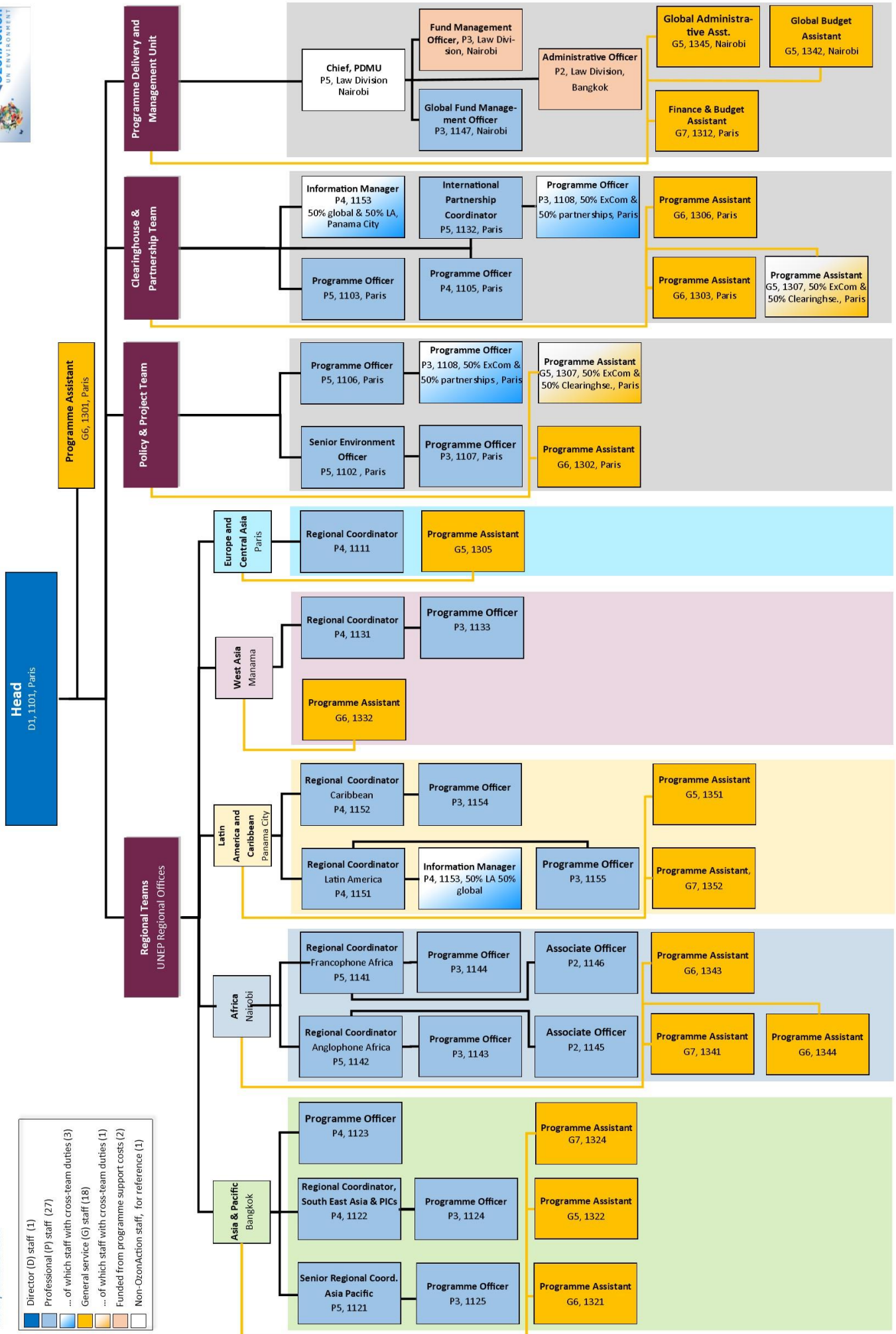
8. UNEP's continued high level of performance as an Implementing Agency of the Multilateral Fund is thanks to the expertise, dedication and hard work of the CAP staff in the regions and Paris. Over the years, these Montreal Protocol professionals have evolved both individually and collectively to meet the ever-changing needs of Article 5 countries and to adjust to the progression of the Montreal Protocol, including recently the emerging challenges resulting from the Kigali Amendment. This flexibility and ability to adapt to country needs is one of the hallmarks of CAP. Over the last five years, UNEP has made various adjustments to the CAP structure and staff responsibilities in response to Executive Committee decisions, and staff have been re-deployed and re-focused to meet pressing programme and regional needs. An organigram describing the structure and operation of CAP for 2020 is presented in Annex 1F - CAP Structure and Operations – Organigram.

9. This process of refining and adjusting the staff responsibilities is ongoing and will continue next year to meet programme delivery requirements, at the time when the 2021-2023 CAP Strategy will be presented. For 2020, UNEP proposes the following modification to the staffing component of the CAP budget:

- Budget line 1112 – Montreal Protocol Coordinator International Partnerships. To streamline the structure of the CAP team in West Asia with that of other regions, and to further optimize the provision of CAP services and project support in West Asia, in July 2019 UNEP adjusted the regional CAP staffing arrangements, including the official designation of the new ROWA Montreal Protocol Regional Coordinator for West Asia (budget line 1131). The Montreal Protocol Coordinator International Partnerships (budget line 1112, previously budget line 1132) now fully

focuses on OzonAction's global partnerships relating to the refrigeration and air conditioning sector. UNEP informed the West Asia National Ozone Officers about these modifications during the February 2019 Inter-Regional Network Meetings in Paris as well as through an email communication on 26 July 2019 once the handover of responsibilities was completed. Given those changes and the nature and scope of the duties of the Montreal Protocol Coordinator International Partnerships post, UNEP proposes to move the post from Manama to Paris to reflect the change of responsibilities from a split regional/global focus to fully global duties, and to integrate the corresponding work more closely into the global Clearinghouse portfolio.

ANNEX 1F – CAP STRUCTURE AND OPERATIONS : ORGANIGRAM FOR 2020



Annex 1 F: CAP structure and operations (organigram)

11 September 2019

- Director (D) staff (1)
- Professional (P) staff (27)
- ... of which staff with cross-team duties (3)
- General service (G) staff (18)
- ... of which staff with cross-team duties (1)
- Funded from programme support costs (2)
- Non-OzonAction staff, for reference (1)

ANNEX 2A – PROGRESS REPORT ON FOUR GLOBAL CAP ACTIVITIES

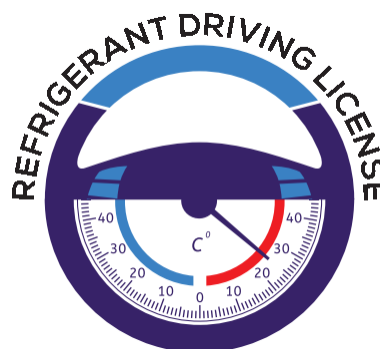
In accordance with Executive Committee Decision 82/57(c)(i), this annex provides detailed information on the activities for which the global funds were used during the period September 2018 – August 2019. These multi-year activities, namely the Refrigerant Driving Licence, Global training for the refrigeration servicing sector, the National Ozone Officer training programme, and ODS management in fishing sector, were originally approved in the 2016 CAP Work Programme and Budget. This annex is divided into two sections: the first provides a brief update of the substantive progress and outcomes, and the second provides an overview of the cumulative expenditures.

A. Substantive progress of global activities

1. Development of a Refrigerant Driving License (RDL)

The Refrigerant Driving License (RDL) is an initiative that aims to introduce a globally-recognised qualification program for the sound management of refrigerants. RDL aims to set minimum competencies and skills for the heating, ventilating, air conditioning and refrigeration (HVAC&R) servicing network (individuals and companies) and creates an international recognition program through industry and governments.

The initiative was launched as a concept by UNEP OzonAction and the Air-Conditioning, Heating and Refrigerating Institute (AHRI) at the 37th Open-Ended Working Group meeting in July 2015. Since then, AHRI and UNEP have promoted the RDL amongst key HVAC&R associations including by outreach to umbrella groups such as the Global Refrigerant Management Initiative (GRMI). Consequently, an RDL Advisory Committee was established consisting of key industry associations namely ABRAVA, ACAIRE, AREA, AREMA, EPEE, JRAIA, Refrigerants Australia, the Alliance for Responsible Atmospheric Policy, the Russian Union of Refrigeration Enterprises and ASHRAE.¹¹ The Advisory Committee serves as the technical advisory and review body for RDL to ensure that suggested deliverables do not conflict with any existing certification scheme in any country or region, evaluate the work at different stages of the initiative and recommend and/or promote regions/countries to pilot RDL.



Progress

During 2016-2018, AHRI and UNEP worked in consultation with the RDL Advisory Committee to review and analyse¹² the existing globally recognised certification programs, to explore the qualification categories and agree on the operational modality. After a thorough analysis and in-depth consultations,

¹¹ ABRAVA: Brazilian trade association that represents refrigeration, air conditioning, ventilation, heating, and air treatment equipment manufacturers, ACAIRE: Colombian air conditioning and refrigeration association that represents business, institutes, professional members, technicians, correspondents, and students in the industry, AREA: Air conditioning and Refrigeration European Association, AREMA: Air conditioning and Refrigeration Equipment Manufacturers Association of Australia, ASHRAE: American Society of Heating, Refrigerating and Air-Conditioning Engineers, EPEE: European Partnership for Energy and the Environment & JRAIA: Japan Refrigeration and Air Conditioning Industry Association.

¹² A comprehensive report about major certification programmes around the globe, and their characteristics, was developed as part of the preparatory stage of the RDL programme.

the RDL Advisory Committee adopted four initial categories for RDL (Table 1). Additional categories will be considered in the future, such as handling ammonia and CO₂ applications.

Table 1: RDL categories

Competency Requirements	(A) Small Applications	(B) Commercial Refrigeration	(C) Commercial Air-Conditioning	(D) Enterprises
Basic knowledge (environment, refrigerants classifications/types, applications and relevant policies)	X	X	X	
Handling, transportation, storage and management of refrigerants' containers	X	X	X	
Servicing skills of leak detection, R&R, evacuation, charging and system tightness	X	X	X	
Logging and record keeping		X	X	X
Tools and equipment for the job	X	X	X	X
Employment skills, training and certification				X

The RDL Advisory Committee considered and agreed upon the following definitions of RDL categories:

- **Category (A) Small Applications:** Air conditioners and heat pumps with less than a 20kW/65kBtu/h cooling capacity and, refrigeration equipment with less than a 6kW/20kBtu/h cooling capacity. (Examples: packaged AC, ductless mini-split AC, multi-capacity AC, heat pumps, refrigerators, dehumidifiers, display cases, coolers and other unitary and hybrid equipment).
- **Category (B) Commercial Refrigeration:** Commercial refrigeration equipment with greater than a 6kW/20k Btu/h cooling capacity. (Examples: Storage and display refrigerators, freezers, commercial unit coolers, condensers, chillers, heat exchangers, vending machines and other traditional and hybrid equipment).
- **Category (C) Commercial Air-Conditioning:** Commercial air conditioners with greater than a 20kW/65k Btu/h cooling capacity. (Examples: Split AC, unitary large AC, VAV AC, CAV AC, VRF AC, chilled beams, heat pumps and other traditional and hybrid equipment).

However, the RDL Advisory Committee concluded that the pilot stage should only focus on testing the program for Category-A (RDL-Small Applications) in order to measure feedback and adjust the program before developing the technical documentation for the other categories.

The development of comprehensive technical documentation for RDL Category-A (RDL-Small Applications) included several steps:

- Development of competencies/skills documentation (benchmarking) required for Category-A.
- Development of bank of questions for the testing.
- Development of sample training materials for train-the-trainers and following training sessions including syllabus and power point presentations.

- Development of comprehensive documentation for procedures of conducting the training, exam, preparatory work, qualification of trainers/assessors, setup of hands-on sessions and practical checks, evaluation and monitoring and roles of local stakeholders i.e. National Ozone Units vs. training centres.
- Development of supporting tools, i.e. checklists, guidance for exams, printing plans, etc.

All above materials were discussed, reviewed and endorsed by the RDL Advisory Committee. Regional CAP teams extended invitations to interested Article 5 countries to pilot RDL through special sessions conducted in the margins of the Regional Network meetings. These sessions were used to present and discuss the RDL with detailed explanations about possible options for linking RDL to ongoing training and/or certification programs, or to use the RDL program as alternate qualification programmes for countries that are facing difficulties in building local certification schemes. After several rounds of discussions and with the support from the regional CAP teams, the following countries expressed interest and agreed to pilot the RDL in conjunction with ongoing training activities under HPMPs:

1. Grenada.
2. Maldives.
3. Rwanda.
4. Sri Lanka.
5. Suriname.
6. Trinidad and Tobago.

RDL Curriculum

- Agenda of refrigerant management knowledge areas
 - Theoretical Training: Installation, Service, Safety, Types of refrigerant, Tools
 - Practical Training: Leak Checking, Evacuation, Charging, Recovery
- Syllabus of RDL training
- PowerPoint presentations of refrigerant management skills
- Training guidance of RDL Job Task Analysis knowledge areas
- Hand-outs and flyers with information on refrigerant management
- Training videos
- RDL Exam "How to take the Exam" information
- RDL Pre-test "How to take the Pre-test" information
- Checklist for preparations and printing plans
- Checklist of practical training tasks
- Checklists for monitoring

Workplans were developed for the selected pilot countries starting with train-the-trainers/assessors and followed by training of around 100 technicians as part of the pilot. The arrangements for the pilot stage was also formalized through official communications with the pilot countries.

Before the start-up of the training sessions, five (5) international experts were identified to be the International Master Trainers for delivering train-the-trainers' sessions in the six (6) pilot countries. Special coordination session was organized for the International Master Trainers to go through the details of the process, materials and ensure that delivery will be consistent across all pilot countries.

Between June and August 2019, six (6) train-the-trainers' sessions were successfully completed as follows:

1. 24-27 June, Rwanda.
2. 8-11 July, Maldives.
3. 23-26 July, Sri Lanka.
4. 13-16 August, Trinidad and Tobago.
5. 20-23 August, Grenada.
6. 20-23 August, Suriname.

Twelve to fifteen local trainers were trained and tested in each country in accordance to RDL program. Schedule of training is set for the six (6) pilot countries to complete the following RDL training during September and December 2019. All tests and hands-on checks are being collected and sent to the RDL administration (AHRI and UNEP OzonAction) for analyzing the level of skill, knowledge and competencies of the local trainers and then local technicians with the aim of mapping variances of level across different Article 5 countries and ensure that final model and bank of questions will be achieve both meeting minimum required competencies and applicable to all.

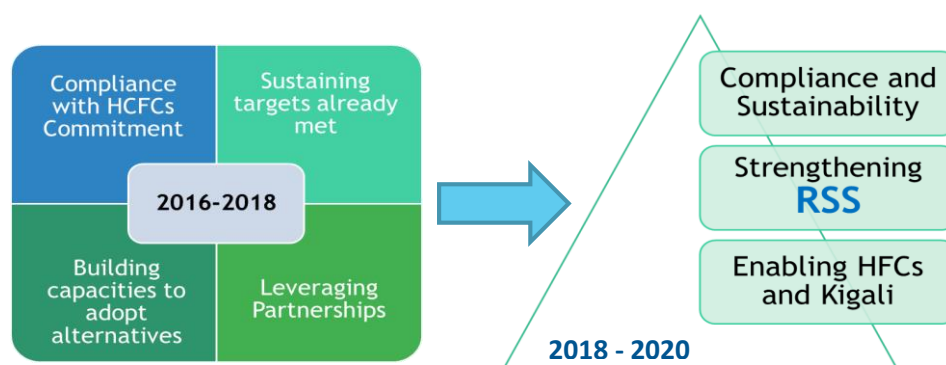
While pursuing completing the pilot stage and extract lessons to help in put RDL documentation in final format for global enrolment. RDL Administration are working on drafting the final operational setup and procedures to allow offering RDL widely to all interested NOUs, training centers and individuals. In principle, three tracks are being examined for the final operational model of RDL which are:

- Track-A: RDL to be the local refrigerant management qualification program managed by the NOU.
- Track-B: RDL to be industry qualification program acknowledged by local the technical and vocational education training (TVET) authority.
- Track-C: Mixed approach, i.e. offering RDL in parallel to standard certification programs or using RDL as step to assist in building local certification program.

This multi-track setup will allow RDL the needed flexibility to cater for different needs of Article 5 countries in supporting local certification programs or filling gaps. Additional piloting will be needed during 2020 to ensure the feasibility of the final model, as several more NOUs have expressed interest to use the RDL program. A comprehensive report will be made available about the outcomes of the RDL pilot stage, suggestion for the operational modalities and options for consideration by NOUs and Executive Committee about the future of the programme.

2. Global training programme for the refrigeration servicing sector

The 2018-2020 CAP Strategy included several initiatives that address specific training needs of the refrigeration servicing sector (RSS), including the development of capacity building and outreach tools. These activities were further elaborated in the CAP revised 3 year rolling strategy (2018-2020), which noted the importance of the RSS as a separate overarching objective, especially given that it will be the remaining HCFC-consuming sector for more than 80 Article 5 countries. The RSS will remain a priority for CAP given the synergies, challenges and opportunities posed by the Kigali Amendment.



Accordingly, OzonAction is addressing the training needs for the RSS in a holistic approach through exhaustive consultation with all global stakeholders, including other Implementing Agencies and HVAC&R associations. In 2016, UNEP OzonAction organized *the First International Stakeholder Workshop on the RSS* that was attended by international associations and other Implementing Agencies and bilateral agencies as well as experts from all regions. The workshop focused on the training needs for the RSS and discussed a roadmap for addressing gaps and mobilizing potential capacities to upscale training tools and services. In 2018, OzonAction maintained this global consultation platform for RSS by organizing the *Second International Stakeholder Workshop on Refrigeration Servicing Sector* with a broader objective to discussing means and exploring tools for joint actions to “Change the Mindset of RSS.” While the first meeting managed to identify gaps and suggested potential areas of work in relation to training materials for RSS, the second meeting looked at synergizing efforts to outreach all available tools and resources and how these could be integrated in a more structured manner with ongoing phase-out programs funded by the Multilateral Fund.

Progress

Over the last three years, and in cooperation with international partners, OzonAction developed and initiated several activities and products to respond to the training needs of this sector. The following is an update of their status:

- **Refrigerants Literacy e-Learning Course, *in cooperation with ASHRAE***: a first of its kind course for non- specialists about refrigerants. The course is currently offered in English and Spanish and shortly, by MOP-31, in French as well. It tends to be very useful tools for NOUs, government officers, and even for RAC experts who are not familiar with the dynamics of refrigerants. The course consists of four main chapters address the relevant environmental issues, refrigerants classification and safety, Refrigerants applications and uses, and principles of refrigerant management. The course offers an international Certificate of Completion signed by ASHRAE.
- **Sound Management of Refrigerants e-Learning Course, *in cooperation with ASHRAE***: This is a dedicated course for refrigerants good service practices addressing the needs of field practitioners i.e. servicing technicians and engineers. The course covers five main topics which are: Refrigerants and environmental issues, Refrigerants designation and classifications, Lubricants and Applications, Servicing good Practice (two parts: the 3Rs and General service practice), and Refrigerant containers and safety aspects. and issues related to new and flammable refrigerants. The course also offers an international Certificate of Completion signed by ASHRAE. It is currently offered in English and will be available shortly in other UN Languages.



OzonAction and ASHRAE currently work on extracting face-to-face versions of the two courses to maximize the use the materials and make it available for NOUs to use with flexibility at different platforms and events. The face-to-face versions shall be available for launch at the 31st Meeting of the Parties in November 2019.

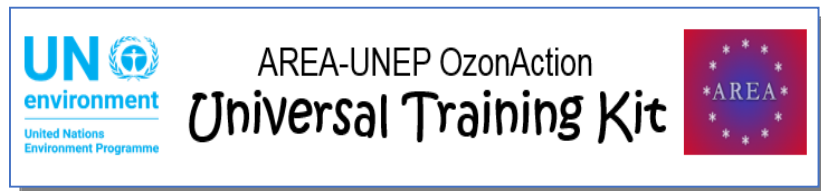
- University Course on Refrigerant Management:** OzonAction teamed up with the American University in Beirut (AUB) and provided inputs to the University's special initiative 'for undergraduates engineering studies. The course is the first of its type to be developed in accordance with academic requirements targets



engineering universities/colleges. It is a full semester elective course (16 weeks) designed with full supporting documentation i.e. Syllabus, Lecture Notes, Power-point presentations, Activity Sheets as well as guidelines for lecturers. Through the cooperation with ASHRAE and its university networks (more than 450 engineering universities/colleges worldwide), As of today 24 universities enrolled to offer the course (including those in Brazil, Canada, Egypt, India, Indonesia, Lebanon, Pakistan, Peru, Philippines, Singapore, Serbia, Turkey and UAE in addition to other in non-Article 5 parties).

In order to facilitate quick access to all courses and enrol instantaneously, ASHRAE developed special portal for accessing all products being developed by ASHRAE in cooperation with UNEP OzonAction. NOUs and stakeholders can now access: www.ashrae.org/ashraeuneportal

- Universal Training Kit, *in cooperation with the European Association of Refrigeration, Air conditioning and heat pump contractors and associations (AREA):*** This will be **Live Training Kit** for good practices of different types of applications and refrigerants. It will replace UNEP's old training manuals providing comprehensive tool for NOUs and local training institutes/centres in Article 5 countries. The kit is designed in a modular format enabling the users to tailor their training programs in accordance with the local needs. The Universal Kit will be offered, starting Nov-2019, through special portal that will offer the



opportunity for users to “**Build your Course**” by selecting the topics and areas that need to cover in the training course they intend to offer. Stage-I of the project will offer detailed documentation covering servicing residential and light commercial refrigeration and air-conditioning applications that are being serviced either with flammable or non-flammable refrigerants. By accessing the Universal Training Kit Portal, users will be able to extract, based on their preference of topics, the following:

- Pre-assessment
 - Venue requirements including equipment
 - Minimum qualification of instructors.
 - Instructors guide
 - Power-point presentations
 - Syllabus and supporting material
 - Sample final test/checks
- To further support these above activities, OzonAction developed and launched information and capacity building tools as follows:

- Booklets: *Quick Guide on the Good Servicing Practices for Flammable Refrigerants* and a guidebook on **Codes of Practices in Handling R290 in the Room Air Conditioner sector**
- **Smart App mobile** applications for RAC technicians:
 - **“RAC technician video smartphone application”** consisting of a series of short instructional videos on techniques (14), safety and best practice for refrigeration and air conditioning (RAC) technicians (in 7 languages); and
 - **“What Gas?”** smartphone application tool for ozone depleting substances (ODS) and other alternatives
 - **“Refrigerant Identifier App”** - Identification of ozone depleting substances using refrigerant identifiers,
 - **“Refrigerant charge size calculator”** - to calculate room size and charge size for flammable refrigerants
- Among the OzonAction series of factsheets, several are related to RSS such as, blends and mixtures, commonly used tools by RAC technicians, flammability, ASHRAE Refrigerant designation and safety classification, etc.).



OzonAction team has also developed a deployment plan to ensure the incorporation of all tools and products within the countries’ HPMPs, ISPs and other related projects, as appropriate.

3. National Ozone Officer (NOO) Training Programme

Progress

Introductory Training for Newly-Appointed NOOs/Assistants and Others

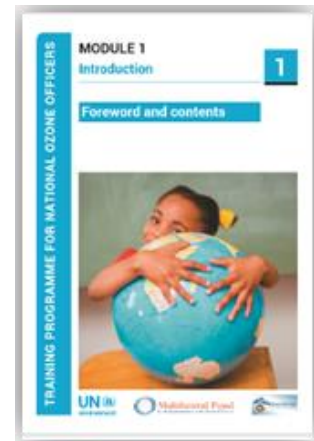
The Introductory training package has been designed for training new NOOs, assistants and other staff of National Ozone Units (NOUs). The training programme was revised and finalized based on the feedback received from three pilot workshops in the Caribbean, Pacific Island Countries and South Asia/South East Asia NOU training workshops held in 2018.

The training package is divided into modules. Modules 1 – 13 contain the documents used during the 2-day training course, as well as some background information and follow-up activities. Each module typically contains:

- A training presentation (PowerPoint slides)
- A handout copies of the PowerPoint presentation, for participants to annotate or make notes during the presentation, if they wish
- A practical exercise for participants
- Background information resources on the topics covered by the module

The Annex contains information and administrative documents for trainers and organisers. The training organisers may add or omit some topics, depending on the specific needs of the participants of each training course, and the time available for training.

The contents of the training package are as follows:



Module 1: Introduction

Contents list: Full list of documents in training package

Objectives and topics covered: Audience and objectives of training; topics covered in training programme. Foreword; list of abbreviations and acronyms; acknowledgements

Module 2: Ozone Depletion

Ozone layer: What is ozone; the ozone layer; good and bad ozone; fragility of the ozone layer

Why ozone is important: How ozone layer shields humans and animals from ultraviolet (UV) radiation; effects of UV on health and other impacts; estimates of ill-health prevented by the Montreal Protocol

Ozone depletion: Creation/destruction of ozone; what is ozone depletion; chemicals responsible for ozone depletion; ozone depletion potential (ODP) values

Trends in ozone depletion: Geographic distribution of ozone depletion; Antarctic ozone hole; trends in ozone depletion over time; monitoring for ozone layer recovery; anticipated timetable for recovery of the ozone layer; ozone layer starting to heal but remains fragile; impediments to ozone recovery; ozone loss with and without the Montreal Protocol

Links between ozone and climate: Interactions between ozone and climate change; most ODS are potent greenhouse gases; HFCs key ODS alternatives have high-GWPs; indirect climate impacts due to electricity/energy used by refrigeration and air-conditioning equipment

Practical exercise: Using UV-sensitive beads to investigate UV levels around us

Resources for further information: Publications and web links on ozone depletion; understanding ODP and GWP values; links between ozone and climate; UV effects and sun safety; multimedia resources

Module 3: Protocol Overview

Evolution of the Montreal Protocol: Scientific developments leading to the adoption of the Vienna Convention and Montreal Protocol; evolution of the MP from covering 8 ODS initially to covering more than 100 substances (ODS and HFCs); initial signature to full ratification by all countries

Main features of the Protocol: General principles and features of the Protocol; groups of controlled substances; schedules for reductions in production and consumption; special situation of developing countries; explanation of key terms and phrases that NOUs will encounter; ratification and how countries become Parties to the Protocol or its Amendments; terms relating to Parties (Article 5 Parties, non-Article 5 Parties, and non-Parties); remaining challenges

Climate issues: Developments in technology from ODS to greenhouse gases; brief introduction to the Kigali Amendment and HFC phase-down

Practical exercise: Examples of significant events in the history of the Montreal Protocol

Module 4: Organisational Structure

Montreal Protocol structure and bodies: Meeting of the Parties (MOP), Open-ended Working Group (OEWG), Bureau of MOP, Implementation Committee (ImpCom), Ozone Secretariat (OS); annual cycle of MP meetings and activities

Multilateral Fund structure and bodies: Executive Committee (ExCom), Multilateral Fund Secretariat (Multilateral Fund or Fund Secretariat), implementing agencies: United Nations Environment (UNEP), United Nations Development Programme (UNDP), United Nations Industrial Development Organization (UNIDO), World Bank; bilateral agencies; UNEP OzonAction's Compliance Assistance Programme (CAP) and Regional Network of NOUs

Vienna Convention structure and bodies: Conference of the Parties (COP), Bureau of COP, Ozone Research Managers (ORM) group, Ozone Secretariat

Assessment panels: Scientific Assessment Panel (SAP), Technology & Economic Assessment Panel (TEAP), Technical Options Committees (TOCs), Environmental Effects Assessment Panel (EEAP)

Who's who in the Montreal Protocol; key contacts; benefits of exchanging information with others involved in the Protocol and Multilateral Fund

Practical exercise: Matching organisations of the Protocol with their roles

Resources for further information: Publications and web links for further information on the bodies described in this module; information about UNEP OzonAction

Module 5: Control Measures

Control measures under the Protocol: Production/consumption reductions and schedules; phase-out schedule for HCFCs; phase-down schedule for HFCs; how countries become subject to the control measures and obligations (ratification of relevant legal text); obligations arising from Articles, Amendments, Adjustments; non-compliance procedure of the Montreal Protocol

Exemptions: Generally-exempted ODS uses; specific ODS exemptions requiring authorisation

Articles of the MP: Summary of key Articles of the Protocol's legal text

Other requirements and measures: MOP decisions; ExCom decisions; Multilateral Fund project agreements between the Government and ExCom

Practical exercise: Team quiz on control measures of the Protocol

Resources for further information: Publications and web links on control measures and Articles of the Protocol; exempted uses; non-compliance procedure of the Protocol

Module 6: National Framework

Role of national government and National Ozone Unit: Responsibilities for national implementation of the Montreal Protocol; activities of NOUs; appropriate government support for NOUs

Existing national framework: national strategy and action plans for HCFCs and other ODS; laws and regulations; licensing system for imports and exports; elements of an effective licensing system; quota allocation system; other components of a national framework

Strengthening the national framework: Strengthening measures on HCFCs and other ODS; ratification of the Kigali Amendment; national enabling legislation and other measures for implementing the Kigali Amendment

Activities: Crossword puzzle. Building a robust national framework for controlling HCFCs and HFCs; examining and assessing measures (options) for implementing the HCFC phase-out and HFC phase-down and related requirements of the Montreal Protocol, MOP decisions and Multilateral Fund project agreements between the Government and ExCom

Resources for further information: Publications and web links on licensing and quota systems; legislative and policy measures relating to HCFCs and other ODS; formats for surveys on ODS alternatives; measures relating to the implementation of the Kigali Amendment; OzonAction's *Kigali factsheets*

Module 7: Enforcement

Role of enforcement: Importance of effective monitoring and enforcement; compliance related to import/export trade and domestic activities

Illegal trade: Main reasons for illegal trade; negative impacts of illegal trade; examples of common smuggling methods; MOP Decisions encouraging Parties to take effective action on illegal trade

Enforcement: Enforcement agencies and relevant government ministries; other stakeholders; elements of effective enforcement systems and procedures

Informal Prior-Informed Consent (iPIC): benefits of iPIC; iPIC procedure

Resources: Training and other types of resources for customs and enforcement

Practical exercise: Examples of legal and illegal imports

Resources for further information: Publications and web links on enforcement and methods for preventing illegal trade; Informal Prior-Informed Consent (iPIC); training materials and e-learning for customs officers; substance identification factsheets and tools for customs

Module 8: Multilateral Fund Projects

Financial mechanism: Role of the Multilateral Fund (Multilateral Fund) as key financial mechanism of the Protocol

Structure and bodies of the Multilateral Fund: Recap of roles of the Executive Committee (ExCom), Fund Secretariat, implementing agencies and bilateral agencies; national governments; Multilateral Fund operating procedures; example of a project cycle, role of verification reports

Institutional strengthening (IS) projects: Role of IS projects; activities and components; reports and requests for IS funding renewal

HCFC Phase-out Management Plans (HPMPs): Staged approach; main aims of stage I and stage II HPMPs; HPMP agreements between ExCom and countries; stage I HPMP activities in servicing sector and manufacturing sectors; stage II HPMP components

Enabling activities for Kigali implementation: MOP Decisions on enabling activities for implementation of the Kigali Amendment on HFCs; ExCom decisions on enabling activities and related funding; Multilateral Fund guide for funding requests for enabling activities

Benefits of synergies: Linking with projects that address other environmental issues, e.g. energy efficiency, greenhouse gas emission reduction; recycling of end-of life equipment; customs enforcement of CITES and other MEAs; potential funding sources for synergies

Practical exercises: Understanding the main components of HCFC Phase-out Management Plans (HPMPs)

Resources for further information: Publications and web links on the Multilateral Fund and Executive Committee; Institutional strengthening projects; HPMP projects; projects for enabling activities and other activities related to implementation of the Kigali Amendment; synergies with other environmental protection activities

Module 9: Fund Secretariat Data Reporting

Requirements and benefits of reporting: ExCom decisions on CP data reporting by countries that receive Multilateral Fund support; benefits of reporting; consequences of not reporting data; submission deadline

Data: Types of data that need to be reported; data collection and checking

Reporting form: Accessing the web-based CP reporting form; structure of reporting forms; examples of main data sheets; sources of assistance; step by step guide to reporting CP data to the Fund Secretariat

Practical exercise: Entering data in a CP data report form; how to calculate the quantity of HCFCs in a mixture or blend; using OzonAction's *GWP ODP calculator* mobile app for converting between metric tonnes, ODP-tonnes and tonnes CO₂-equivalent

Resources for further information: Publications and web links related to CP data reporting

Module 10: Ozone Secretariat Data Reporting

Requirements and benefits of reporting: Articles and MOP Decisions requiring data submissions by Parties; benefits of reporting data; consequences of not reporting data; submission deadlines

Data: Types of data that need to be reported; data collection and checking

Reporting forms: Where to download Excel reporting form; examples of main data sheets; reporting issues; calculating the amount of ODS in a mixture (recap); converting from metric tonnes to ODP-tonnes and CO₂e tonnes; how production and consumption are calculated by the Ozone Secretariat; step by step guide to reporting Article 7 data to the Ozone Secretariat

Practical exercise: Exploring consumption data in the Ozone Secretariat's online *Data Centre*

Resources for further information: Publications and web links related to reporting Article 7 data to the Ozone Secretariat

Module 11: Working with Stakeholders

Stakeholders: Importance of working with stakeholders; government coordination committee; different types of stakeholders; working with business and other stakeholders

Furnishing information: Role of awareness raising; key steps for raising awareness; identifying audiences and developing targeted messages; delivering messages

Training programmes: Role of training, testing and certification programmes in refrigerant management, refrigerant safety, and other aspects; training resources for refrigerant technicians, customs and other enforcement officers, and others

Practical exercise: Designing awareness-raising messages for a target audience

Resources for further information: Publications and web links on working with stakeholders; raising awareness; customs and enforcement training, refrigeration servicing technicians training; certification schemes; resources for educational institutions

Module 12: Alternatives

MOP decisions: MOP Decisions referring to climate impacts of alternatives and low-GWP alternatives; the Kigali Amendment on HFCs and related Decisions on alternatives

Climate issues related to alternatives: direct and indirect greenhouse gas emissions; importance of energy efficiency when selecting alternatives; other ways to reduce climate impacts

HCFC & HFC uses: Main uses of HCFCs and HFCs; main market sectors; examples of major HCFC & HFC substances and GWPs

Alternatives overview: Journey to substances with zero-ODP and low-GWP; characteristics of main types of alternatives; assessing advantages and disadvantages; examples of applications that use alternatives; factors to consider when selecting alternatives; overcoming barriers

Reducing consumption in servicing sectors: major role of servicing sector; promoting alternatives where suitable and affordable; training technicians to reduce consumption and use alternatives safely; supporting legislation and policy measures

Practical exercise: Comparing GWP values of controlled substances and alternative refrigerants; explanation of refrigerant designation numbers (R numbers)

Resources for further information: Publications and web links on formats for surveys on ODS alternatives (Multilateral Fund); reports and factsheets on alternatives; links for new developments in alternatives; safety and good practices in refrigeration servicing; international and regional standards in refrigeration and air-conditioning

Module 13: Additional Resources for Participants

Follow-up exercise: Checklist for new ozone officers

Resources: Glossary of terms; list of contacts

Based on the newly finalized modules, the CAP organised Training Programme for new National Ozone Officers of the Southern African Development Community (SADC) on 20-21 June 2019 in Victoria, Mahe, Seychelles. The following countries participated in the training programme: Angola, Botswana, Eswatini, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, Tanzania, Zambia, Zimbabwe and Ghana. In 2019, two more NOU training programmes are scheduled: one training back to back with enabling activities project workshop for selected countries from East, West and North African region (Anglophone Network) on 23-24 September 2019 in Accra, Ghana and another training workshop for the Asia and Pacific region tentatively to be organised during the first week of December in Bangkok, Thailand.



Therefore, this component is completed, and the NOO training is fully operational. Further training workshops based on the newly-developed modules will be regularly organised by CAP regional teams

in coming years based on requests/needs of Article 5 countries from the respective Regional Networks. There are also plans to translate the modules into French and Spanish languages.

Advanced (refresher) training for experienced NOOs

The training package and components for the advanced (refresher) training for experienced NOOs are drafted and are currently under review. The following modules are included in the training programme:

- **Module 1.** HFC phase-down & national strategy
- **Module 2.** Calculating CO₂e, HFC consumption & baseline
- **Module 3.** Near-term implementation
- **Module 4.** Longer-term implementation
- **Module 5.** Supporting climate-friendly alternatives
- **Module 6.** Stakeholders capacity building
- **Module 7.** Tools for optimising Multilateral Fund projects [pending ExCom decision on cost guidelines]
- **Module 8.** Updated CP data reporting [pending ExCom decision on HFC reporting]
- **Module 9.** Updated Article 7 data reporting
- **Module 10.** Skills toolbox
- **Annex A:** Information for trainers
- **Annex B:** Additional resources

The expected immediate result is that NOU experienced staff will acquire additional information and skills to enhance the work of the NOU. The expected longer-term results are that (a) NOU teams will be able to carry out their work more effectively, and (b) national governments will be successful in meeting the commitments that have been agreed by all countries under the Montreal Protocol. The advanced (refresher) training is planned to be tested during the pilot training workshops similarly to the introductory training programme. At the final stage, CAP will incorporate the feedback and comments from participants to improve and ‘fine tune’ the advanced (refresher) training curricula.

The advanced modules for experienced NOOs are planned to be completed by first quarter 2020 which will enable inclusion of pending Executive Committee decisions on Country Programme data reporting and the HFC cost guidelines.

4. Management of ODS in the fishing sector

UNEP completed this specifically-funded global CAP activity in 2018 as reported in that year's CAP Progress Report. However, CAP continued its regular work related to refrigerant management in the fishery sector, especially in the Pacific Island Country region:

- Continued Attention in Specific Regional Network Meetings. During the Network and Thematic Meetings of the Pacific Islands Countries' Ozone Officers “Next Step: Implementation of the Initial Obligations and HPMP organized in September 2018, data collection on ODS (and HFC) usage in the fisheries sector was discussed. Bilateral discussions with fisheries authority and fisheries industry were also conducted during country mission. The challenges identified to grasp accurate data in refrigerant supply, use and demand in the fisheries sectors could be attributed to many factors, including the complicated ownership structure. Issues identified included: Non-docking of locally-flagged fishing vessels at national ports, Potential uncaptured high leakage rate Vessel age, and Absence of legal frameworks.

- Support Marine Stewardship Council (MSC) on refrigeration systems reporting requirements. With CAP assistance, the Forum Fisheries Agency (FFA) presented a proposal to the Marine Stewardship Council (MSC) to approve two new columns on the FFA's Vessel Register application form, i.e. the type of refrigerant, and the capacity of refrigerant system in kilograms. The proposal was approved and adopted by the MSC through Decision MCSWG20 in March 2018 and has been implemented by the FFA member countries, noting that this only applies to newly-registered vessels after the adoption of the decision.
- Address fishing sector under HPMP Stage II. Under the regional HPMP Stage II preparation project, CAP assisted the PIC NOUs with developing a specific questionnaire to collect data from the fisheries sector, in particular the vessel information, type of refrigerants, holding capacity, etc. taking into account the challenges identified from the 2018 Network meeting. Data collection is underway and it is envisaged that information collected from the survey will assist the countries to better understand their national situation and make further decisions about the phase-out of HCFC after 2020.

ANNEX 2B – CAP PARTNERSHIPS, PRODUCTS AND TOOLS

Since becoming an Implementing Agency of the Multilateral Fund in 1991, UNEP has built partnerships with key international, regional and national industry associations, professional societies, international organisations, government agencies, industry groups, and non-governmental organisations to further the objectives of the Montreal Protocol. These world-recognized partners bring their institutional reputation, expertise, and knowledge products to bear on issues related to implementation or enforcement of this multilateral environmental agreement in Article 5 countries. This cooperation takes many forms, such as joint development and deployment products and tools, support for project implementation, capacity building, outreach and awareness raising. OzonAction relies on these partnerships to deliver specific activities identified in the 2018-2020 CAP Strategy, and they constitute considerable in-kind support (and in some cases co-financing) from non-Multilateral Fund sources. OzonAction’s partnership arrangements ensure covering the most needed services by Article-5 countries including, but not limited to, the following areas:

- Certification of RAC technicians
- Refrigeration Training and Education
- Safety and good practice practices
- Surveying and analysing consuming sectors
- Advancement and deployment of lower-GWP alternatives and technology
- Development and update of codes and standards
- Monitoring trade and combating illegal trade
- Development, enactment, and enforcement of policies and regulations

The following are OzonAction’s planned partnerships for 2020:

Organisation	Type of organisation	Scope	Type of cooperation with UNEP	Details about partnership (past, present and/or future)
REFRIGERATION AND AIR CONDITIONING				
Air Conditioning and Refrigeration European Association (AREA)	Professional/ Industry Association	Global	Promoting adoption of ozone-friendly lower-GWP and energy efficient RAC technology; online e-learning; materials on the use of new refrigerants; certification of technicians	Sharing experience on strengthening RAC associations, training, certification, technology transfer and innovation with the network countries; developing of a “Universal Training Kit” on sound use of refrigerants to support training centres and programs in Article 5 countries
Air Conditioning, Heating, and Refrigeration Institute (AHRI)	Industry association	Global	Promoting a global industry approach to qualify refrigeration technicians; cooperating in addressing technical needs for promoting low-GWP alternatives	Partnering through a cooperation framework to develop and deploy a global refrigeration qualification program titled (Refrigerant Driving License); support UNEP in addressing research needs for examining lower-GWP alternatives in high ambient temperature countries;

Organisation	Type of organisation	Scope	Type of cooperation with UNEP	Details about partnership (past, present and/or future)
ASHRAE	Professional association	Global	Promoting adoption of ozone-friendly low-GWP and energy efficient RAC technology; e-training; organizing joint international and regional events; strengthening RAC associations in Article 5 countries; supporting Montreal Protocol projects in Article-5 countries through promotion of responsible and sound management of refrigerants	UNEP and ASHRAE have a long-standing cooperation and biennial work plans since 2007. Joint activities include: <ul style="list-style-type: none"> - organising international and regional technical conferences/events; - Developing e-Learning training courses, university course and technical materials. - Developing international guideline (assessment program) for the good management of refrigeration/air-conditioning installations - Promoting lower-GWP alternatives and technology through a global Award program and facilitating access of Article 5 countries to ASHRAE's knowledge tools; - supporting/strengthening RAC associations in Article 5 countries; - UNEP is also part of ASHRAE's relevant refrigeration and research committees to ensure that the needs of Article 5 countries are well-tabled in ASHRAE standards, research and global programs.
Italian Association of Refrigeration (ATF)	Professional association	European	Advancing certification programs for refrigeration servicing technicians	Cooperate in building national refrigeration servicing certification model similar to F-Gas certification but tailored to the needs and operating conditions of Article-5 countries (three pilot countries)
Bundesfachschule Kälte-Klima-Technik (BFS)	Training institute	Global	Training and capacity building related to safe use of ozone-friendly low-GWP & energy efficient RAC technology	Co-developing training materials/applications for low-GWP refrigerants.
China Household Electric Appliances Association (CHEAA)	Industry Association	National	Facilitating South-South cooperation (especially in the SEAP region) to exchange China's experiences with the transition to R290 (propane) in A/C	Supporting the annual conference of CHEAA; cooperating to assist HAT countries to build a risk assessment model for the use of A3 refrigerants.

Organisation	Type of organisation	Scope	Type of cooperation with UNEP	Details about partnership (past, present and/or future)
			industry to other Article 5 countries; cooperating in risk assessment for A3 refrigerants	
Emirates Authority for Standardization and Metrology (ESMA)	Government agency	National	Organizing joint conferences and events about low-GWP alternatives and technologies;	Jointly organizing 5 international symposia on alternative refrigerants for high ambient countries; Organizing the sixth international symposium (2020) on alternatives for HAT countries in both air-conditioning and refrigeration sectors
European Partnership for Energy and the Environment (EPEE)	Industry association	Regional	Exchanging experiences with European Industry about analyzing consuming sectors and building scenario models for alternatives availability and potential in markets	Building scenario model titled “HFCs Outlook” for assessing consuming sectors, availability of alternatives and prospects at short and long terms vis-à-vis compliance scenarios against HCFCs phase-out and HFCs phase-down commitments. The model is piloted in ten (10) Article 5 countries in Latin America, Africa, South Asia, West Asia and East Europe. Plans are made to make the model accessible to all interested Article-5 countries in 2020
Global Food Cold Chain Council (GFCCC)	Initiative (Industry and RAC associations)	Global	Mapping the needs of Cold Chain subsectors in relation to lower-GWP technologies while considering the relation to energy and food loss/waste.	Launching of joint initiative “Cold Chain Database Model” which is an in-depth survey for the cold chain subsectors to build better understanding about needs and possible interventions for promoting lower-GWP alternatives and technology while connecting with energy demand, economics and food/loss dimensions.
Global Refrigerant Management Initiative (GRMI)	Initiative (RAC industry associations)	Global	Promoting the sound management of refrigerants amongst RAC industry; supporting training and emissions reduction measures; advocating for refrigerant management policies and norms	UNEP is cooperating with GRMI secretariat and members to convey the needs and voice of Article 5 countries and Montreal Protocol to that initiative.
International Institute of Refrigeration (IIR)	Inter-Governmental Organization	Global	Promoting adoption of ozone-friendly low-GWP and energy efficient RAC	Sharing technical information and expertise; organising joint events; co-organizing thematic workshop on alternative technologies for

Organisation	Type of organisation	Scope	Type of cooperation with UNEP	Details about partnership (past, present and/or future)
			technology in the cold chain	cold chain Jointly develop series of Cold Chain Technology Briefs offering detailed explanation of five main categories of the cold chain, trends, and challenges i.e. Food Production, Processing, Storage, Transportation, Commercial Refrigeration (Retail) and Fisheries/Vessel Applications
Japan Refrigeration and Air Conditioning Industry Association (JRAIA)	Industry Association	National	South-South cooperation to exchange Japan experience in transition to low-GWP alternatives in A/C industry to other Article 5 countries; cooperating in risk assessment for A2L refrigerants.	Organizing several workshops/sessions and field trip for the air conditioning industry from West Asian HAT countries to Japan; cooperating to assist HAT countries to build risk assessment model for the use of A2L refrigerants. Finalize comprehensive model for Risk Assessment of A2L refrigerants as part of PRAHA-II project
Pacific Islands Forum Fisheries Agency (FFA)	Inter-Governmental Organization	Regional	Promoting adoption of ozone-friendly low-GWP and energy RAC technology	Collaboration with FFA on implementation of the revised vessel register application form that include (i) type of refrigerant and (ii) capacity of refrigerant system for further analysis and dissemination of MARPOL Annex VI Regulation 12 regarding ban on HCFC containing system or equipment in ships constructed on or after 1 January 2020 to member countries. Collaboration also include identification of activities to support HCFC phase-out under the regional Pacific Island Country HPMP Stage II.
Refrigerant Australia	Industry Association	Regional	Promoting good service practice and maximizing energy efficiency	New program to review and analyze the service practices on good management of refrigerants vis-à-vis energy efficiency of serviced units
Secretariat of the Pacific Community (SPC)	Intergovernmental	Regional	Supporting RAC technical vocational training and energy efficiency policy management in the Pacific region	UNEP will continue to collaborate with SPC to (i) promote synergizing of the Montreal Protocol and Energy Efficiency as part of agenda in the existing regional high-level forums in the Pacific region and (ii) explore whether refrigerant information could be included

Organisation	Type of organisation	Scope	Type of cooperation with UNEP	Details about partnership (past, present and/or future)
				in the product registration system of energy efficient product.
World Refrigeration Day Secretariat	International Initiative	Global	Global public and specialized campaign to highlight the importance of sector and environmental issues in relation to Montreal Protocol	Celebrating the first World Refrigeration Day (WRD) through an international camping with WRD Secretariat and ASHRAE under the theme “Refrigerants for Life” with many events and functions organized in Article 5 countries as part of Montreal Protocol their projects and programs. Campaign included support materials and refrigerences. Plans are made for new campaign in 2020 addressing the refrigeration servicing sector
CUSTOMS AND ENFORCEMENT				
Association of Southeast Asian Nations (ASEAN)	Intergovernmental	Regional	Regional collaboration on ratification of the Kigali Amendment, development and adoption of regional HS Code for HFCs and HFC blends, strengthening regional cooperation in combatting illegal ODS trade for the Southeast Asia Network	All SEAP countries (except Timor Leste) are member of ASEAN, which has played a vital role in the region to promote regional collaboration in a number of aspects including environment. UNEP will collaborate with ASEAN through their relevant working groups to promote the ratification of the Kigali Amendment at the regional level. Moreover, ASEAN has established an 8-digit regional HS code system to harmonize the trade of common commodities in the region. UNEP will work with ASEAN to explore the possibility to assign the HS code to HFCs and HFC blends, for further adoption of each member country. The collaboration also includes strengthening regional cooperation in combatting illegal ODS trade for the Southeast Asia Network.
Green Customs Initiative (GCI)	International partnership	Global	Customs training; compliance and enforcement; combatting illegal ODS trade	The GCI partners include the Secretariats of the relevant multilateral environmental agreements (Basel, Cartagena, CITES, Montreal, Rotterdam Stockholm and recently Minamata), Interpol, the

Organisation	Type of organisation	Scope	Type of cooperation with UNEP	Details about partnership (past, present and/or future)
				Organisation for the Prohibition of Chemical Weapons, UNEP, the United Nations Office on Drugs and Crime (UNODC) and the WCO. The partnership is led and coordinated by UNEP Law Division/International Environmental Law Unit.
Gulf Cooperation Council (GCC) Secretariat	Regional	Regional	Monitor the trade ODS and alternatives as well as combat illegal trade.	UNEP is cooperating with GCC and other regional & sub-regional organizations and secretariats to support the development and implementation of strategies or action plans to foster the monitoring the trade ODS and alternatives as well as combat illegal trade.
League of Arab States (LAS) Secretariat	Regional	Regional	Development and dissemination of Codes	Develop jointly the first and second regional refrigeration and air-conditioning code (2010 & 2015), working on updating the RAC code and adding two (2) more codes on District Cooling and Commercial Refrigeration, start the process of update the insulation materials codes as part of the regional building codes. Developing tools for introduction of the developed/updated codes to all Arab member states.
Oceania Customs Organization Secretariat (OCO)	Regional	Regional	Development and adoption of regional HS Code for HFCs and HFC blends, strengthening regional cooperation in combatting illegal ODS trade for the Pacific Islands Countries Network	OCO has launched the Pacific Harmonized Commodity Description and Coding System 2017 (PACHS17) in June 2018, which aims to establish the regional HS code to standardize names and codes of goods exported and imported by the Pacific region. UNEP is collaborating with OCO to amend the PACHS17 to include regional sub-heading for single HFCs and mixtures containing HFCs based on recommendation of the World Customs Organization (WCO) as an interim solution. The amendment proposal will be submitted to OCO for review in September 2019. In 2020, UNEP will continue to collaborate with OCO to strengthen capacity of the

Organisation	Type of organisation	Scope	Type of cooperation with UNEP	Details about partnership (past, present and/or future)
				customs in the region to understand and accurately use HS code for HFC and mixtures containing HFCs and to prepare for the adoption of WCO's 2022 HS code in the PACHS22 (to be adopted in 2022). Collaboration also include identification of activities to support HCFC phase-out under the regional Pacific Island Country HPMP Stage II.
World Customs Organisation (WCO)	International organisation	Global	Customs training; e-training; compliance and enforcement; combatting illegal ODS trade	UNEP and WCO have a formal framework for cooperation (MOU). UNEP collaborated with WCO to develop a Montreal Protocol e-learning course for customs officers, which is hosted by WCO's e-learning platform; mutual participation in relevant events. UNEP cooperates with WCO Headquarters as well as WCO's Regional Intelligence Liaison Offices (RILOs), Regional Offices of Capacity Building (ROCB), and Regional Training Centres (e.g. AKMAL in Malaysia, ROK, India).

Partnership products and tools

Article 5 countries include the following Montreal Protocol stakeholder groups that need to be addressed through programmes, projects, and services:

Institutional - Public Sector	Technical - Private, Non-Governmental
<ul style="list-style-type: none"> • National Ozone Units • Environmental authorities • Energy and climate authorities • Customs, enforcement, border controls • Standardization authorities • Industry authorities • Technical education and vocation training (TVET) authorities • Research institutes and universities • Housing and buildings authorities • Procurement boards and committees • Marine/fisheries/agriculture/ports, others • Chambers of trade and industry 	<ul style="list-style-type: none"> • Refrigeration servicing workshops, companies and technicians • Informal servicing sector • Refrigerant importers, wholesalers and distributors • Training institutes and centers • Engineers, plants/facility managers and operators • Consultants and consulting firms • Building and plant owners/investors • Research institutes and universities • Engineering groups

The following lists the major products that OzonAction is undertaking with one or more of the above partners, targeted at one or more of the above stakeholder groups:

Partner	Product	Availability	Who will benefit
ASHRAE	Refrigerant Literacy E-Learning Course with international certificate	English : Available	Government officials, buildings owners, NOUs, consultants, other individuals who wish to learn about Refrigerants progression, classification, applications and basic good management practice
		Spanish : Available	
		French : Nov-2019	
	Refrigerant Sound Management E-Learning Course with international certificate	English : Available	Servicing technicians and engineers as well as servicing contractors and buildings' managers
		Spanish : Jun-2020	
French : Jun-2020			
Refrigerant Management for Future Engineers (University Program)	Available	Full Elective Course about Refrigerant Management for one teaching semester at engineering universities or colleges. The course is designed as per Academic requirements	
Lower-GWP Innovation Award	Available	A joint ASHRAE and UNEP award promotes innovative design, research and practice by recognizing people who have developed or implemented innovative technological concepts applied in developing countries to minimize global warming potential (GWP) through refrigeration and air-conditioning management.	
University Course "Refrigerant Management"	Available	First of kind elective course for engineering colleges/institutes designed in academic format and offer full-semester knowledge to undergraduate engineers about management of refrigerants	
EPEE	HFCs Outlook Model	2 nd Pilot Stage is ongoing with 8 countries ¹³ and will be ready for rollout to all interested countries early 2020	NOUs that which we build scenario model about HFCs vs. HCFCs projection as substances and based-products against MP compliance targets
AREA	Universal Training Kit	Nov-2019	Modular Training Kit that can be used directly by training institutes/centers in A5 countries where they can build the desired format of any training course (subject/ target groups/duration) through an online portal
AHRI ¹⁴	Refrigerant Driving License (RDL)	Pilot Stage is ongoing with 6 countries ¹⁵ and additional pilot will take place in 2020	Global Industry-based qualification program with international certificate recognized by RAC industry on sound management of refrigerants.
JRAIA	Risk Assessment Model for use of flammable refrigerants	As part of PRAHA-II project and will be ready by Nov-2019	A roadmap for building local risk assessment model analyzing risks and measures need to be considered when using flammable refrigerants during

¹³ Bosnia and Herzegovina, Dominican Republic, Gabon, Guatemala, Honduras, Mali, Senegal, and Sri Lanka

¹⁴ Other RDL supporters are: ABRAVA, ACAIRE, AREA, AREMA, ASHRAE, EPEE, JRAIA, Refrigerant Australia, The Alliance for Responsible Atmospheric Policy.

¹⁵ Grenada, Maldives, Rwanda, Sri Lanka, Suriname, and Trinidad and Tobago.

Partner	Product	Availability	Who will benefit
			the logistics process (non-manufacturing) i.e. installation, operation and servicing of residential A/C applications
GFCCC	Cold Chain Database Model	Available for Piloting	A database model to assist countries is sorting and classifying cold chain related applications for better decision making about technology selection and phase-out/phase-down programs. The model will be offered as tool that can be used during preparation of Stage-II of HPMPs, HFCs plans and any relevant local surveys
BFS	Good Practice Videos & Mobile App	Available	Set of short educational videos about best practices in refrigeration servicing and
WCO	Customs E-Learning	Available	A series of interactive training modules on Montreal Protocol, legal trade facilitation and prevention of illegal trade in ODS and alternatives. Developed in cooperation with the WCO and hosted on the WCO training platform.
WCO	Customs Training Manual	Available	The customs training manual is a comprehensive guide to Montreal Protocol and illegal trade issues. It also provides guidance on delivery of customs training workshops.
WRD	“Refrigerants for Life” Campaign	Available	Celebrating the first World Refrigeration Day (WRD) through an international camping with WRD Secretariat and ASHRAE under the theme “Refrigerants for Life” with many events and functions organized in Article 5 countries as part of Montreal Protocol their projects and programs. Campaign included support materials and refringences. Plans are made for new campaign in 2020 addressing the refrigeration servicing sector

In reaching out to those different clients, OzonAction staff re-forced their work over the last three years to develop products and tools that can be instantaneously utilized as part of ongoing phase-out projects and capacity building programs. The products and tools were also designed in different formats to allow broader use and better accessibility.

To ensure optimal use of these products and tools by Article 5 countries, OzonAction developed an internal **Deployment Plan** whereby it regularly encourages National Ozone Units to consider, on a voluntary basis, linking the products and tools with their ongoing Multilateral Fund projects, notably the Institutional Strengthening, HPMP and Kigali Enabling Activities projects. OzonAction tools and products are also open and shared with other Implementing Agencies to use in different projects they directly or jointly implement in Article 5 countries. By end of UNEP’s 2018-2020 CAP Strategy, all developed tools and products will be evaluated and further updated/improved as needed.

ANNEX 2C – REPORT ON THE USE OF CAP STAFF FOR MULTILATERAL FUND ACTIVITIES

Decision 70/10 (iii) requested UNEP to provide a status report to the 71st Executive Committee meeting on the extent to which UNEP implemented measures to ensure that all staff time paid with CAP funds was used for the Multilateral Fund Montreal Protocol activities, in line with decision 50/26(a)(iii). Moreover, Decision 70/10(d)(ii), requested UNEP to continue providing reports according to the following five categories in the context of annual progress and financial reports on utilisation of CAP staff:

- Projects and services approved by the Executive Committee;
- Pursuing synergies or implementing joint activities with other non-Multilateral Fund partnerships and initiatives;
- Mobilizing resources for ozone protection activities from entities outside of Multilateral Fund;
- UNEP-wide processes and activities; and
- Administrative activities.

For the period September 2018 through August 2019, UNEP continued to ensure that all staff paid through CAP focused on the delivery of the activities, services and projects approved by the Executive Committee via the Business Plan and CAP Work Programme and Budget. This was done primarily through:

- Work planning. All CAP staff have developed their individual work plans for the period 1 April 2019 – 31 March 2020 in close consultation with the Head of OzonAction. The individual work plans reflect the goals and priorities set for the staff member for this reporting period. Collectively, the implementation of these work plans reflected the projects and services approved by the Executive Committee for the reporting period.
- Monitoring of legal instruments. The Head of OzonAction reviews all proposed legal instruments with countries and organisations, commercial companies, terms of reference for consultants, as well as requests for payments and associated outputs.
- Regular communication with CAP teams. Through regular communication with Regional Coordinators and other team members, review of outputs and deliverables, and participation in events/missions organised by CAP, the Head of OzonAction keeps an overview on activities undertaken by CAP staff. The Regional Coordinators also play a key role in monitoring use of CAP staff time. Regional Coordinators report to the Head of OzonAction as their First Reporting Officer and to the UNEP Regional Director as their Second Reporting Officer (Decision 70/10 (d) (iv)).
- Accountability of staff. As part of UNEP's accountability framework, all staff are individually responsible for the use of their time and delivery of their own work, which is to deliver Multilateral Fund outputs.

The following table summarizes the use of CAP staff time during this period:

CAP team	Projects and services approved by the Executive Committee (% time)	Pursuing synergies or implementing joint activities with other non-Multilateral Fund partnerships and initiatives (% time)	Mobilising resources for ozone protection activities from entities outside of Multilateral Fund (% time)	UNEP-wide processes and activities (% time)	Administrative activities for CAP and Multilateral Fund projects (% time)
Africa – Anglophone	70	10	0	0	20
Africa – Francophone	70	10	0	0	20
Caribbean	70	10	0	0	20
Europe & Central Asia	70	10	0	0	20
Latin America	70	10	0	0	20
Pacific Island Countries	70	10	0	0	20
South Asia	70	10	0	0	20
South East Asia	70	10	0	0	20
West Asia	70	10	0	0	20
Paris (Global)	50	10	5	5	30

In collaboration with Ozone Officers, CAP staff continue to explore opportunities for co-financing and climate co-benefits through interactions with non-Multilateral Fund organizations, including but not limited to those indicated in Annex 2B CAP Partnerships, products and tools. Furthermore, during the period September 2018 through August 2019, various CAP staff were involved in the following project:

- Kigali Cooling Efficiency Programme (K-CEP). OzonAction helped implement the two-year "Twinning of National Ozone Officers and Energy Policymakers" project to build the capacity of National Ozone Officers and national energy policymakers for linking energy efficiency and Montreal Protocol objectives in support of the Kigali Amendment. The component handled by OzonAction, i.e. the organisation of workshops back-to-back with Regional Network Meetings in all regions, was completed in February 2019. The project was led by the Network and Policy Manager and involved all regional CAP teams to deliver the workshops.

ANNEX 2D – MEETINGS AND WORKSHOPS

Meetings and workshops organized by CAP

During the period 1 September 2018 – 31 August 2019, UNEP organized the following events as part of CAP services. The documentation is available on the OzonAction Meeting Portal at www.ozonactionmeetings.org.

Network and thematic meetings

1. *Training Workshop for the New National Ozone Officers of Pacific Island Countries Network*, Bangkok, Thailand, 25-26 September 2018.
2. *Network and Thematic Meetings of the Pacific Island Countries Ozone Officers “Next Step: Implementation of the Initial Obligations and HPMP Stage II”*, Bangkok, Thailand, 27-29 September 2018.
3. *Training Workshop for the New National Ozone Officers of South Asia and Southeast Asia Networks*, Bangkok, Thailand, 28-29 September 2018.
4. *Consultation Workshop on the Implementation of the Initial Obligations of Kigali Amendment for Parties in Asia and the Pacific*, Bangkok, Thailand, 30 September 2018.
5. *Europe and Central Asia Meeting of Montreal Protocol Experts*, Antalya, Turkey, 11-12 October 2018.
6. *Joint National Ozone Unit and Customs Twinning Workshop for South Asia and South East Asia*, Bangkok, Thailand, 17-19 October 2018.
7. *Joint National Ozone Officers and Customs Twinning workshop and Back to Back Parallel Border Dialogues for Selected Countries of Africa Francophone Network*, Grand Popo, Benin, 23-25 October 2018.
8. *Joint National Ozone Officers and Customs Twinning Workshop for Southern Africa Development Cooperation (SADC) Countries*, Johannesburg, South Africa, 24-26 October 2018.
9. *Joint Meeting of the Networks of Central America, South America and the Caribbean*, Quito, Ecuador, 1 November 2018.
10. *Latin America Network Meeting of National Ozone Officers*, Quito, Ecuador, 2-4 November 2018.
11. *Caribbean Network Meeting of National Ozone Officers*, Quito, Ecuador, 2-4 November 2018.
12. *Capacity Building and Awareness on HFCs and Alternatives Management*, Dakar, Senegal, 4-6 December 2018.
13. *ECA Technology Roundtable on Ozone and Climate-friendly Technologies and Exhibition* (as part of 49th International Congress and Exhibition on Heating, Refrigeration and Air Conditioning), Belgrade, Serbia, 5-7 December 2018.
14. *Regional Workshop on Good Practice and Flammable Refrigerants for Master Trainers from South Asia and South East Asia Networks*, Guangzhou, China, 4-7 December 2018.
15. *Roundtable Experts Meeting on Updating the Arab Unified Codes*, Cairo, Egypt, 18-19 December 2018.
16. *Kigali Enabling Activities Projects Consultation Workshop for West Asia Partner Countries*, Cairo, Egypt, 22-23 December 2018.
17. *Second Global Inter-Regional and Parallel Network Meetings for National Ozone Officers*, Paris, France, 17-20 February 2019.

18. *Enabling Activities Workshop for Countries of Southern African Development Community (SADC) Region- Africa Anglophone Network*, Victoria Mahe, Seychelles, 17-19 June 2019.
19. *Ozone Officers Training for Countries of Southern African Development Community Region - Africa Anglophone Network*, Mahe, Seychelles, 20-21 June 2019.
20. *Thematic Workshop on the Integration of Good Practices in the National Qualification Certificate/Vocational and Technical Education and Training System for Refrigeration Servicing Technicians of South Asia and South East Asia Networks*, Bangkok, Thailand, 29-30 June 2019.
21. *Train the Trainers Program of Refrigerant Driving License (RDL)*, Male, Maldives, 8-11 July 2019
22. *Train the Trainers Program of Refrigerant Driving License (RDL)*, Colombo, Sri Lanka, 22-25 July 2019
23. *Thematic Workshop for South East Asia Network of National Ozone Officers*, Cebu, Philippines, 30 July – 2 August 2019.
24. *Thematic Workshop of the Pacific Island Countries Network of National Ozone Officers on Compliance with the Montreal Protocol Post-Kigali, and Twinning Workshop for the PIC Ozone and Customs Officers on Strengthening Monitoring and Enforcement Mechanism for Ozone Depleting Substances and HFC Trade Control*, Koror, Palau, 12 - 17 August 2019.
25. *Regional Workshop for Customs Officers and National Ozone Officers of Latin America on HCFCs/HFCs Controls and Illegal Trade Prevention*, Asunción, Paraguay, 20–22 August 2019.
26. *Thematic Workshop for National Ozone Officers of South Asia Network “Building Enabling Conditions for HFC Phase-down while Phasing out HCFCs,”* Ulaanbaatar, Mongolia, 26-29 August 2019.

Other meetings

Events with "*" were co-organized with the Kigali Cooling Efficiency Fund.

27. *Seminar on Montreal Protocol and Cold Chain in developing Economies- in cooperation with government of India, IIR, GFCCE and ASHRAE in margins of REFCOLD-2018*, Gujarat, India, 23 November 2018.
28. *Twinning Workshop on Energy-Efficient and Climate-Friendly Refrigeration and Air Conditioning: Pacific Island Countries*, Bangkok, Thailand, 1-2 October 2018.*
29. *Twinning Workshop on Energy-Efficient and Climate-Friendly Refrigeration and Air Conditioning: Europe and Central Asia*, Antalya, Turkey, 9-10 October 2018.*
30. *Twinning Workshop on Energy-Efficient and Climate-Friendly Refrigeration and Air Conditioning: Caribbean*, Quito, Ecuador, 30-31 October 2018.*
31. *Parallel Twinning of National Ozone Officers and Energy Policymakers for Energy Efficient and Climate-Friendly Cooling*, Paris, France, 21-22 February 2019.*
32. *PRAHA-II Final Experts’ Meeting for Building Risk Assessment Model of Using Flammable Refrigerants in High-Ambient Temperature Countries*, Tokyo, Japan 15-17 April 2019.
33. *Train the Trainers Program of Refrigerant Driving License (RDL)*, Kigali, Rwanda, 24-27 June 2019.
34. *Train the Trainers Program of Refrigerant Driving License (RDL)*, Trinidad and Tobago, 13-16 August 2019.
35. *Train the Trainers Program of Refrigerant Driving License (RDL)*, Suriname, 19-22 August 2019.
36. *Train the Trainers Program of Refrigerant Driving License (RDL)*, Grenada, 19-22 August 2019.

Other major meetings in which CAP participated

During the period 1 September 2018 – 31 August 2019, UNEP participated in the following events organized by other organisations:

1. *Inter-Agency Coordination Meeting*, Montreal, Canada, 2-7 September 2018.
2. *United Nations Office on Drugs and Crime's Regional Meeting of South Asia Customs Officers*, Dhaka, Bangladesh, 4-6 September 2018.
3. *Green Customs Initiative 13th Annual Partners Meeting*, The Hague, The Netherlands, 24-25 September 2018.
4. *30th Meeting of the Parties to the Montreal Protocol*, Quito, Ecuador, 5-9 November 2018.
5. *WCO Regional Workshop on Combatting Environmental Crime and Debriefing of WCO Operation "Demeter IV"*, Shanghai, China, 20-22 November 2018.
6. *82nd Executive Committee Meeting*, Montreal, Canada, 3-7 December 2018.
7. *49th International Congress & Exhibition on Heating, Refrigeration and Air Conditioning*, Belgrade, Serbia, 5-7 December 2018.
8. *ASHRAE 2019 Conference*, Atlanta, United States, 12-16 January 2019.
9. *Inter-Agency Coordination Meeting*, Montreal, Canada, 5-7 March 2019.
10. *IIR International Conference on Ammonia and Carbon Dioxide Refrigeration Technologies*, Ohrid, Republic of North Macedonia, 11-13 April 2019.
11. *83rd Executive Committee Meeting*, Montreal, Canada, 27-31 May 2019.
12. *XVIII European Conference on Latest Refrigeration and Air Conditioning Technologies*, Milan, Italy, 6-7 June 2019.
13. *Annual Meeting of WCO's Regional Intelligence Liaison Office for Eastern and Central Europe (RILO ECE)*, Poznań, Poland, 11-12 June 2019.
14. *41st Open-Ended Working Group Meeting of the Parties to the Montreal Protocol*, Bangkok, Thailand, 1-5 July 2019.