



Ozone Secretariat



United Nations
Environment Programme

31 March 2017

Your Excellency,

On behalf of the Parties to the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer, we are pleased to forward the attached report, which is our joint input to the 2017 High Level Political Forum on the theme 'Eradicating poverty and promoting prosperity in a changing world'.

The report demonstrates the contribution by parties to the Vienna Convention and its Montreal Protocol to the Sustainable Development Goals through the implementation of the two treaties. We welcome the in-depth review of the relevant Goals by the High Level Political Forum in 2017. The goals under review by HLPF are also relevant to the implementation of the Vienna Convention and the Montreal Protocol by the parties.

We would like to express our appreciation for the opportunity to make our contribution to the Forum.

Please accept, Excellency, the assurance of our highest consideration.

Dr. Sydney Alexander Samuels Milson
President of the 10th meeting of the Conference of the Parties to the Vienna Convention
Minister of the Environment
and Natural Resources of the Government of Guatemala



Vincent Biruta
President of the 28th Meeting of the Parties to the Montreal Protocol
Minister of Natural Resources of the Government of Rwanda

H.E. Ambassador Frederick Mussiwa Makamure Shava
President of the Economic and Social Council



Vienna Convention and its Montreal Protocol's contribution towards the 2030 Agenda and the Sustainable Development Goals

Introduction

In response to the invitation from the President of the Economic and Social Council, *H.E. Ambassador Frederick Mussiwa Makamure Shava*, the President of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer and the President of the Twenty-Eighth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer are jointly submitting this report to the 2017 High Level Political Forum (HLPF).

The report is structured around the template provided by the President of Economic and Social Council, and the inputs are provided in response to the specific questions from the template, under the theme of the 2017 HLPF: *Eradicating poverty and promoting prosperity in a changing world*. It showcases the contribution of the Vienna Convention and its Montreal Protocol towards those Sustainable Development Goals that are under in-depth review in 2017 and most relevant to the work of the two treaties.¹

Goal 1 – End poverty in all its forms everywhere: The Multilateral Fund for the Implementation of the Montreal Protocol provides financial and technical support to developing countries in complying with their obligations under the Montreal Protocol. Through the Fund, approximately US\$3.5 billion has been provided to date to assist 147 developing countries to meet their Montreal Protocol obligations. The Fund has supported technology transfer projects that have replaced ozone-depleting substances with ozone-friendly substitutes and technologies in the developing countries. This has made the relevant industries more competitive, and has been done carefully with a view to mitigating the negative impacts of the changes on both the enterprises concerned and on their workers. The Montreal Protocol has therefore significantly contributed to the eradication of poverty and promotion of prosperity in these countries.

Goal 2 – End hunger, achieve food security and improved nutrition and promote sustainable agriculture: According to some estimates, the global phase-out of ozone-depleting substances under the Montreal Protocol will result in an estimated US\$460 billion in global benefits between 1987 and 2060 due to avoided damages to agriculture, fisheries, and materials such as plastic and wood² that would have been caused by depletion of the ozone layer.

In addition, the phase-out of methyl bromide, a poisonous fumigant gas that is ozone depleting, was used for many years against a wide variety of pests in agriculture, buildings and commodities. Its phase-out has contributed to the development of more effective and much safer alternatives in addition to protecting the ozone layer.

Goal 3 – Ensure healthy lives and promote well-being for all at all ages: As a result of ozone layer protection efforts under the Vienna Convention and the Montreal Protocol, up to 2 million cases of

¹ In addition, actions taken under the Vienna Convention and its Montreal Protocol have contributed to the achievement of Sustainable Development Goals 8, 11, 12, 13 and 15 which are not under review at this time. Goals 4, 5, 6, 7, 10 and 16 are not of relevance to the work of the ozone treaties.

² Markandya, A. and Dale, N. (2012): "The Montreal Protocol and the Green Economy: Assessing the Contributions and Co-Benefits of a Multilateral Environmental Agreement," Contribution to the Green Economy Initiative, United Nations Environment Programme, OzonAction Branch and Economics and Trade Branch, accessible at <http://www.unep.org/ozonaction/Portals/105/documents/publications/green-economy-report.pdf>, Pages 45 & 50



skin cancer may be prevented globally each year by 2030.³ In the United States, for those born between 1890 and 2100, there may be: 283 million cases of skin cancer avoided, 8.3 million being melanoma; 1.6 million deaths from skin cancer prevented; and 46 million cases of cataract prevented, according to the US Environmental Protection Agency (EPA).⁴

Goal 9 – Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation: Phasing out ozone-depleting substances across more than 240 sectors has changed daily production and consumption patterns by stimulating more efficient production processes, including energy efficiency, and by innovative redesigning of products and equipment to use greener chemicals. Increased investment in green alternatives has driven down the costs of using them, making them more accessible to the person in the street.

Goal 14 – Conserve and sustainably use the oceans, seas and marine resources for sustainable development: Phasing out ODSs protects the oceans from the impact of UV radiation. For example, many aquatic species including some planktons, corals and fish are sensitive to and adversely affected by UV radiation. The changes in climate also create other impacts such as alteration of the temperatures and occurrence of extreme weather events, many of which interact with UV radiation impacts, exacerbating the harmful effects. Protecting the ozone layer has contributed to protecting the marine ecosystem and resources, thus contributing in turn to the countries and sectors of economy that rely on marine resources.

Goal 17– Strengthen the means of implementation and revitalize the global partnership for sustainable development: One of the hallmarks of the Montreal Protocol is successful partnership and cooperation, not only at the level of governments but among all stakeholders – in a global partnership. The Multilateral Fund of the Montreal Protocol has ensured capacity-building and institutional strengthening in developing countries, including through the establishment of 147 National Ozone Units, formulation of regulations and legislation, and establishment of a system of Regional Networks of Ozone Officers, which has been valuable for capacity-building and information sharing. This support to the developing countries ensures that they are equal partners and can participate fully in taking on their responsibility to protect the global commons.

1. An assessment of the situation regarding the principle of “ensuring that no one is left behind” at the global level:

The Vienna Convention, adopted in 1985, and its Montreal Protocol, adopted in 1987, are widely recognized as very successful multilateral environmental agreements.

Together, the ozone treaties have ensured that to date more than 99% of the historic baseline levels of consumption and production of harmful ozone depleting substances (ODSs), amounting to 1,858,491 ozone-depleting potential (ODP) tonnes (equivalent to 2,677,087 metric tonnes), has been phased out. As a result, the ozone layer is healing and is expected to be restored by around 2060.

³ van Dijk, A., Slaper, H., den Outer, P.N., Morgenstern, O., Braesicke, P., Pyle, J.A., Garny, H., Stenke, A., Dameris, M., Kazantzidis, A., Tourpali, K., and Bais, A.F. (2013): Skin Cancer Risks Avoided by the Montreal Protocol—Worldwide Modeling Integrating Coupled Climate-Chemistry Models with a Risk Model for UV: <https://www.ncbi.nlm.nih.gov/pubmed/22924540>.

⁴ US EPA report (27 Feb 2015): Updating ozone calculations and emissions profiles for use in the atmospheric and health effects framework model: https://www.epa.gov/sites/production/files/2015-11/documents/ahf_2015_update_report-final_508.pdf.



Both ozone protection treaties are universally ratified, by 197 parties, thus ensuring that no country is left behind in implementing their specified obligations and measures to protect the ozone layer and the climate. Four of the five Amendments to the Montreal Protocol – the London, Copenhagen, Montreal and Beijing Amendments – have also achieved universal ratification by all the 197 parties to the Protocol.

In October 2016, the parties adopted the Kigali Amendment to the Montreal Protocol in which they agreed to phase down hydrofluorocarbons (HFCs), harmful greenhouse gases used as substitutes for ozone depleting substances, under the Protocol. HFCs are man-made chemicals that are primarily used in air conditioning, refrigeration and foam insulation, and are powerful greenhouse gases that can be thousands of times more potent than carbon dioxide in contributing to climate change.

Implementation of the Kigali Amendment is expected to avoid up to 0.5°C of global warming by the end of the century, while continuing to protect the ozone layer.

In the process of negotiating the Amendment, the situations of countries and regions, including their local circumstances and interests, were taken into consideration (as they were for the Montreal Protocol and its amendments and adjustments) to ensure that all countries were on board and would be able to implement the provisions without unduly disrupting the functioning of the society.

The features and provisions of the Montreal Protocol that take those special situations and circumstances into account include a grace period for developing countries in complying with the control measures; support to developing countries through the financial mechanism; exemption mechanisms for critical and essential uses of controlled substances; and trade provisions.

The Protocol's special mechanisms ensure its parties meet the agreed targets. These mechanisms could serve as a model for tackling other global environmental issues and sustainable development challenges and offer inspiration to other initiatives in ensuring that no one is left behind:

Financial mechanism: The Montreal Protocol's financial mechanism that includes a Multilateral Fund is managed by an Executive Committee with equal membership from developed and developing countries (see goal 1 above). More than 6,000 projects and activities have been carried, thus enabling technology transfer where old technologies have been totally replaced. The next replenishment of the Fund, to be decided upon in November 2017, will support HFC phase-down initiatives under the Kigali Amendment, in addition to the ongoing phase-out of ozone-depleting substances.

Non-compliance regime: The Protocol's unique non-compliance procedure focuses on amicable solutions and facilitating assistance to parties in fulfilling their legal obligations, rather than 'naming and shaming' or punishment. Past experience shows that parties feel comfortable to report their own non-compliance issues and seek assistance and solutions.

Assessment Panels: The Protocol's three Assessment Panels regularly provide parties with up-to-date, independent information on scientific, technical, economic and environmental issues, enabling them to take informed and timely decisions on complex matters and base their policies and actions on sound science.

Exemption mechanisms: The Protocol has developed and used various exemption mechanisms to address the lack of suitable alternatives to ODSs. Through such mechanisms, the Protocol takes into account the need to ensure health and safety and the functioning of society, and the need to avoid significant market disruptions. Similar mechanisms are foreseen for the phasedown of HFCs.



Non-party trade provisions: Parties that have ratified the Protocol and its amendments may not trade in controlled substances with states that are yet to ratify it. This creates an incentive for countries to promptly join the Protocol and its amendments. The provisions are applied in a flexible way to ensure that all parties adhere to them without compromising their economic performance.

2. The identification of gaps, areas requiring urgent attention, risks and challenges:

Assessment Process

The Protocol's three Assessment Panels regularly provide parties with up-to-date, independent information on scientific, technical, economic and environmental issues. The Panels identify emerging issues, progress in the development of alternatives to harmful ozone depleting substances and the impacts of the implementation of the actions taken by the parties. The assessments by the Panels enable parties to take informed and timely decisions on complex matters based on sound science, in areas where action is required.

In addition, the Montreal Protocol has a built-in mechanism that allows for the control measures agreed upon by the parties to be adjusted, based on new scientific or technical information, in a fast-track manner with less bureaucracy.

Kigali Amendment

Following the Amendment's unanimous adoption by all the parties present at the 28th Meeting of Parties to the Montreal Protocol, the next step is its ratification by the parties. The Amendment will enter into force on 1 January 2019, provided that at least 20 parties have ratified it by that date, failing which it will enter into force on the 90th day following the date of ratification by the twentieth party.

The ratification and eventual implementation of the Kigali Amendment to the Montreal Protocol by all states is crucial for the protection of the environment, as it will make a significant contribution towards keeping global warming below 2°C, a key commitment of the Paris Agreement. Implementation of the Kigali Amendment will continue to build upon the significant contribution made by the Montreal Protocol in mitigating climate change by simply phasing out ODSs, which are also greenhouse gases. It is estimated that the Protocol averted an estimated net amount of more than 135 billion tonnes of carbon dioxide equivalent emissions into the atmosphere from 1990 to 2010.

The Kigali Amendment must be ratified by at least 20 countries for it to enter into force. However, in order for it to be effective, universal ratification and implementation are required. A number of Montreal Protocol parties have already initiated the process of ratification of the Amendment at the national level. The HLPF can be instrumental in encouraging the parties to ratify.

Remaining Ozone-Depleting Substances

The remaining 1% of ODSs is mainly HCFCs, amounting to 26,828 ODP tonnes (equivalent to 408,699 metric tonnes) still need to be phased out. This may seem small in terms of ODP weighted amount but it is still an enormous challenge in terms of actual quantities in metric tonnes and also because the phase-out schedule was accelerated in 2007. There is now an added challenge of avoiding high-GWP HFCs in phasing out HCFCs because of the Kigali Amendment. The parties have so far achieved a compliance rate of 98%, which needs to be maintained. In this regard, the problem of illegal trade needs to be addressed as temptations to make money from such trade increase as supplies of ODSs diminish.



The remaining ODSs to be phased out under the Montreal Protocol also include small amounts exempted from the control measures for essential and critical uses, process agent applications and laboratory and analytical uses. The Montreal Protocol also exempts feedstock uses of ODS and the quarantine and pre-shipment uses of methyl bromide from controls but parties monitor these through reporting requirements.

ODSs in banks (e.g. equipment, insulation foams, chemical stockpiles) are not controlled under the Montreal Protocol. The parties are concerned with the issue of environmentally sound management of ODS banks because the emissions of those ODSs will cause ozone layer depletion and contribute considerably to climate change. It has been estimated that about 5.4 million tonnes of ODSs remain in banks globally and annual emissions from banks have been estimated to be about 2.3 billion tonnes carbon dioxide equivalent per year.

The cooperation of all parties is needed in tackling the remaining challenges.

3. Valuable lessons learned on eradicating poverty and promoting prosperity:

Engagement with all stakeholders including industry: One of the strengths of the Montreal Protocol is its engagement with all stakeholders. As a result, industry, which could otherwise have been threatened by the Protocol, is considered a partner in the process of making the goals of the Protocol a reality. Fruitful collaboration has been established among scientists, industry, governments, nongovernmental organizations, media, and UN organizations: scientific findings leading to understanding and stimulating innovation of alternatives by industry, understanding leading to policy, policy leading to implementation, and implementation leading to global environmental protection.

Technology transfer and industrial conversion: By funding the incremental costs of compliance with the Montreal Protocol in developing countries, to the tune of US\$3.5 billion since 1991, the Multilateral Fund has removed financial barriers that might have discouraged developing countries to accede to the Montreal Protocol and converted entire industries towards more environmentally sound practices. Projects and activities supported by the Fund are implemented by four international implementing agencies – UNDP, UN Environment, UNIDO and the World Bank.

Various provisions of the Montreal Protocol: The special provisions of the Montreal Protocol described under section 1, “An assessment of the situation regarding the principle of “ensuring that no one is left behind” at the global level” have ensured the success of the regime in protecting the ozone layer. Those provisions ensured that the society continued to function smoothly while ODSs that permeated in so many facets of our lives were being phased out; that developing countries received financial and technical support to help them meet their global responsibility on equal footing; that there was facilitation rather than punishment in cases of non-compliance; and that emerging issues and gaps are addressed efficiently and effectively based on regular provision of sound scientific information. It is expected that the ozone layer will return to its pre-1980s state around the middle of this century.

4. Emerging issues likely to affect the realization of poverty eradication and achieving prosperity:

By phasing down HFCs under the Kigali Amendment, the contributions of the Vienna Convention and Montreal Protocol to eradicating poverty and promoting prosperity will continue.

Under the Amendment, Montreal Protocol parties will gradually reduce HFCs by 80 to 85 per cent by the late 2040s and replace them with more planet-friendly alternatives. First reductions by developed



countries are expected in 2019. Developing countries will follow with a freeze of HFCs consumption levels in 2024 and in 2028 for some nations.

The Amendment therefore provides an opportunity for countries to ramp up their efforts to address climate change not only internationally but domestically: through choice of better, greener technologies, including those that improve energy efficiency that are feasible and affordable. This will continue to contribute to poverty eradication and achieving prosperity at the same time as mitigating the threats of climate change to many vulnerable countries.

5. Areas where political guidance by the high-level political forum is required:

The adoption of the Kigali Amendment demonstrates global commitment towards the phase-down of HFCs at the highest political levels in both developed and developing countries. The momentum of the high-level political commitment needs to be maintained and even heightened as Montreal Protocol parties work towards ratification and implementation of the Amendment. The encouragement, guidance and engagement of the HLPF could contribute significantly to this goal.

6. Policy recommendations on ways to accelerate progress in poverty eradication:

Fair and transparent multilateral processes that ensure that all parties are heard, that decisions are based on the sound and up to date scientific knowledge, that take into account the needs and situations of all the countries and stakeholders including civil society and industry, that induce spirit of compromise and collaboration and a sense of responsibility towards improving the lives of people, are well-placed to succeed in tackling global challenges such as poverty eradication.