Maintaining Momentum to Meet MDGs

A Global Effort to Eliminate Ozone-Depleting Substances is Working, Though Damage to the Ozone Layer will Persist for Some Time

Emissions of ozone-depleting substances (ODS) have been drastically reduced – from almost 1.5 million tons in 1989 to 89 thousand tons in 2005 – since threats to the protective ozone layer were first recognized. The progress to date, 20 years after the Montreal Protocol was signed, demonstrates what can be achieved when countries act together, and in a concerted way, to resolve global environmental problems.

Concentrations of ozone-depleting chlorofluorocarbons (CFCs) have begun to recede in the atmosphere. However, until they diminish significantly, the ozone layer cannot begin to heal and ultraviolet radiation will continue to harm human health, crop productivity and wildlife.

Since the 1990s, every region has exceeded its commitments under the Montreal Protocol. CFCs have already been phased out in developed countries, and developing countries are on track to do so by 2010. Similarly, every region has reduced its consumption of other ozone-depleting substances. However, countries have yet to completely eliminate their use, which is in accordance with the timelines proposed under the Protocol. Complicating the issue is the fact that significant amounts of CFCs continue to be produced and traded illegally. Management of ODS stockpiles is another concern, since the cost of destroying them is high and environmentally unsound disposal methods could spew disastrous amounts of ozone depleting substances into the atmosphere. Maintaining momentum and funding for the final phase-out and for monitoring the ozone layer is crucial to a happy conclusion to this unprecedented international success story.

The eight Millennium Development Goals (MDGs) – which range from halving extreme poverty to halting the spread of HIV/AIDS and providing universal primary education, all by the target date of 2015 – form a blueprint agreed to by all the world’s countries and all the world’s leading development institutions. They have galvanized unprecedented efforts to meet the needs of the world’s poorest.

The Millennium Development Goals Report is the highest-level update in the United Nations system about the status of implementation of these time-targeted goals agreed by all 191 Member States. UN Secretary-General Ban Ki-moon launched the latest edition of this report on 2 July 2007.

At this mid-point in the path towards the 2015 MDG targets - which coincides with the 20th Anniversary of the signing of the Montreal Protocol - this report highlights how ozone layer protection contributes to the implementation of Goal 7, ‘Ensure environmental sustainability’. In fact, this report indicates that the global efforts to protect the ozone layer is on the way to becoming an unprecedented international success story if we keep on track and meet the remaining compliance commitments.

Canada to Host the World

Canada’s Minister of the Environment, John Baird, will Host the 20th Anniversary Meeting of the Parties of the Montreal Protocol in Montreal, the City where this Milestone Agreement was Born

Twenty years ago in Montreal, Canada joined 23 other countries to sign the Montreal Protocol on Substances that Deplete the Ozone Layer. At that time, ozone-depleting substances were pervasive in the world economy. Two decades later, thanks to the combined efforts of the United Nations Environment Programme (UNEP) and the world community, the majority of ozone-depleting substances have been eliminated and the world is on track to complete the phase-out of the remaining uses of these substances. As a result, the world’s fragile ozone layer is predicted to gradually return to its original state by the second half of this century and, because of this, the Montreal Protocol is rightly hailed as a pre-eminent example of international cooperation.

In September, the world will once again convene in Montreal, this time to celebrate the anniversary of the Protocol’s signing. Canada is proud to host this historic 20th anniversary meeting in the city where this milestone agreement was born. With 191 countries now on board, we can hold up the Montreal Protocol as the benchmark that we should strive to reach in our international efforts to address the world’s other environmental challenges. In that regard, it is worth mentioning that a recent study by the National Academy of Sciences confirmed that since chlorofluorocarbons (CFCs) are potent greenhouse gases, their reduction in the atmosphere has made a substantial contribution towards protecting us from the harmful effects of climate change. This has been an additional benefit of the implementation of the Montreal Protocol, the extent of which was not widely understood and appreciated until recently.

As a northern country, Canada is especially vulnerable to the harmful effects of ozone layer depletion. Canada is proud to have now phased out over 98 per cent of its consumption of ozone-depleting substances and congratulates other Parties to the Montreal Protocol on their equally remarkable achievements.

It is particularly notable that, under the Montreal Protocol, significant progress has been made not only by developed countries, but by developing countries as well. Indeed, through their national efforts, combined with the assistance provided under the Protocol’s Multilateral Fund, over 300,000 tonnes of ozone-depleting substances have been phased out in the developing world since the early 1990s.

The importance of international action for the environment has never been clearer. Today, our collective challenge has broadened considerably. While we are now seeing the results of 20 years of cooperative action, we are also seeing that this work needs to go on. There remain key actions to ensure completion of our work, including the phase-out of hydrochlorofluorocarbons (HCFCs) and remaining uses of methyl bromide, safe disposal of CFCs still contained in older equipment and avoidance of any potential new ozone-depleting substance. To address these and other new challenges, Parties to the Montreal Protocol should take advantage of the agreement’s 20th anniversary to reflect on how to meet the needs of the future in order to secure the long-term health of the ozone layer. Indeed, this year provides a unique opportunity to learn from our past work and to chart the future. Canada looks forward to continuing to work constructively with our partners in this truly global agreement, with a view to setting the priorities and strategic course for the Montreal Protocol for the coming decades.

John Baird, P.C., M.P.
Minister of the Environment, Canada

1987-2007
The Dual Benefit of the Montreal Protocol: Ozone and Climate Protection

The 1987 Montreal Protocol on Substances that Deplete the Ozone Layer is a landmark agreement that has successfully reduced the global production, consumption, and emissions of ozone-depleting substances (ODSs). ODSs are also greenhouse gases that contribute to the radiative forcing of climate change.

Nobel Prize winners, Mario Molina and Sherwood Roland, warned the world about ozone depletion in 1974. Citizens and governments reacted by boycotting and banning CFC aerosol products and ultimately with a phaseout of ozone-depleting substances under the Montreal Protocol. These actions put the ozone layer on the path to recovery and delayed climate change. The reduction in ODSs since 1990 under the Montreal Protocol is equivalent to about 7-12 years of growth in radiative forcing of CO₂ from human activities. Additional climate benefits that are significant compared with the Kyoto Protocol reduction target could be achieved by accelerating the phaseout under the Montreal Protocol, by managing the emissions of substitute fluorocarbon gases and/or implementing alternative gases with lower global warming potentials (GWPs). These diagrams and text illustrate and quantify the extraordinary benefits of the Montreal Protocol.

By 2010, the Montreal Protocol will have reduced net radiative forcing from ODSs in 2010 by about 0.23 Wm⁻² (see B in above graph), which is about 13% of that due to the accumulated emissions of CO₂ from human activities and will be equivalent to about 7-12 years of growth in radiative forcing of CO₂ from human activities.

By 2010, the Montreal Protocol will have reduced net GWP-weighted emissions from ODSs by about 11 Gt CO₂-eq yr⁻¹ (see A in above graph) which is 5-to-6 times the reduction target of the first commitment period (2008-2012) of the Kyoto Protocol.
It was 1987. The Soviet Union launched the Mir Space Station, the world population reached five billion, Oscar Arias Sanchez won the Nobel Peace Prize and Paul Simon’s ‘Graceland’ was named record of the year. But perhaps the key event occurred in Canada, when the world’s nations agreed to the Montreal Protocol to repair and protect the Earth’s protective ozone layer.

The treaty is perhaps the single most successful international environmental agreement ever made. It generates science and deploys funds to assist developing countries to phase out ozone damaging chemicals, like chlorofluorocarbons (CFCs) and halons. But its impact stretches beyond safeguarding public health from excessive ultra violet rays from the sun.

It is now clear that - as ozone depleting substances are also often powerful greenhouse gases - the treaty has also spared the planet and its people much global warming. Above all, it is a symbol of how, when faced with a serious international threat, nations can set aside differences and make common cause under the United Nations.

Later this month governments will meet in Montreal and mark the Protocol’s 20th anniversary and the past, present - and also perhaps future - achievements of those who have made it a success. Future because - though 95 per cent of the substances it controls have been phased out - the remaining five per cent may prove troublesome. Getting rid of them is necessary for the ozone layer’s full recovery.

The Multilateral Fund - which has provided over $ 2.0 billion in funding for developing country phase outs - is another key to success. This summer China shut down five plants, putting it two and a half years ahead of the developing countries’ 2010 deadline for phasing out CFCs and halons.

A big challenge for governments meeting in Montreal is how the treaty can contribute even more to combating climate change. Scientists from the Netherlands and the United States estimate that, by 2010, phasing out CFCs and other ozone depleting substances will save the equivalent of eleven gigatonnes of carbon dioxide a year. This compares to a cut of just one gigatonne over 1990 levels mandated under the Kyoto Protocol, or two gigatonnes from what the 2010 levels would be if emissions have been allowed to grow unchecked.

New assessments indicate that the Protocol could achieve even more since some of the alternative chemicals to CFCs, such as HCFCs also have climate change impacts.

Some of the ‘quickest wins’ include accelerating energy efficiency in buildings in rapidly developing regions such as Asia and a global phase out of old energy guzzling light bulbs in favour of compact fluorescent ones. An accelerated freeze and phase out of HCFCs now represents another of those ‘quick wins’ which needs to be more widely understood and supported.

It is certainly a message that UNEP will take on from Montreal to New York only days later. Here Ban Ki-moon, the UN Secretary General, is hosting a High Level Event on climate change with Heads of State.

The climate achievements and the future climate benefits of the ozone protection treaty offers a clear illustration to world leaders that action on climate change is do-able and possible on a far wider front than may be commonly perceived.

It is the kind of confidence building across Continents and across varying economic and national interests which can also assist in delivering a successful outcome at the crucial climate convention negotiations in Bali in December.

Experts calculate that - without the decisions taken 20 years ago - atmospheric levels of ozone depleting substances would have increased tenfold by 2050, leading to up to 20 million more cases of skin cancer and 130 million more cases of eye cataracts, not to speak of damage to human immune systems, wildlife and agriculture. Its continued success, politically and financially, must be assured.

So the story of the Montreal Protocol has not yet reached its final chapter. There is much more to do and wider benefits to be harvested. But it has already achieved much to celebrate, putting the ozone layer on the road to recovery and helping to slow the pace of climate change.

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How Industry Met the Ozone Challenge

Industry Perspective on Ozone Layer Protection

The need to protect the ozone layer has forced major change in many industries, often requiring the rejection of operational systems developed over many years. Well proven, non-flammable and non-toxic substances such as chlorofluorocarbons (CFCs), had to be replaced over a short period, either by flammable substances, or by expensive hydrofluorocarbons (HFCs). An unexpected development was that in many cases, not-in-kind alternatives provided the most efficient solution. This radical change affected industries differently, threatening the survival of some and opening up new fields of opportunity for others. Moreover, enterprise size, ownership, location and sector all influenced the degree of difficulty experienced by companies in adapting to ozone-friendly technologies.

Despite initial fears that the substances scheduled for phase-out would be indispensable, it has proved possible to replace them in almost all cases. Although the new products were not necessarily better than the old ones and the degree of change varied in the different industries that used ODS, the replacement process was, on the whole, a success story that involved rethinking some mature products.

Some changes were easier to implement than others. Indeed the phase-out of ODS has demonstrated that the first reductions in emissions were the easiest to make, as simple good housekeeping sufficed. On the other hand, the last uses were generally the most difficult to replace. In many instances, it was necessary to adopt transitional substances that also damaged the ozone layer until better alternatives were developed.

Looking back, I believe that ozone layer protection was made possible by the political will and determination of the UNEP and government leaders who initiated the process and convinced industry to invest in alternatives. From that point on, industry worked sincerely to develop and implement new technology. When demands for proof were an excuse for inaction, the precautionary principle was invoked. In the end, despite all the efforts and successes, we only just made it on time, and the Antarctic ozone hole is still expected to haunt us for 50 years more.

We now have had a unique opportunity to contribute to the recovery of the ozone layer and to mitigate climate change. Rather than being complacent, we should remember that the battle to protect the ozone layer is still being fought in the developing world. For future battles, we should remember that it is better to start sooner than later; that we should not emit long-lived chemicals into the atmosphere, that initial emission reductions can be achieved just by good housekeeping, and that while there is much that we still do not understand, it appears that the environment will need decades or maybe even centuries to recover.

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The Importance of NGOs to the Montreal Protocol

Environmental non-governmental organizations (NGOs) throughout the world have been, and continue to be, essential to the success of the Montreal Protocol. Their work is critical in reassuring the public that governments can be trusted to protect the earth for future generations. The following is the briefest of summaries of some of the contributions by NGOs.

The Natural Resources Defense Council (NRDC) played a key role in promoting the warnings of Mario Molina and Sherwood Rowland that CFCs were destroying the ozone layer and it was NRDC that won a court order demanding that the US Environmental Protection Agency (EPA) take action.

Friends of the Earth (FOE) stirred the public imagination and led a boycott against CFC food packaging and then joined a voluntary agreement with industry for a phase-out.

Greenpeace forced responsible manufacturers to embrace natural refrigerants for domestic refrigerators and later called for industry to abandon HFCs.

The Environmental Investigation Agency (EIA) courageously documented illegal trade in countries that had otherwise committed themselves to ozone layer protection, and then stimulated action by the Parties to address the problem, including a highly successful initiative to train customs agents worldwide.

Japan’s Save the Ozone Network (JASON) used music and drama to bring to the ears of policymakers the demands of children for a sustainable future free from ozone-destroying and climate-destabilising CFCs, HCFCs, and HFCs.

The Center for International Environmental Law (CIEL) organized the ‘pathfinder’ meetings with environmental authorities from the USSR where it was agreed that Western military organizations would cooperate on technology to reduce and eliminate halon and CFC solvent uses and emissions.

The Association of Harvesters and Exporters of Fruit and Vegetables (COEXPHAL) and the Association of Commercial Suppliers of Horticultural Products of Almeria (ECOHAL) showed Spanish and other European consumers that they could demand food free from the methyl bromide that poisoned farm workers and people living near fields, disrupted natural ecosystems, and depleted the ozone layer.

CIEL, FOE, NRDC, and a dozen other NGOs saw the potential in industry leadership and joined directly with organizations like The Industry Cooperative for Ozone Layer Protection (ICOLP), the Japan Industrial Conference for Ozone Layer Protection (JICOP), and the Mobile Air Conditioning Society (MACS).

Today, NGOs are continuing to demand that the Parties further strengthen the Montreal Protocol at the upcoming 20th Anniversary, rather than just indulging in mutual admiration for past success. The Institute for Governance and Sustainable Development (IGSD), the International Network for Environmental Compliance and Enforcement (INECE), and EIA are currently leading the NGO campaign to demand accelerated phase-out of HCFCs, in order to ensure that the ozone layer is better protected and that greenhouse gas emissions are drastically reduced.

NGOs are a determined and often powerful community that is capable of using every peaceful means available to expose governments that fail in their responsibility to protect the ozone layer or any other part of the environment. NGOs routinely fight the lawlessness of companies that despoil the ecosystem with irresponsible chemicals and are willing, if necessary, to name names in their campaigns to make the world safe for future generations.

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More Involvement of Scientists from Developing Countries is Needed

When the issue of ozone layer depletion was raised in the early 1970s, many people, including some scientists, were sceptical. The Montreal Protocol offered scientists an opportunity to conduct research to increase understanding of the chemical processes involved.

In the past few years, continued observations and recent analyses have raised questions about how well past ozone changes can be explained in quantitative terms. In particular, changes in halogen loading, stratospheric aerosol loading, atmospheric dynamics radiation and temperature have been assessed in several different ways.

A number of scientific and environmental studies have detailed various effects of ozone layer depletion on human health and ecosystems but here it is important to note the limited involvement of scientists from the developing world in this research. Despite the fact that ozone layer depletion is a localised phenomenon, its effects are felt all over the world and even remote areas are experiencing severe consequences.

The imbalance in scientific research into the ozone layer has been exacerbated by the high economic importance of ozone layer depletion. Most policies associated with ozone layer protection are based on maintaining a sustainable economic growth and this leads to dangerous distortions in decision-making.

Activity in the coming years will focus on continuation of ongoing research projects and their extension to developing countries in order to facilitate general discussion and information flow. Issues will include the roles of chemical and dynamic influences on ozone, the requirements for the data record, statistical approaches and the importance of seasonal, geographic and vertical distribution of ozone.

New scientific evidence of the relationship between ozone protection and climate change raises new issues that require urgent consideration to enable prompt action.

Africa, with its low adaptive capacity resulting from increasing poverty, weak economies and rapid population growth is particularly vulnerable to the effects of ozone depletion and climate change. Human health, ecological systems and socio-economic systems – such as water resources, food production, coastal ecosystems, human settlements and biodiversity – are vital to sustainable development, and are already sensitive to climate variability under current conditions in Africa. Future climate change will put further pressure on all of these systems, thus affecting the livelihood of the majority of the people.

Therefore, a Centre for Ozone and Climate Change Interactions Research in Africa is required. This will provide a regional institutional arrangement to help fill the gap in capacity building, research and systematic observation in a sustainable manner. The approach will involve a number of national scientific and research institutions with sufficient capacity to formulate project proposals in the required format and to implement approved ozone and climate change projects. As a result, countries in the region will be more able to comply with and fulfil their commitments under the Conventions.

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Above and Beyond: Harnessing the Potential of the Montreal Protocol

In September 2007, 191 countries will jointly celebrate a very special Montreal Protocol Meeting of the Parties. Twenty years ago, the international community agreed to build a commitment to the future and adopted a new paradigm for relations between developed and developing countries. For the first time, 20 per cent of the world agreed to provide financial and technical assistance to the other 80 per cent in order to reach a clear set of environmental goals. The financing mechanism under the agreement pioneered the concept of common but differentiated responsibilities and proved its effectiveness.

The Montreal Protocol is one of the most successful international environmental treaties ever. In addition to its achievements in protecting the ozone layer, it has made a phenomenal contribution to climate change reduction—unintentionally and nearly accidentally. According to new research published by the US National Academy of Sciences, if the world had not built such an effective regime to regulate and phase out ozone-depleting substances (ODS), an additional 11 billion carbon dioxide-equivalent tons per year between 1990 and 2010 would have been emitted. This could reduce emissions by up to an additional 1.2 GtCO2-eq. yr-1 by 2015. The Montreal Protocol has reduced global production of ODS by 95 per cent. But what is truly amazing is that by 2010 the Montreal Protocol will have produced 11 times the climate reductions mandated by Kyoto, reducing greenhouse gas emissions by approximately 11 billion carbon dioxide-equivalent tons per year between 1990 and 2010 and delaying the onset of climate change by more than a decade.

The Montreal Protocol’s success is based on several factors: universal membership of 191 Parties; experienced ozone officers in every country; subsidiary bodies (such as the Technology and Economic Assessment Panel) with industry representation to respond quickly to new developments; an elegant system for treaty adjustment and amendment to drive technological innovation and diffusion; and a funding mechanism providing equitable settlement of interests between developing and developed countries.

The National Academy of Sciences research reveals that extending the Montreal Protocol commitments with a faster HCFC phase-out could make an enormous contribution to the reversal of climate change. The first future adjustment to the Protocol should accelerate the phase-out of HCFCs in a way that maximises climate benefits. This could reduce emissions by up to an additional 1.2 GtCO2-eq. yr-1 by 2015. Substitutes for HCFCs are available, but use of only the most climate-friendly alternatives is essential to capture the climate benefits of accelerated phase-out. Developed countries are more likely to participate if the Protocol signatories ensure the necessary funding. Sufficient finance must be provided through the Multilateral Fund (MLF), to cover the incremental costs of transition to climate-friendly substitutes.

Fortunately, the financing is easier than might be expected. The MLF would probably only need to maintain current funding levels for the duration of the phase-out. In other words, as the current commitment schedule winds down, the level of money in the Fund would hold, instead of dip, in order to clear out the transitional chemicals.

Recent scientific reports indicate that, despite major reductions in CFCs, halons, and other chemicals, we nonetheless face a critical period for ozone layer depletion and its impacts. This assessment and increasing evidence for the Montreal Protocol’s positive effects on climate change have prompted Argentina and Brazil to jointly propose an adjustment to the Protocol to maximise its climate mitigation, while also completing the job of protecting the ozone layer. This proposed adjustment has been submitted for the 20th Anniversary Meeting of the Parties in September 2007, in Montreal.

Our proposal asks for an accelerated phase-out of HCFCs, while allowing continued use where there are superior environmental benefits and provided that an additional 200 per cent of ozone-depleting potential is destroyed from the banks of CFCs in old equipment and products as an offset. The proposal makes the accelerated HCFC phase-out conditional on continued financial assistance from developed countries to cover the transitional costs. Also, the adjustments request that future replenishment of the MLF take into account the requirement to provide new and additional financial and technical assistance to enable Article 5 Parties to comply with adjusted control measures on HCFCs. Argentina believes that the global community can leverage the Montreal Protocol experience to take up the challenge of climate change. The Protocol gives us precise regulatory tools to help control the climate problem and the international community should use them for this purpose. The post-2012 climate regime should blend the regulatory approach embodied by the Protocol with the market-based cap and trade system. It is clear that we need both, and we need to make them work together.

We are dangerously near the tipping point for irreversible climate change. The Montreal Protocol presents us with a chance to further our ozone commitments and make a significant contribution to climate mitigation. Given the impact, speed, cost, and proven ability of the ozone treaty to deliver what it promises, it is an opportunity that the world cannot afford to miss. We can, and we must, go above and beyond.
An Integrated Effort for Environmental Success

We are celebrating the 20th Anniversary of the Montreal Protocol. And indeed there is much cause for celebration. Of all the global environmental treaties agreed by governments, only the Montreal Protocol can be said to have arrived twenty years beyond its signing with a near-complete set of achieved goals. At the Global Environment Facility (GEF), we believe that the Protocol’s achievements can shed important light on devising strong sustainable tools, policies, and partnerships for global environmental protection.

The GEF, the largest funder for developing countries and economies in transition in their work on the global environment, was created in 1991, at a time when it was clear that Russia and the Newly Independent States and the other countries of Central and Eastern Europe with Economies in Transition (CEITs) would need the global community’s support to meet their obligations to phase out ozone depleting substances under the Montreal Protocol.

The GEF stepped in to help the CEITs. With the support of GEF and its Implementing Agencies UNDP, UNEP and the World Bank, those countries have decreased their consumption of ozone depleting substances from about 296,000 tons to 360 tons – a reduction of nearly 99% - in 15 years.

Today, it is becoming an accepted reality that global environmental issues – from climate change to biodiversity to ozone to desertification – converge on each other, and that solutions can no longer be applied in separate silos of action. At the GEF, we increasingly work with countries to intervene in and across domains to address climate change, biodiversity conservation and sustainable land management, and chemicals management, including pollution of international waters from persistent organic pollutants.

This penchant for an integrated approach across otherwise segregated areas has grown in part from our work with countries on ozone depletion. In our work with the CEITs, it became increasingly clear that it was not sustainable to promote practices that would help preserve the ozone layer but would increase greenhouse gas emissions. Instead, countries’ success lay in funding the conversion to technologies with the least impact on global warming that was economically acceptable. Enabling activities, as guided by GEF and provided through UNEP DTIE OzoneAction/GEF Ozone, were also found to be critical to this successful conversion.

The GEF’s capacity to work in an integrated manner now underpins our ongoing strategies. For example, bearing in mind the climate change benefits that can accrue from the elimination of HCFCs, the GEF strategy for climate change envisages support for replacing HCFC-containing equipment in the context of overall energy efficiency programs in buildings. Similarly, strong linkages exist and will be explored with the POPs destruction activities that the GEF is engaged in.

Increasingly, as we draw lessons from the two-decade old ozone treaty, the global community’s capacity to build on the inter-linkages of the natural world holds out promise for workable solutions in climate change, biodiversity, and the other global commons, just as the world came together in our global efforts to preserve the ozone layer. At the GEF, with hats off to countries for their achievements in the Montreal Protocol, we stand poised to continue the forward movement for integrated environmental solutions.

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We often sum up the achievements of the Multilateral Fund with impressive figures. US $2 billion in disbursements to Article 5 countries; more than 5000 projects approved; elimination of about 190,000 ODP tonnes of consumption of ozone depleting substances (ODS). However remarkable these numbers might be, the story of successful environmental governance that lies beneath them is even more remarkable.

While the Multilateral Fund provided the incentive for developing countries to implement the Montreal Protocol, dollars and cents alone were not going to achieve success. The key to this example of successful environmental cooperation lies in its clear mandate from the Parties to the Montreal Protocol, the policies, procedures and processes developed for business planning, rigorous project review and impartial monitoring and evaluation.

The seven Article 5 and seven non-Article 5 countries of the Executive Committee (Excom), manage the Fund through an inclusive, participatory and solution-orientated approach that resolves or mitigates objections in order to reach consensus. A rolling ODS phase-out plan informs the annual business planning process, which allocates funding according to compliance needs of all Article 5 countries. An independent Fund Secretariat reviews ODS phase-out projects in countries’ industrial, agricultural and health sectors, a process that has saved an estimated US $1.5 billion since 1991. Project implementation is contracted out to UNDP, UNEP, UNIDO, the World Bank and agencies that work with countries to help them build capacities and infrastructure in the form of national ozone units and assist them in implementing projects in order to fulfill their obligations under the Protocol. Excom ensures that the funds disbursed are used to meet objectives through a clear and ever-present focus on accountability. A performance-based funding approach links funding to specific interim targets, and is backed by a strong monitoring function in the Fund Secretariat.

Challenges ahead
By the end of 2005, Article 5 countries had phased out about 72 per cent of baseline consumption; thus it would appear that we are set to accomplish our goal. However vigilance is called for since a number of complex challenges lie ahead including addressing HCFCs.

A major factor which influences the phase-out of CFCs by 2010 is the refrigeration servicing sector in Article 5 countries. While plans for CFC phase-out for all countries are either in place or soon to be approved, it will be a considerable challenge to tackle the estimated 119 million vehicles being cooled by CFCs or the 500 million CFC refrigerators currently in use.

The co-existence of un-controlled versus controlled uses of carbon tetrachloride and methyl bromide poses a real risk of a crossover from legal to illegal use. The current oversight systems might therefore need to be reinforced and to continue beyond the Protocol’s phase-out dates if compliance is to be monitored and sustained. Increasing stockpiles of ODS could also be a source of unauthorized trade in these substances, particularly in the absence of functioning national import-export licensing controls and inter-regional information exchange.

The production and use of HCFCs in developing countries are growing rapidly and the Parties to the Montreal Protocol will address possible adjustments to the time-table for their phase-out in September 2007.

A real change for the environment
The Multilateral Fund is not only a simple financial mechanism for transferring funds to Article 5 countries to implement ODS phase-out projects, but also represents strong international cooperation, efficient and effective actions, equity between contributing and recipient parties, and an innovative, accountable and transparent financing structure that serves as a model for other multilateral environmental conventions.
Lessons from the Montreal Protocol are Important for other MEAs

I would first like to congratulate all those who have worked so hard during the last 20 years to make the Montreal Protocol on Substances that Deplete the Ozone Layer the most successful Multilateral Environment (MEA) agreement to date.

The fact that the Montreal Protocol was agreed prior to the Rio summit and the setting up of the Global Environment Facility (GEF) gave it the freedom to develop its own implementation mechanisms, such as the Multilateral Fund (MLF) and the Technology and Economic Assessment Panel (TEAP).

The MLF has been instrumental in facilitating technology transfer from developed to developing countries. It provides financial and technical assistance to developing countries (Article 5 countries) in implementing their obligations under the Protocol. Without MLF seed funding to remove technical and financial barriers, private investment would not have materialised in the Low Volume Consuming Countries (LVCs), which are usually developing countries with very limited financial resources and technological know-how.

There was, at first, a perception, among LVCs, especially small islands like Mauritius, that they were being marginalised. I am happy that the fighting spirit and tenacity of their representatives, at various Meetings of the Parties and at the Executive Committee of the MLF, enabled the LVCs not only to find their way in the mainstream but also at times to lead the plot. With assistance from UNEP and other implementing Agencies, policy implementation and bilateral arrangements were adapted to the conditions and situations of the countries concerned. I am particularly thankful to UNEP for its strong support in this venture.

TEAP, with its various technical options committees, has provided clear guidance, through its publications, to policy makers to help them choose the most rational technical and economic options. The best international experts on the different issues have, in a way, provided free consultancy to Parties, while attending to the special circumstances of LVCs.

One may wonder why small countries like Mauritius, in remote parts of the globe, are so concerned about an issue like ozone depletion. But global issues are ‘global’ because they know no frontiers. For a country like ours that depends largely on tourism, depletion of the ozone layer and climate change are crucial, as we are vulnerable to those changes by virtue of our geographical position and our size. We sell ‘sun, sand and sea’ to the tourists. Imagine what will happen if the UV-B rays are not filtered because of ozone depletion! On the other hand, with the present trend of greenhouse gas emissions, we will, as time goes by, become more and more vulnerable to sea level rise and be at the forefront of the impact of climate change.

The phasing out of 93 per cent of CFCs through the Montreal Protocol has not only reduced the potential effects of ozone layer depletion but, because of the relatively high global warming potential of these substances, has also contributed to lessening the effects of climate change.

The Montreal Protocol can achieve even more by reducing production and consumption of hydrochlorofluorocarbons (HCFCs), the total phase-out of which is not expected until 2040. Besides being ozone depleting, HCFCs have high global warming potential.

This is why Mauritius has proposed an adjustment to the Protocol for an accelerated phase-out of HCFCs. This will surely help towards an earlier recovery of the ozone layer, while providing substantial benefits for the world’s climate.

Finally, may I make a firm appeal to the international community to take seriously the strong lessons from the Montreal Protocol, both in terms of mindset and structure, and apply them to the other MEAs. To me, looking back, the two elements that made the success of the Montreal Protocol are mutual trust among Parties and a dedicated MLF. These can and should be emulated by other MEAs.
Protocol Players – Take a Bow but Don’t Walk Off Stage

Assisting developing countries and countries with economies in transition to manage the manufacture, use and disposal of chemicals is an important part of UNDP’s endeavour to build environmental considerations into sustainable development. Reducing the health and environmental stress on poorer communities caused by ozone depleting substances (ODS) is a key part of this work.

Since 1991, UNDP has worked with over 100 countries to build capacity and enhance technological expertise in managing consumption and elimination of ODS. Financial help of around US$ 496 million from the Multilateral Fund, the Global Environment Facility (GEF) and various bi-lateral donors has supported these projects. Together with a wide range of partners, UNDP has assisted countries to phase out ODS use in foam production, refrigeration and air-conditioning, aerosol and solvents applications, as well as in agriculture and for fire protection. In total, UNDP-implemented projects have prevented the release of more than 60,689 ODP tonnes. UNDP’s assistance has targeted the following areas.

Capacity development:
Assisting governments, supported by national stakeholders, to develop more effective ODS elimination policies and programmes. For example, India’s foam sector was dominated by small-scale, labour intensive operations with limited capital and low investment in infrastructure and equipment, which were under pressure from a highly competitive domestic market and cheap imports. UNDP, in collaboration with suppliers, facilitated development of customised low-output foaming equipment and essential CFC-free chemical substances. Economies of scale were achieved through standardisation and bulk procurement, supported by extensive technical assistance and training.

Technical assistance, practical training and demonstration:
Using this approach, UNDP has focused on methyl bromide (MeBr) elimination in agricultural applications. By building confidence and trust – through practical, hands-on training sessions and in-field demonstrations – UNDP has been able to convince growers that MeBr alternatives are viable and need not upset vital agricultural export markets.

Technology transfer:
By providing access to the best ozone-friendly technologies and technical assistance, UNDP has successfully helped thousands of enterprises in developing countries. For example, in the medical aerosol sector, UNDP has assisted countries, such as Cuba, to convert to CFC-free asthma metered dose inhalers (MDIs).

A number of important goals remain. Pharmaceutical grade CFCs will cease to be available after 2010 but most developing countries have still to make the final transition to CFC-free asthma inhalers. Also, partnerships are needed to address areas where ODS use is increasing, such as MeBr for quarantine and pre-shipment (QPS) purposes. The proper management of banked ODS and their destruction require urgent consideration so that these substances do not end up in the atmosphere. Because ODS are also potent greenhouse gases, this can bring considerable climate benefits. This is also true of the HCFC challenge. The elimination of CFCs under the Montreal Protocol has made a positive contribution to Kyoto Protocol objectives, but increasing HCFC production to replace substances covered by Kyoto must be halted. And, if proper HCFC management and phase-out are to be addressed, reduction targets through to 2040 or earlier must be considered.

While the 20th anniversary of the Montreal Protocol gives the global ozone family the chance to celebrate the successes of the last 20 years it is also the time to acknowledge that work still remains to be done. This is particularly important because a growing body of evidence suggests that continued ozone protection can help reduce global warming.

UNDP, the UN’s global development network, remains committed, after 15 years of service, to the goal of sustainable ODS phase-out and will continue to support the objectives of the Protocol as it evolves.

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In 1993, when the Montreal Protocol work in China had recently begun, I was in Beijing for a meeting convened on Ozone Day involving government, industry and civil society. At that time, we in UNEP DTIE’s OzonAction programme were busy helping to “quick start” the Montreal Protocol implementation in developing countries and countries with economies in transition, and just beginning to learn the challenges involved. Once the ceremony ended, I vividly recall a Chinese student dressed in a typical school uniform, standing at attention, asking “What I can do personally to save the ozone layer?” His straightforward but pivotal question moved me and it later came to define the core approach of our programme. Indeed, all of UNEP’s subsequent strategies and business plans under the Multilateral Fund have been woven around it: we continuously ask ourselves “what capacity building and technology support services should we provide to both inspire and enable people to take action on ozone?”

Between then and now, the OzonAction programme has learned many lessons and applied them to our work. First, the power of partnership drives implementation of the Protocol. UNEP works with UNDP, UNIDO and the World Bank as well as with bilateral agencies to assist developing countries. Second, people must be aware, informed and empowered if they are to participate in the phase out process; the ways and means to mainstream Low Volume Consuming Countries (LVCs) into the Montreal Protocol implementation; the importance of sharing of experiences between National Ozone Units (NOUs) and understanding of each others needs and abilities; the tremendous potential of South-South cooperation to facilitate progress; that partnerships at all levels are absolute pre-requisites for progress on ozone layer protection; and that policy-setting and enforcement are key success factors for countries.

A participative process developed by OzonAction proved essential for preparing Country Programmes – a road map for implementation in more than 100 countries, the majority of which are LVCs. Along with other Implementing Agencies, we helped develop and deliver the principal tool to assist LVCs in strengthening their management infrastructure for compliance with the Montreal Protocol: Refrigerant Management Plans. Of the 145 Article 5 countries, 89 countries are LVCs and currently all of them are in compliance in large part thanks to these RMPs.

With assistance from the Government of Sweden, we initiated Regional Networks of NOUs, which now cover 10 regions and sub-regions and enable Ozone Officers from 145 developing countries through South-South cooperation. OzonAction is implementing Institutional Strengthening projects to support NOUs in 106 countries. Networks of such NOUs on a regional basis have become a model for the implementation of other multilateral environmental agreements and have helped contribute to 100% data reporting by the counties, a feat never achieved under any other treaty.

OzonAction developed global communication and training strategies to act as road maps and developed and delivered information and capacity building services to countries in a need-based, sequential manner.

We have targeted special direct compliance assistance to countries, including Small Island Developing States like Fiji and Barbados, and countries in transition like Afghanistan and Sudan, which has proven highly effective in helping those countries meet their compliance targets.

We look forward to applying what we have learned to the upcoming challenges including the phase out of remaining ODS consumption, including HCFCs and methyl bromide, promoting “collateral benefits” and “spin-offs” from the Protocol such as energy efficiency. Integrated capacity building of enforcement officers including customs is now included under the Green Customs initiative, which is coordinated by OzonAction.

We will never forget that the path that we are on started with one simple question from a Chinese student.
UNIDO, now celebrating its 15th anniversary as an Implementing Agency of the Multilateral Fund (MLF), runs a programme under the Montreal Protocol comprising more than 1000 projects in over 80 countries. The agency has put particular emphasis on Africa, carrying out 25 per cent of its Protocol projects in the region. Over the last 15 years, UNIDO has received more than US$ 450 million from the MLF (including support costs), and has phased out a total of 45,600 ODP tonnes, focusing mainly on the refrigeration, plastic foams, solvents, aerosols, fumigants, process agents and halons sectors.

UNIDO has played a leading role in transferring the latest non-ODS technologies to developing countries and has actively promoted use of non-chemical substances, such as hydrocarbons, as ODS alternatives, particularly in the refrigeration sector. In 1994, UNIDO implemented the first projects using cyclopentane technology in Egypt, Iran and Jordan. A year later, in 1995, ExCom approved the first two hydrocarbon-technology projects using cyclopentane as the blowing agent and isobutane as the refrigerant. In the same year, two more UNIDO-designed projects were approved; enabling two Chinese manufacturers of refrigerator compressors to be among the first companies in a developing country to produce the latest hydrocarbon technologies.

In the manufacture of flexible polyurethane foams, UNIDO has taken the leading role in promoting liquid carbon dioxide (LCD) blowing technology as the most advanced alternative. Despite difficulties with optimisation of the processes, UNIDO convinced the MLF that LCD technology was viable and provided guidance on licensing it.

UNIDO has also pioneered methyl bromide phase-out projects and implemented programmes to demonstrate the use of methyl bromide alternatives for soil and storage fumigation. As a result, the agency has been able to convince the majority of farmers involved in the projects to phase out use of methyl bromide completely.

While UNIDO has made important contributions to the goals of the Montreal Protocol, a number of challenges remain. The agency has assisted two Egyptian pharmaceutical companies to convert to the manufacture of ODS-free Metered Dose Inhalers and is preparing similar projects for China, Iran, Jordan, Mexico and Venezuela. In 2005, UNIDO launched three regional projects in Africa, Europe and West Asia to promote and facilitate the early replacement of chillers. These are complex large-scale schemes that link the phase-out of ODS under the Montreal Protocol with the promotion of energy efficiency under the Kyoto Protocol. However, UNIDO is confident that all projects in its portfolios will be completed successfully. The agency will continue to build on its strengths within the focal sectors, while enhancing its skills and knowledge to meet future challenges, such as the replacement of HCFCs.

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The World Bank

The Multilateral Fund: A Fund of Experience

In 1987, the Montreal Protocol for the Protection of the Ozone Layer became the first global environmental agreement to adopt a graduated phase-out schedule and a grace period as a practical way to help developing countries comply with their obligations. Even more significant was the provision of financial assistance to Article 5 countries to meet the incremental costs of converting to ozone-friendlier technologies.

The World Bank in its role as an MLF Implementing Agency has channelled US$ 602 million in funding to more than 20 Article 5 countries through nearly 500 MLF-approved investment projects. Completed projects have resulted in phase-out of over 242,000 tons of ODP, approximately 70 per cent of the total ODP phased out under completed investment projects funded by the MLF as of the end of 2005.

Early on, the World Bank recognised the need for knowledge sharing and capacity building and supplemented support for ODS conversion and closure projects with technical and advisory assistance. It used ‘national execution’ as a means to build in-country capacity, provided technical support through its expert panel, the Ozone Operations Resource Group, and guided countries through the evolution of MLF guidelines and monitoring and evaluation procedures.

The Bank has endeavoured to help client countries meet their phase-out obligations without overburdening their economies. An important example was the introduction of performance-based sectoral and national phase-out plans combining investment activities with policy development, a significant departure from the traditional project-by-project approach. Now, more than 60 countries are engaged in multi-year projects funded under the MLF. When completed, the 26 multi-year projects approved by the end of 2006 for countries working with the World Bank will have phased out more than 247,000 ODP tons of ODS production and consumption.

The Bank has adopted novel financing approaches including grant auctions, revolving funds, and vouchers for allocating equipment financed by the MLF. Through innovative projects, such as global chiller replacement, the Bank has also maximised the benefits of links between the Montreal Protocol objectives and those of other environmental agreements (in this case the reduction of greenhouse gases).

Under its Montreal Protocol programme, the World Bank has seen that the development of country strategies and action plans must be an iterative process. Programmes must include systems to monitor, evaluate, and integrate lessons into the implementation process. In addition, every country needs its own strategy and the level and types of details can and should vary from country to country.

Experience over the last two decades has shown that clear and effective policy and regulatory frameworks, which target all ODS-related sectors and stakeholders, are necessary to achieve sustained phase-out. These frameworks should delegate relevant powers to the levels of government responsible for implementation and wherever possible should use existing regulations to execute ozone protection initiatives. Actions should be based on long-term policy frameworks and include predictable and flexible regulatory regimes, as well as targeted economic incentives. Awareness raising and outreach are essential to the achievement of sustainable outcomes, as they drive changes in behavior that will ultimately be reflected in the markets.
Africa’s Slow Start Could Make a Great Finish

African countries have played a major role in implementing the Montreal Protocol in spite of the fact that ozone layer protection is not seen as a major environmental concern in the region. Since inception of the Multilateral Fund (MLF) in 1992, African countries have shown increasing interest in the ozone treaties (both the Vienna Convention on the Protection of the Ozone Layer and its Montreal Protocol).

In the early 90s, African countries accounted for only one per cent of the global consumption of the ozone-depleting substances (ODS). But, as developed countries accelerated ODS phase-out, ODS consumption in Africa increased as a result of the transfer of obsolete technologies to the developing world. ODS consumption in many African countries then grew fast, with peaks between 1996 and 1998, and the region faced the problem of dumping of second-hand equipment that relied on ODS.

The history of ratification of the two ozone treaties shows that only three African countries had signed the Vienna Convention before it was put forward for ratification and only eight had done so for the Montreal Protocol. By the end of 1992 (the year the amendment introducing the financial mechanism was adopted), only 20 African countries had ratified, accepted or acceded to the Montreal Protocol. Over a period of years after introduction of the MLF, the remaining 33 African countries ratified the Protocol. The last country to become a Party was Equatorial Guinea in 2006. Undoubtedly, the MLF has been the key to involvement of African countries in Protocol implementation.

As shown in several reports, the National Ozone Units, the regional network of ODS Officers and recently the Compliance Assistance Programme (CAP) have helped African countries build formidable institutional mechanisms. ODS officers have said that, without the networking and the Compliance Assistance provided by UNEP, implementation of the Montreal Protocol could not have succeeded in their countries. Implementing Agencies and bilateral agencies have also played a major role in providing support through investment projects to expedite phase-out of ODS while minimising the social and economic impact.

In addition to institutions set up under the Protocol, African countries have also developed good partnerships between their ODS Officers networks and sub-regional economic groupings such as COMESA (Common Market for Eastern and Southern Africa), UEMOA (Economic and Monetary Union of West Africa), CEMAC (Economic and Monetary Commission of Central Africa), SACU (Southern African Customs Union) and ECOWAS (Economic Commission for West Africa) and this has led to adoption of harmonised ODS regulation in three sub-regions (COMESA, CEMAC and UEMOA). Similar regulations are under preparation for the other sub-regions.

Thanks to effective institutions and active networking, the majority of African countries have complied with their phase-out plans as set by the Montreal Protocol and are confident of achieving the 85 per cent reduction in 2007. Most African countries are now engaged in the last ditch effort for total phase-out of the most used ODS, CFCs in particular, by 2010. If adequate financial and technical support is provided, we expect most countries in the region to achieve total phase-out even before the set deadline.

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Montreal Protocol - a Force for Global Change

The impact of the Montreal Protocol has gone far beyond ozone layer protection. It has not only stimulated technological innovation and contributed to climate change mitigation but has also advanced economic development and vocational education. Not only has it changed consumption patterns and social behaviour but it has also prevented skin cancer and eye cataracts and saved yet-quantified funds for the national health systems of the world community. In addition, it has raised awareness about environmental crime, including illegal trade in ozone-depleting substances (ODS), stimulated partnerships and networking between Governments, industry organisations, research and educational institutions, international enforcement and intelligence networks and implementing agencies.

The international community may wish to evaluate the real benefits of the implementation of the Montreal Protocol, in terms of its contribution to global development, global cooperation and poverty alleviation. Such a study may well demonstrate that the Montreal Protocol has been an extremely cost-efficient force in promoting sustainable development and reducing poverty. An understanding of such incidental but important benefits and the relationships that underpin them may assist the development of strategies for implementing Multilateral Environmental Agreements, development aid and health programmes in the future.

The side benefits of the Montreal Protocol alone would justify the money spent on its implementation. When reflecting on the future of the Montreal Protocol, this should be taken into account. What will be the implications for global development and cooperation when Montreal Protocol activities are gradually reduced? What other mechanisms could replace the Montreal Protocol as driving forces for sustainable development and poverty alleviation? What financial support strategies might be developed to build on the achievements of the Protocol?

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H.E. Minister Makhtumkuly Akmuradov from the Ministry of Nature Protection of Turkmenistan opens proceedings at an ECA regional meeting celebrating the 20th anniversary of the Montreal Protocol in Turkmenistan at the end of February 2007.
Creating the Right Regional Framework for Maximum Effectiveness

The CAP team of the Regional Office of Latin America and the Caribbean (ROLAC/CAP) became fully operational in May 2003. Its role is to assist each Party in the Latin America and the Caribbean region with technical areas of the Montreal Protocol such as compliance management, development and implementation of policies and legislation, refrigerant and methyl bromide management, prevention of illegal trade in ozone-depleting substances (ODS) and public awareness and education.

Some countries in the region are ODS producers, some high-volume consumers, some low-volume consumers and some non-consumers. Geopolitically, 15 of the 33 members of the region are classified as Small Islands Developing States (SIDS) and Haiti is a Least Developed Country (LDC) within the Caribbean SIDS. Further, the region has five major languages (Spanish, Portuguese, French, English, and Dutch).

The CAP team’s work has to be in line with UNEP global policies and the ROLAC regional work programme. Early on, realising compliance assistance must meet the varied requirements of countries in the region, the team adapted the global CAP Programme global to regional needs and orientated it to improve the performance of countries at higher risk of non-compliance. The team has used multi-stranded approaches to involve all stakeholders at regional, sub-regional and national levels. These include the following methods.

National Capacity Building

The CAP team believes Protocol implementation should not only be driven by the national authorities but by partnership with the private sector, NGOs and other stakeholders. This capacity building has focused on National Ozone Officers (NOO), government officers and ODS users. Increasing the capacity of the National Ozone Unit (NOU) through regional and national training has channelled information to the private sector, government and Implementing Agencies.

Encouraging national ownership of Protocol implementation has been crucial because many Parties saw ozone protection as primarily the responsibility of the Implementing Agencies. At all stages of implementation, the CAP team encourages the NOU to establish National Ozone Committees or similar bodies involving both the public and private sectors. Specific national partnerships with the air-conditioning and refrigeration associations, manufacturers, users of pesticides and solvents and other relevant groups are also encouraged.

Raising Protocol issues at the highest levels

Montreal Protocol sessions are held at the annual Forum of Ministers of the Environment of Latin American and the Caribbean Countries and this link is invaluable when the CAP Regional Director needs to raise issues of compliance and UNEP project implementation with these Ministers. Further, in every CAP staff official mission, Ministers, Vice-Ministers and heads of environment departments are updated on Montreal Protocol progress.

Improving networking

Networking – by means of meetings, electronic discussion fora and bilateral exchange of expertise between members – is essential to the NOU’s activities. The CAP team of ROLAC has recently introduced thematic workshops, which provide policy and compliance guidance to countries and promote informal collaboration between members. The thematic meeting approach is adapted to the needs of the countries and participants including the private sector, tertiary educational institutions, and other Government officers in addition to the NOO.

As a result of political commitment at the Party level, and international support from the Implementing Agencies, the region has made remarkable progress in reducing consumption of ODS in accordance with the Montreal Protocol, ratification of amendments and ODS legislation approval.

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A child’s hand protects the Earth, the blue fingers representing the atmosphere. The planet wears a colourful parasol, guarding it from harmful solar rays. In another piece of artwork, two children are shown living in harmony with plants and animals, air and water.

These and other paintings by children from schools across Asia show optimism about the future. By the use of ozone-destroying chemicals over the last 60 years, our generation nearly destroyed the atmospheric layer that protects all living beings from harmful solar radiation; but we realised our mistake and acted in time.

In 20 years since the Montreal Protocol was signed in September 1987, the goal of protecting the ozone layer has been the focus of unprecedented worldwide cooperation. In no other international endeavour have scientists, politicians, international agencies, governments and ordinary citizens combined so successfully to tackle a global threat.

Although the stratosphere shows signs of healing, we are not yet out of danger. The battle to permanently plug the hole in the ozone layer will be lost or won in Asia, which has the world’s most dynamic economies. The challenge is to order the phase-out of the 96 identified ozone-depleting substances (ODS) according to a fixed timetable.

Cooperation between developed and developing countries in banning these chemicals has been acknowledged as a model for international teamwork. Happily, most Asian countries are on target in curbing the production and use of ODS.

Countries like The Maldives and Bangladesh and many Pacific Island Countries will be the first to suffer from the effects of rising sea levels caused by CFCs, which are also potent greenhouse gases. Both these nations have received international help to reduce the use of harmful chemicals. Germany is assisting Iran while France is assisting Lao PDR to meet its compliance requirement. Mongolia, with help from Japan, has a terminal phase-out plan in place and has already reduced consumption of ODS by half. Australia is assisting the Pacific Island Countries under a unique regional programme. Pakistan has cut back on most harmful chemicals and has been collaborating with other countries to tackle the problem of illegal trade in banned substances. Nepal has cut its use of ODS to zero, and is now focusing on training customs officials to monitor smuggling of banned chemicals through its territory. Singapore, as a major transit port, has actively implemented the informal prior informed consent procedure before exporting ODS. Vietnam has been sharing its CFC export data with neighboring countries to improve border control.

The Republic of Korea has also collaborated with neighbouring countries in tracking and monitoring illegal movement of ODS and has cut its production and consumption of these chemicals as per agreed targets. The Democratic People’s Republic of Korea, Brunei Darussalam and Myanmar are getting assistance from the Multilateral Fund to phase out use of ozone-depleting chemicals. Sri Lanka is on track to ban all CFC consumption by 2007 and is well on its way to phase out other ODS. Fiji is one of the first Article 5 countries to achieve complete phase-out of CFCs since the year 2000 and to put the import quota on HCFCs.

Despite late ratification, Afghanistan, and Bhutan and Cambodia have made dramatic progress in phase-out and are also involved in regional programmes to train ozone officers. We are proud of the achievements made by these three countries and by all the Parties in our large and varied region but have no intention of resting on our laurels before our Protocol obligations are met.

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Compliance Assistance: West Asia

Hard Won Success in West Asia

West Asia is one of the most compliant regions under the Montreal Protocol but this status has not been easily achieved. Ozone depletion and other problems covered by Multilateral Environmental Agreements (MEAs) were not top priorities in a region where water shortage, industrial pollution and urban development dominated national/regional environmental agendas.

Like other Article 5 countries, states in West Asia have passed through different stages of Protocol implementation. During the last few years, remaining consumption has been in the servicing sectors, making phase-out more difficult. Additionally, many countries have either faced non-compliance or have been at risk of doing so. However, the response to such difficulties has demonstrated strong commitment to the Montreal Protocol. A mutual and demonstrable trust between National Ozone Units (NOUs) and all national stakeholders has been crucial in achieving and sustaining compliance.

Many countries have understood the importance of upgrading national legislation governing ozone-depleting substances (ODS) and, instead of depending on conventional licensing systems, are developing legislative instruments to deal comprehensively with the trade and use of ODS. Indeed, some countries have gone further and worked together to create tools to strengthen regional efforts in controlling ODS. For example, in 2006, the Gulf Countries enacted a regional regulation through the Gulf Cooperation Council (GCC) and this achievement has been recognised by a US EPA Annual Stratospheric Ozone Award.

Exchange of experience among member states has increased, particularly in technical areas, such as methyl bromide phase-out projects and the implementation of Refrigerant Management Plans (RMP). Regional organizations are also playing a greater part in addressing Montreal Protocol targets. The ASHRAE Chapters in West Asia, Gulf Cooperation Council (GCC), League of Arab States (LAS), and the Regional Intelligence Liaison Office (RILO) of WCO are regional organizations that have taken steps to include the Montreal Protocol in their mandates.

However, despite the encouraging progress, there are still serious challenges that could jeopardise compliance targets if not properly addressed. These include the existence of non-Parties in the region, the growth of illegal trade, the post-2007 compliance requirements, the international debate on the phase-out of HCFC and uncertainty about the future of reliable alternatives in many sectors.

The Compliance Assistance Programme (CAP), hand-in-hand with NOUs, has strengthened networking activities by prompting experience and information exchange among Montreal Protocol parties within and outside the region, assisted countries to monitor compliance requirements and ensured that all possible technical support is given on request. CAP has witnessed West Asia’s progress in the last five years and is proud of being a dynamic partner in achieving and sustaining compliance. The example of CAP has also introduced a good operational model for other MEAs.

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New Book Celebrates Montreal Protocol as Beacon for Climate Change

Stephen O. Andersen, K. Madhava Sarma and Kristen N. Taddonio are authors of a new book presenting lessons and insider accounts demonstrating how and why technology transfer works for stratospheric ozone protection. Ultimately, the book provides the only thorough assessment of successful technology transfer of the nature and scale required for combating climate change and other global environmental challenges. Study the details of 1000 investments over 15 years, hear directly from three dozen sector experts, recall your own contributions to the remarkable victory in making the world safer for future generations. “Technology Transfer for the Ozone Layer: Lessons for Climate Change,” Earthscan, London. www.earthscan.co.uk

“Celebrating 20 years of Progress in 2007”


Twenty Questions and Answers about the Ozone Layer: 2006 Update

To help foster continued interaction, this component of the Scientific Assessment of Ozone Depletion: 2006 presents 20 questions and answers about the often-complex science of ozone depletion prepared and reviewed by a large international group of scientists. http://ozone.unep.org/Assessment_Panels/SAP/Scientific_Assessment_2006/Twenty_Questions.pdf

Ozzy Ozone cartoon book: “Ozzy goes Polar”

The third cartoon book focuses on the effects that ozone depletion, climate change and Persistent Organic Pollutants (POPs) are having on polar ecosystems and communities and the ensuing consequences around the world. www.unep.fr/ozonaction

Ozzy Ozone Game

This “snakes and ladders” board game is at the same time educational and fun! Published in English, French and Spanish. www.unep.fr/ozonaction

TV - spots

“Drumming” and “Kid’s dream”, two Public Service Announcements (PSAs), specially prepared for the 20th Anniversary celebration. They are 20 seconds long and available in English, French, Spanish, Arabic, Chinese, Russian and Portuguese to be broadcasted on international or national television channels or for public purposes. www.unep.fr/ozonaction