

OZONENEWS

30 May 2015

Vol. XV

In this issue

- 1. “Why Isn’t the Ozone Hole Story Already History?”, Invitation to Join the OzonAction Webinar**
- 2. Updates from the 74th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol**
- 3. Governments, International Organisations, and NGOs Move to Protect Lives and the Climate from Dangerous Air Pollution. Mon, May 25, 2015**
- 4. Fast Action on HFCs, Other Short-Lived Climate Pollutants Can Cut the Rate of Global Warming in Half**
- 5. Long-Term Investment, Longer-Term Gain: The Montreal Protocol**
- 6. Quantifying the Ozone and Ultraviolet Benefits Already Achieved by the Montreal Protocol**
- 7. UNIDO Project Helps the Gambia Adopt Natural Refrigerants and Leapfrog HFCs in the Fisheries Industry**
- 8. Asia Environmental Enforcement Award Recognizes Crime Fighters**
- 9. The European Commission to negotiate the amendments to the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer on behalf of the European Union**
- 10. Une journée Fluides pour l’AFF**
- 11. Undersecretaries for Environmental Affairs in GCC Meet in Doha (Qatar)**

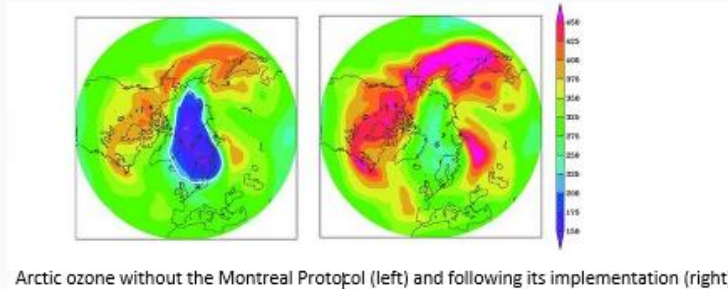


A fortnightly electronic news update on ozone and climate protection and the implementation of the Montreal Protocol



GLOBAL

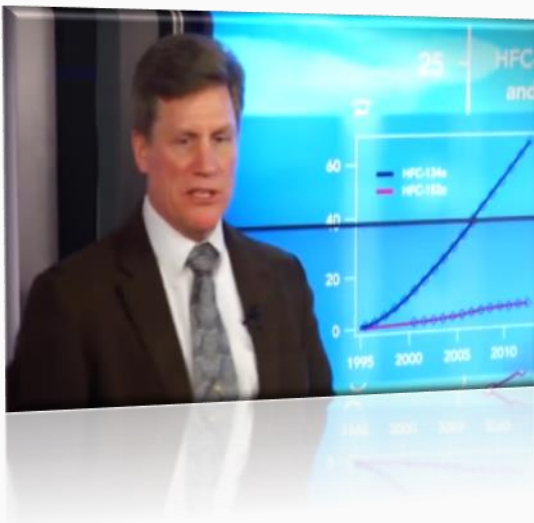
1. Invitation to Join the OzonAction Webinar: “Why Isn’t the Ozone Hole Story Already History?”



Arctic ozone without the Montreal Protocol (left) and following its implementation (right)

The Montreal Protocol is undoubtedly a success but...

- Was ozone depletion ever a real danger?
- What damage could it have really caused us?
- What if we had not acted?
- Why hasn't the ozone hole recovered yet?
- Will it ever?
- Have efforts to heal the ozone layer contributed to other threats?
- How can efforts on ozone and climate be aligned?
- Are we heading for a bleak future, or on track for environmental utopia?



Dr. Paul Newman, Chief Scientist for Earth Sciences at NASA's Goddard Space Flight Center, will be discussing these and other challenging questions regarding the ozone layer's past, present and future in an upcoming OzonAction Webinar on **Wednesday, 17 June 2015, at 14:00 CEST**

This will be an informative, interesting and entertaining webinar which will ensure you are up to speed on one of humanities greatest environmental threats and also the most successful environmental treaty ever created.

[Book your place now](#)

Make sure you don't miss this important webinar!

2. Updates from the 74th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol

The 74th Meeting of the Executive Committee, which took place in Montreal, Canada from 18 to 22 May 2015, was attended by the representatives of 14 of the Executive Committee member Parties and by participants co-opted from 18 other countries. Mr. John Thompson of the United States of America presided over the meeting as Chair of the Executive Committee in 2015.

Investment projects and work programme activities for 113 countries with a value of US \$59.4 million including support costs were approved including: institutional strengthening (IS) projects for 26 countries; stage II of an HPMP for one country; tranches of stage I of HPMPs and HPPMPs for 37 countries; funding for preparation of stage II of an HPMP for one country; preparation for national surveys of ODS alternatives in 85 countries in consideration of Decision XXVI/9 of the Parties); funding for the preparation of 13 projects to demonstrate low global warming potential (GWP) technology alternatives; a feasibility study for district cooling; and one technical assistance project on alternatives to methyl bromide.

With regard to Decision XXVI/9 of the Parties regarding additional funding to conduct inventories or surveys on ODS alternatives at the national level, the Executive Committee will consider a format for the survey preparation and presentation of data resulting from the surveys at the 75th meeting although interested countries could initiate the surveys before the format is agreed.

The Executive Committee decided to allow the submission of a limited number of additional requests for project preparation of low-GWP demonstration projects in the air-conditioning manufacturing sector, the re-submission of the two fully-developed demonstration projects in Colombia and Egypt, and additional feasibility studies on district cooling to the 75th meeting.

The Executive Committee requested Article 5 countries to submit their country programme (CP) data reports eight weeks prior to the first Executive Committee meeting of the year, if possible, and no later than 1 May, on the understanding that the deadlines for CP data submission would need to be revisited in the event that the Executive Committee decided to revert to holding three meetings a year. An updated CP report format will be considered at the 75th meeting.

The Executive Committee approved the criteria for funding HCFC phase-out in the consumption sector for stage II of HPMPs. These take into account the needs of small and medium-sized enterprises, the concerns of low-volume consuming (LVC) countries and very LVC countries (for example by an increase in the funding levels by 25 per cent for countries with HCFC baseline consumption in the refrigeration servicing sector of less than 40 metric tonnes), and make special provisions for the introduction of low-GWP alternatives that require large capital investments,

Following its review of funding of IS projects the Executive Committee decided that approvals of IS projects and renewals would be at a level that is 28 per cent higher than the historically agreed level, and for LVC and very LVC countries there would be a minimum level of IS funding of US \$42,500 per year, to continue support for compliance with the Montreal Protocol and to address the challenges related to the phase-out of HCFCs in line with the objectives of decision XIX/6 and the transition to alternatives that minimize environmental impact.

The Executive Committee decided to hold the 75th and 76th meetings in Montreal from 16 to 20 November 2015, and 9 to 13 May 2016, respectively.

Further details on decisions of the 74th meeting including the full text of the criteria for funding HCFC phase-out in the consumption sector for stage II of HPMPs, will be available in the Report of the 74th meeting of the Executive Committee (UNEP/OzL.Pro/ExCom/74/55). A summary of decisions of the meeting will also be distributed.

► [The Multilateral Fund for the Implementation of the Montreal Protocol](#), May 2015

3. Governments, International Organisations, and NGOs Move to Protect Lives and the Climate from Dangerous Air Pollution. Mon, May 25, 2015

If we manage to reduce short lived climate pollution, we not only save millions of lives but also reduce global warming by as much as 0.6 degrees by 2050



Ban Ki-moon: "Steps to address short-lived climate pollutants are now seen as an essential complement of the aggressive mitigation actions needed to combat climate change."

Geneva, May 22, 2015 - "Steps to address short-lived climate pollutants are now seen as an essential complement of the aggressive mitigation actions needed to combat climate change," United Nations Secretary General Ban Ki-moon said in a statement at the opening of the Climate and Clean Air Coalition's (CCAC) High Level Assembly in Geneva this week.

"The Coalition's mobilization of concrete actions to reduce emissions by 2020 promises high-impact results," Mr Ban said. "These efforts will protect the climate, our environment and improve the health and lives of people across the globe."

The CCAC High Level Assembly took place on the margins of the 68th World Health Assembly to bring attention to the strong links between air pollution, human health and climate change. Tine Sundtoft, Norway's Minister for Climate and Environment and Co-Chair of the Assembly, said that reducing short-lived climate pollutants (SLCPs), like black carbon, methane, tropospheric ozone and hydrofluorocarbons (HFCs), provides multiple benefits for health and climate.

"If we manage to reduce short lived climate pollution, we not only save millions of lives but also reduce global warming by as much as 0.6 degrees by 2050. This will be a significant contribution to limit global warming to 2 degrees," Ms Sundtoft said. "This is some of the most important work the world community can do in the coming years. Often there are small and cheap efforts that are needed, such as using solar energy to heat and light up houses. But this isn't only about emissions from poor countries. For instance, diesel vehicles cause significant health problem in big cities across the world. Thus we have a considerable task ahead of us."

A key result of the High Level Assembly was the passing of a strategic plan to scale up the CCAC's work over the next five years. A task force, chaired by the United States in close consultation with partners, looked at ways to advance policies, regulations, programs, and practices that can quickly deliver substantial reductions in harmful climate and air pollutants in the short term, while transforming sectors so they continue to deliver results into the future.

The plan calls for short-lived climate pollutants to be put on the policy map and become a priority for governments, the private sector and civil society around the world. It also called for more peer to peer support between partners to share expertise and provide technical assistance where needed. To do this the CCAC should prioritize work that is scientifically grounded, politically feasible, cost-effective, provide measurable results in the near-term, and has the potential to lead to greater SLCP reductions.

One group of SLCPs, hydrofluorocarbons (or HFCs), used in refrigeration and air conditioning is an extremely powerful climate forcing gas. The CCAC partners supported a statement on HFCs introduced by Canada as an example of how the Coalition will promote ambitious action and build strategic partnerships with other efforts. The HLA noted their support for a phase down of HFC under the Montreal Protocol and noted the importance to discuss these issues at the Protocol's upcoming July meeting.

The HLA expressed its support of the HFC initiative's activities to improve knowledge and highlight the range of climate friendly alternatives available. The CCAC will also further promote public procurement of climate-friendly alternatives to high- Global Warming Potential (GWP) HFCs, responsible refrigerant management practices and approaches, and the greening of the food cold chain through low-GWP technologies and reducing food waste.

The High Level Assembly also recognized the tragic events following the earthquake in Nepal and agreed to fund work with on a feasibility study to rebuild the country's damaged brick industry in a way that reduces black carbon pollution and increases kiln efficiency. Brick is the traditional building material in Nepal and every brick kiln in Kathmandu was damaged by the May, 2015, earthquake. All will need to be rebuilt. 10% of buildings in Nepal also need rebuilding. The rise in demand for building materials presents an opportunity to ensure that Nepal's brick industry is cleaner and safer for people and the environment. The study will also look at alternative building materials and earthquake safe construction practices.

SLCPs stay in the atmosphere for a relatively short time (from days to years) and reduction efforts can produce results relatively quickly. Marcelo Mena, Chile's Vice Minister for Environment and Assembly Co-chair, told delegates that Chile's efforts to reduce air pollution were already showing results.

"In May 2014 we unveiled a strategy that focuses on 14 new pollution attainment plans in areas covering 87% of the health risk associated with air pollution," Mr Mena said. "We worked with the Ministry of Health, to declare 'Sanitary Alerts' which allows for extreme measures on bad air days allowing us to ban visible smoke among other measures."

"In one year we reduced air quality episodes in most cities by between 20 and 30 percent. The Ministry of Health showed that our measures reduced medical visits by 25,000 cases and the department of Environmental Economy estimates that we reduced premature mortality by 270 cases last year."

Ibrahim Thiaw, Deputy Executive Director of the United Nations Environment Programme (UNEP), who also co-chaired the meeting said the CCAC was "an incredible Coalition that is doing a lot", and urged it to continue to grow in size and influence. In three years the CCAC has grown rapidly from a founding group of six countries and UNEP to a Coalition of 47 countries, 13 International Government Organisations, and 44 Non-Government Organisations. The Philippines is the latest member, joining at this latest meeting.

The United States and Norway pledged \$4 million and \$1 million respectively, to fund the ongoing work of the CCAC. A CCAC and World Bank Group led report on ways to increase private and public finance to reduce black carbon pollution was also released at the High Level Assembly.

► [UNEP](#), May 2015

4. Fast Action on HFCs, Other Short-Lived Climate Pollutants Can Cut the Rate of Global Warming in Half

Climate and Clean Air Coalition's five-year strategic framework aims to avoid 0.6° C of warming by 2050

High-Level Assembly of ministers endorses cutting HFCs under Montreal Protocol

California rallies cities and states

21 May 2015 – A five-year strategic framework adopted today by the Climate and Clean Air Coalition will scale up fast mitigation by cutting short-lived climate pollutants, in an effort to help keep global warming to less than 2°C above pre-Industrial levels. Studies show that fast reduction of the short-lived climate pollutants can cut the rate of global warming in half and avoid 0.6°C of warming by 2050. Short-lived climate pollutants include black carbon, ground-level ozone, methane, and HFCs. The five-year strategic framework also will save many millions of lives. According to the World Health Organization, seven million people die every year from air pollution, principally black carbon and ground-level ozone.

The United States pledged \$4 million and Norway more than a million to fund further Coalition work, in support of the five-year strategy, which will be finalized in Paris in December.

The Coalition's High-Level Assembly of ministers endorsed cutting production of HFCs under the Montreal Protocol, leaving accounting and reporting of emissions in the UN climate regime. The High-Level Assembly emphasized the importance of moving forward with the proposed HFC cuts under the Montreal Protocol when the Parties meet in July at their Open-Ended Working Group.

Chile announced that it would follow Mexico's lead and include reductions of black carbon as they develop their "intended nationally determined contributions" to climate mitigation in the run-up to the UN climate negotiations in Paris in December, when a new climate deal is anticipated, with the goal of taking effect in 2020.

UN Secretary General Ban Ki-moon stated that "steps to address short-lived climate pollutants are now seen as an essential complement of the aggressive mitigation actions needed to combat climate change," in his opening statement at the High-Level Assembly. "The Coalition's mobilization of concrete actions to reduce emissions by 2020 promises high-impact results. These efforts will protect the climate, our environment and improve the health and lives of people across the globe."

"The Coalition, which the member countries refer to as 'the coalition of the working,' shows what can be done by a small group of committed actors," said Romina Picolotti, former Minister of Environment from Argentina. "The Coalition is targeting specific sectors such as black carbon from transport and brick kilns, and sharing technology, regulatory experience, and funding to help country partners make fast progress. Our success is giving us the confidence to increase our ambition so we can deliver the full climate protection at a global scale."

The Coalition is the only international organization focused on reducing short-lived climate pollutants as a package. HFCs are used primarily as refrigerants, and methane comes from oil and gas exploration and transmission, landfills, agriculture, and coal mines. The Coalition has 47 country partners, along with the World Bank, UNEP, UNDP and WHO, as well as 57 nongovernmental organizations as partners.

Earlier this week California and 11 other subnational government leaders, representing over 100 million people, agreed to take action to keep the global average temperature below the 2°C guardrail for the most dangerous climate impacts, including by cutting short-lived climate pollutants. The “Under 2 MOU” agreement was signed by leaders of California, Oregon, Washington and Vermont, Baja California and Jalisco Mexico, British Columbia and Ontario Canada, Catalonia Spain, Wales UK, Arce Brazil, and Baden-Württemberg, Germany, and pledges reductions of greenhouse gas emissions 80 to 95 percent below 1990 levels by 2050 or per capita annual emission target of less than two metric tons by 2050.

California also released a draft concept paper earlier this month describing how the state plans to aggressively reduce short lived climate pollutants, which the paper notes are responsible for as much as 40% of current global warming.

“California once again is showing the world a better future by coupling fast mitigation from cuts in short-lived climate pollutants with longer-term mitigation from cuts in carbon dioxide,” said Durwood Zaelke, President of the Institute for Governance & Sustainable Development. “We can’t win the climate challenge without first winning the battle against air pollution and HFCs, which can provide the fastest mitigation in the near-term.”

▶ [IGSD](#), 21 May 2015

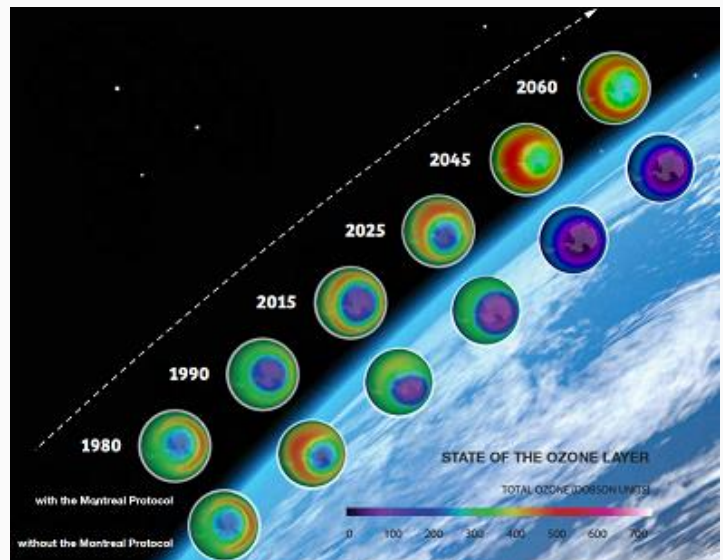
▶ See also :

Primer on Short-Lived Climate Pollutants is [here](#)

Primer on HFCs is [here](#)

5. Long-Term Investment, Longer-Term Gain: The Montreal Protocol

In 1974, Nature magazine published research by two scientists unveiling the link between manmade chemicals and the degradation of the Earth’s ozone layer—the shield that protects all life from harmful ultraviolet radiation. Fifteen years later, the Montreal Protocol came into force and began the long task of repairing the ozone layer by phasing out ozone-depleting substances. In 2014, a report by UNEP and the World Meteorological Organization, Scientific Assessment of Ozone Depletion 2014, confirmed that the ozone layer is healing and will return to pre-1980 levels by mid-century, demonstrating that a long-term commitment to tackling environmental challenges brings benefits to human health and economic prosperity that outweigh initial investments.



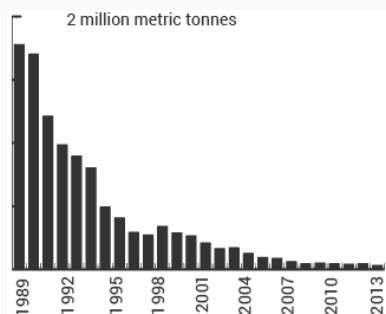
According to new models released by the United States Environmental Protection Agency, the Montreal Protocol and its amendments provide the following health benefits for those born between 1890 and 2100 in the United States: 283 million cases of skin cancer prevented, 8.3 million of which are melanoma. 1.6 million deaths from skin cancer prevented. 46 million cases of cataracts prevented. At a global level, up to 2 million cases of skin cancer may be prevented each year by 2030, along with additional avoided cataracts cases.



The Montreal Protocol has so far averted estimated emissions of over 135 billion tonnes of CO₂ equivalent.



Among the economic benefits of the Montreal Protocol are savings in healthcare costs. Reducing the number of skin cancer cases could save billions of dollars across the globe. In the United States alone, research published by the Centers for Disease Control and Prevention in November 2014 revealed that the average cost of treating 4.9 million adults for any skin cancer each year reached \$8.1 billion between 2007 and 2011.



▶ UNEP, [Annual Report 2014](#), May 2015

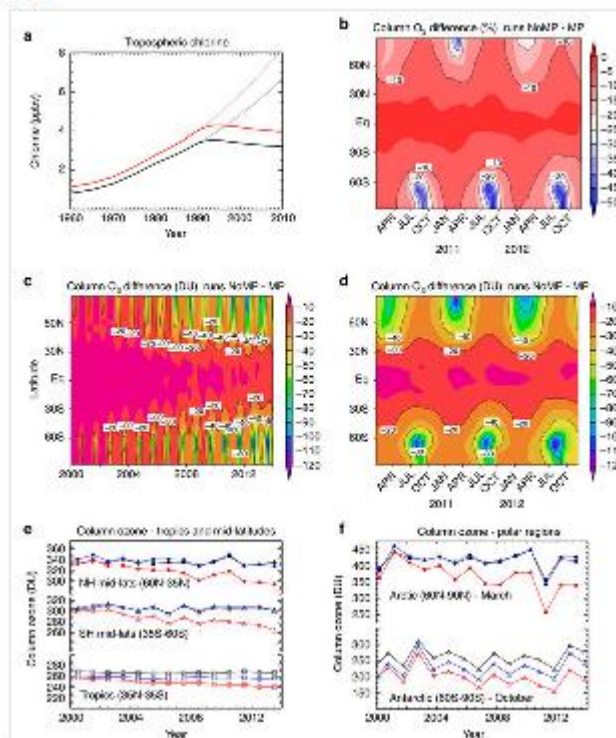
6. Quantifying the Ozone and Ultraviolet Benefits Already Achieved by the Montreal Protocol

Chlorine- and bromine-containing ozone-depleting substances (ODSs) are controlled by the 1987 Montreal Protocol. In consequence, atmospheric equivalent chlorine peaked in 1993 and has been declining slowly since then. Consistent with this, models project a gradual increase in stratospheric ozone with the Antarctic ozone hole expected to disappear by ~2050. However, we show that by 2013 the Montreal Protocol had already achieved significant benefits for the ozone layer. Using a 3D atmospheric chemistry transport model, we demonstrate that much larger ozone depletion than observed has been avoided by the protocol, with beneficial impacts on surface ultraviolet. A deep Arctic ozone hole, with column values <120 DU, would have occurred given meteorological conditions in 2011. The Antarctic ozone hole would have grown in size by 40% by 2013, with enhanced loss at subpolar latitudes. The decline over northern hemisphere middle latitudes would have continued, more than doubling to ~15% by 2013.

Concern over the depletion of the ozone layer started in the 1970s with the suggestion that chlorine from chlorofluorocarbons could reach the stratosphere and cause ozone loss¹. Research activities intensified greatly in the mid-1980s following the surprise discovery of significant ozone depletion over the Antarctic², the so-called ozone hole. This large decrease in ozone was explained by chlorine- and bromine-catalysed loss acting in the particularly cold conditions of the Antarctic polar lower stratosphere, which allow polar stratospheric clouds to form (see, for example, Solomon³). Ozone depletion was subsequently observed in the Arctic springtime stratosphere, but the loss was much smaller than the Antarctic and more variable from year to year^{4,5}. Cold years in the Arctic stratosphere, such as 1994/95, lead to an integrated column loss of around 120–140 DU (~35%), while warm years, without polar stratospheric cloud occurrence, produce essentially zero loss.

The discovery of the Antarctic ozone hole helped stimulate the initial signing in 1987 of the Montreal Protocol, an international treaty to limit production of chlorine- and bromine-containing ozone-depleting substances (ODSs). The Montreal Protocol has since been strengthened greatly through subsequent amendments and adjustments, supported by ongoing research, which has enhanced our understanding that ozone loss, in the polar regions and globally, is driven by chemical processes involving chlorine- and bromine-containing gases, arising

Figure 1: Calculated impact of Montreal Protocol on atmospheric halogens and column ozone.



mainly as breakdown products of ODSs. With global compliance with Montreal Protocol regulations, atmospheric chlorine peaked at ~3.6 parts per billion by volume (p.p.b.v.) in 1993 at the surface and a few years later in the stratosphere, and then began to decline. The current tropospheric loading is 10% below the 1993 peak value.

Most of the major ODSs have long lifetimes (many decades) in the atmosphere⁶, so a significant time delay is expected before the reduction in atmospheric emissions of chlorine and bromine translate into an increase in stratospheric ozone. Column ozone amounts in the northern middle latitudes reached their minimum values in the mid-1990s at about 6–8% below the 1964–1980 mean⁷, due to the combination of elevated stratospheric chlorine and bromine with enhanced aerosol loading after the 1991 eruption of Mt Pinatubo. Mean northern mid-latitude ozone values at the present day are still around 4% below the long-term mean⁸. The Antarctic ozone hole continues to re-appear each spring; stratospheric chlorine is not expected to return to 1980 levels, when the Antarctic ozone hole was first detectable, until about 2050. Substantial Arctic ozone loss also continues to be observed in the late winter/early spring of some years when polar stratospheric temperatures are particularly low. The largest Arctic ozone loss observed to date occurred in the recent cold winter of 2010/11 (ref. 9). By early April 2011, about 75% of the ozone had been destroyed in a limited altitude region of the polar lower stratosphere. Despite this relatively large local loss there were substantial differences in the spatial extent and the degree of local depletion between a typical Antarctic ozone hole and the 2011 Arctic loss. Near complete removal of ozone occurs annually in the Antarctic lower stratosphere while the maximum loss in the 2011 in Arctic is estimated at just over 80% at 18–20 km within a polar vortex covering a much smaller area than in the south. By late March, around 45% of the Arctic polar vortex had column ozone values below 275 DU. However, the observed column did not fall below the threshold for the Antarctic ozone hole, taken as 220 DU. Therefore, by that definition an ‘Arctic ozone hole’ did not occur.

Several studies have investigated the benefits of the Montreal Protocol. Prather *et al.*¹⁰ first discussed the possible impacts if the protocol had not come into force. Later studies have attempted to use atmospheric models to quantify the benefits. These have focused on the avoided future impacts later this century, assuming a continued strong growth in ODS emissions, and stratospheric chlorine. Morgenstern *et al.*¹¹ used a coupled chemistry-climate model (CCM) to compare the atmosphere in 2030 with and without the effect of the Montreal Protocol. By 2030 their assumed stratospheric chlorine loading was 9 p.p.b.v. In addition to increased stratospheric ozone loss, they found a feedback on stratospheric dynamics and an impact on surface climate. Newman *et al.*¹² used a similar CCM to investigate the impact on an uncontrolled 3% per year growth in chlorine through 2065. As expected, they found very large stratospheric ozone depletion and also large temperature changes in response to the ozone loss. Garcia *et al.*¹³ used their CCM to study the chemical processes responsible for this possible collapse of the ozone layer in the mid twenty-first century. Finally, Egorova *et al.*¹⁴ also used a CCM to study the impact of the Montreal Protocol on the ozone layer and again focused mainly on the large losses that would have occurred by the end of this century. Their analysis did extend from 1987 to 2100 but, as they were using a free-running CCM like all of the above studies, internal model variability prevented them from being able to diagnose the impact of the Montreal Protocol during specific years of the recent past.

These ‘World Avoided’ studies have thus mainly looked far into the future under the assumption that no action would have been taken to control ODS emissions, and compared the results with those expected with full implementation of the Montreal Protocol. In the face of the expected mounting evidence of an impact it seems quite unlikely that ODS emissions would have continued to grow at the assumed uncontrolled rates without some policy action by the middle of this century. Furthermore, these studies have partly focused on the coupled climate impact of large O₃ loss, but climate models often have temperature biases that make accurate quantitative modelling of the strongly temperature-dependent polar ozone loss extremely challenging.

In contrast, off-line chemical transport models (CTMs) have been shown^{15, 16, 17} to give an accurate simulation of stratospheric ozone loss when they use meteorological analyses—our best estimate of the ‘real’ meteorology. CTMs have also been developed with a focus on accurate and complete representations of chemical processes, although CCMs often use computationally fast schemes in more complex climate models. Therefore, a good CTM is likely to produce a more faithful simulation of the present and past atmosphere than a good CCM.

Here we use CTM calculations, covering the past two decades during which the growth of atmospheric chlorine and bromine abundances first slowed and then started to decline, to assess the benefits already achieved by the Montreal Protocol. We show that much larger ozone depletion than observed has been avoided by the protocol. A deep Arctic ozone hole, with column values <120 DU, would have occurred given the meteorological conditions in 2011. The Antarctic ozone hole would have grown in size by 40% by 2013, with enhanced loss at subpolar latitudes. The decline over northern hemisphere middle latitudes would have continued, more than doubling to ~15% by 2013. This ozone loss would have led to increases in surface ultraviolet of up to 8–12% in Australia and New Zealand and 14% in the United Kingdom, and consequent increases in skin cancer. [...]

▶ Read /Download the [full article](#)

▶ Nature Communications 6, [Article number: 7233](#), 26 May 2015, By: M. P. Chipperfield, S. S. Dhomse, W. Feng, R. L. McKenzie, G.J.M. Velders & J. A. Pyle



AFRICA

7. UNIDO Project Helps the Gambia Adopt Natural Refrigerants and Leapfrog HFCs in the Fisheries Industry



On 5 May, the key partners of a UNIDO initiative to help The Gambia switch to refrigerants with low global warming potential (GWP) met for the official inauguration of the project that is set to last three years. Through the promotion of technology transfer in the country's fisheries sector, it is believed that The Gambia can avoid the use of climate damaging HFCs as they steer away from the use of ozone-depleting HCFCs. However, this process also requires a favourable policy climate and a supporting logistical framework to blossom and it was these considerations that were the focus of the first meeting.

The Gambia seeks to replace ageing fisheries sector with natural refrigerant equipment

Ndey Sireng Bakurin, Executive Director of the National Environment Agency of The Gambia made it clear that The Gambia wishes to leapfrog the use of further fluorinated gases when she said that:

You will agree with me that today one of the world's most daunting challenges is climate change related predicaments, hence the need to control emissions of greenhouse gases and some refrigerants like hydrofluorocarbons used mainly in our air conditioning systems like those at the fish processing factories, which contributes significantly to the warming of the earth."

The chance to use natural refrigerant-based technology to help replace The Gambia's struggling fisheries sector was seen as a golden opportunity. The fish processing sector is currently experiencing problems due to high energy costs, outdated refrigeration equipment that has parts that are impossible to replace either because spare parts are no longer available or they are too expensive to buy as they must be imported.

A strong policy climate is as important as the climate

It is clear that a lot of factors must be aligned to allow for a successful proliferation of natural refrigerant-based equipment and shecco addressed one of these key factors; which is the policy measures that must be implemented. Nina Masson, Deputy Managing Director of shecco and international policy expert for the UNIDO project, highlighted the first results from the policy gap analysis conducted in partnership with the Gambian Government.

The analysis intends to identify priority areas where legislative action and more effective safety and technology standards promise the best results for the acceleration of more environmentally friendly industrial refrigeration and air conditioning solutions, including the use of flammable hydrocarbon refrigerants and carbon dioxide cascade solutions.

Some of the options that shecco put forward that could have an immediate and longer-term impact on the uptake of natural refrigerants include:

Taxation of fluorinated gases

Incentives and investment grant schemes for energy efficiency measures

Effective safety standards

Funding available to assist The Gambia in their transition

To assist The Gambia in their attempts to transition to naturals such as hydrocarbons, the Global Environment

Facility (GEF) Secretariat has provided a grant of US\$495,000 (€446,000) and the co-financing from various partners totals US\$2.4 million (€2.16 million). This financial support is to help The Gambia facilitate the adoption of equipment that possesses qualities such as being climate-friendly and energy saving to help modernise their fisheries sector and other susceptible sectors such as the air conditioning sector. The money is also available to help with policy measures, technology transfer and awareness-raising related activities.

The project is particularly innovative as, for the first time, it is bringing together the funding mechanisms of the Montreal Protocol on substances that deplete the ozone layer and the GEF so that environmental benefits from the phase-out of ozone depleting substances become eligible for a wider spectrum of financial support.

▶ [Hydrocarbons21](#), 22 May 2015



ASIA PACIFIC

8. Asia Environmental Enforcement Award Recognizes Crime Fighters

Five enforcement officers and eight organizations tackling fast-growing illegal trade in wildlife, chemicals and waste in Asia Pacific were the first recipients of the **Asia Environmental Enforcement Award (AEEA)** announced 20 May in Bangkok.



AEEA is one of the activities in cooperation with OzonAction Compliance Assistance Programme under the Regional Enforcement Network for Chemicals and Waste, a project funded by Swedish Sida. The first ceremony of AEEA was held back-to-back with the Asia-Pacific Roundtable on Environmental Rule of Law for Sustainable Development during the First Forum of Ministers and Environment Authorities of Asia Pacific.

The winners, hailing from Cambodia, China, India, Philippines, Thailand, Tonga, and Viet Nam, were awarded for their efforts in confiscating nearly US\$69 million in illegal contraband, logs and wood charcoal and seizures of nearly 300,000 tons of hazardous waste, wildlife products and timber like the Indian Red Sanders, a wood popularly used for idols and wooden artifacts. Investigations into these crimes have resulted in nearly US\$40 million in fines and more than US\$100 million in frozen assets. [...]

Among the winners for the category: ODS/Chemicals/Waste and Wildlife

Tonga Ministry of Revenue and Customs, Tonga (Organization) won for its contributing significantly to the country's global commitment to phasing out ozone-depleting substances, including the seizure of 30 cylinders of ozone-depleting Hydrochlorofluorocarbon (HCFC) R-22. [...]

Directorate of Revenue Intelligence (DRI), India (Organization) won for the successful enforcement operations that led to the seizure of 845 tons of the endangered and very popular Red Sanders wood, and 45,790 cylinders of ozone-depleting chemicals. [...]

▶ Contact: [Shaofeng Hu](#), Regional Network Coordinator, UNEP OzonAction Compliance Assistance Programme, Regional Office for Asia and Pacific



EUROPE AND CENTRAL ASIA

Invitation of Nominations for the ECA Ozone Protection Award for Europe & Central Asia 2016 (4th edition)

The Europe & Central Asia (ECA) network is inviting the customs & enforcement community to submit nominations for the 4th edition of the ECA Ozone Protection Award. It is a regional award for the ECA network & associated CEIT countries as well as their trade partners. The award ceremony is scheduled in Ashgabat, Turkmenistan in May 2016.

The nomination including a detailed description of the case, any evidence and photographs should be submitted to Halvart Koeppen, UNEP DTIE OzonAction Programme, Email: halvart.koppen@unep.org using the nomination form included in the [info note on the seizures and iPIC](#), as soon as the information is available but at the latest by 30 April 2016.

The ECA Ozone Protection Award for Customs & Enforcement Officers aims to provide incentive and recognition to customs and enforcement officers and their respective organizations, who successfully prevented illegal / unwanted trade of substances, equipment or products relevant for the implementation of the Montreal Protocol. It contributes to raising awareness about the Montreal Protocol and promotes cooperation between national customs services and ozone units.

- ▶ Contact: [Halvart Koeppen](#), Coordinator [Europe & Central Asia](#), UNEP OzonAction Compliance Assistance Programme

Seizures of Ozone-Depleting Substances

Numerous seizures of ozone-depleting substances, mixtures and equipment have been reported in the past. One of them was the seizure of 1150 cylinders containing 13,6 kg of R22 each (15,640 kg in total) in Vaalimaa, Finland, in 2011. The cylinders were hidden in truck on its way to Russia and detected through X-ray scan. Finnish customs estimates the costs of destruction of the seized chemicals at 54,000 Euros and would be interested in knowing how other countries have solved similar cases.

Therefore, we would appreciate it if you could inform us how you dealt with similar seizures in your respective countries. Were they returned to the country of origin and how was the shipment monitored? Were they destroyed and who paid for it? Were they auctioned to eligible buyers and what was the procedure? Or are they still stored in customs warehouses and what are the costs? It would be useful to provide a short description of the seizure case and explanation how the seized goods were disposed of.

We intend to compile this information and to share it widely with interested stakeholders. Many thanks in advance for your cooperation.

- ▶ Contact: [Halvart Koeppen](#), Coordinator [Europe & Central Asia](#), UNEP DTIE OzonAction Compliance Assistance Programme

9. The European Commission to negotiate the amendments to the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer on behalf of the European Union

The Council of the European Union Decision (EU) 2015/798 of 11 May 2015 authorising the European Commission to negotiate, on behalf of the European Union, amendments to the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer.

COUNCIL DECISION (EU) 2015/798

of 11 May 2015

authorising the European Commission to negotiate, on behalf of the European Union, amendments to the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(1) and

Article 218(3) and (4) thereof,

Having regard to the recommendation from the European Commission,

Whereas the Commission should be authorised to negotiate, on behalf of the Union, amendments to the Vienna Convention for the Protection of the Ozone Layer⁽¹⁾ and the Montreal Protocol on Substances that Deplete the Ozone Layer⁽²⁾,

HAS ADOPTED THIS DECISION:

Article 1

The Commission is hereby authorised to negotiate, on behalf of the Union, as regards matters falling within the Union's competence and in respect of which the Union has adopted rules, amendments to the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer at the Conference of the Parties to that Convention and at the Meetings of the Parties to that Protocol in 2015 and 2016.

Article 2

1. The negotiations shall be conducted by the Commission in consultation with the special committee designated by the Council, and in accordance with the negotiating directives of the Council set out in the Addendum to this Decision.

2. The Council may review those negotiating directives at any time. To that effect, the Commission shall report to the Council on the outcome of the negotiations after each negotiating session and, where appropriate, on any problem that may arise during the negotiations.

Article 3

To the extent that the subject matter of the amendments referred to in Article 1 falls within the shared competence of the Union and of the Member States, the Commission and the Member States should cooperate closely during the negotiating process, with a view to ensuring unity in the international representation of the Union and its Member States.

Article 4

This Decision is addressed to the Commission.

Done at Brussels, 11 May 2015.

For the Council

The President

J. DŪKLAVS

⁽¹⁾ OJ L 297, 31.10.1988, p. 10.

⁽²⁾ OJ L 297, 31.10.1988, p. 21.

 [Official Journal of the European Union](#), 11 May 2015

10. Une journée Fluides pour l'AFF



La journée a, pour l'essentiel, été consacrée aux fluides "naturels".
Photo : La Rpf.

L'association a organisé une journée de conférences autour des travaux menés par les experts de sa commission fluides. La RPF en livre ici un premier aperçu.

Le lycée Raspail accueillait le 8 avril dernier, la journée technique de l'AFF sur les fluides frigorigènes. L'occasion pour Florian Veyssilier, chargé de mission à la direction générale de la prévention des risques, au bureau des substances et préparations chimiques de faire le point sur le sujet : « *Le changement auquel nous assistons en ce moment fait partie d'une dynamique bien plus large. On voit que le sujet des HFC est abordé lors de sommets diplomatiques entre les deux plus grandes puissances de la planète. Cette année 2015 devrait constituer un tournant avec des avancées majeures dans les négociations internationales sur les gaz à effet de serre. L'obtention d'un amendement au protocole de Montréal encadrant les HFC et la réussite de la COP 21 font d'ailleurs partie des priorités pour notre ministre Ségolène Royal.*

Avec les récentes évolutions réglementaires, les métiers du froid entrent dans une phase de transition. Il apparaît que, contrairement à auparavant, une seule famille de fluides ne pourra pas couvrir l'ensemble des usages et des besoins... Le frigoriste sera amené à choisir entre diverses solutions, que sont le CO₂, le NH₃, les hydrocarbures ou encore les HFO. Cette phase de transition va constituer une opportunité pour vous en tant que professionnels du froid. »

Les fluides "naturels" au cœur des débats

Dans le cadre d'un retour d'expérience sur l'ammoniac, Laurent Pépin de la société Artic a rappelé qu'il s'agissait d'un fluide inflammable, toxique pour l'homme, mais que l'on comptait déjà plus de 30 000 installations à l'ammoniac et qu'il représentait 55 % de la puissance frigorifique française.

Nicolas Pondicq-Cassou, directeur de l'ingénierie chez Carrier SCS Profroid a poursuivi en évoquant le CO₂. Si ce dernier est indiqué en réfrigération commerciale, il ne constituerait pas, selon lui, une solution universelle...

Plus pratique, l'après-midi a démarré par des ateliers destinés aux élèves du lycée. Des cas pratiques portant sur les frigoporteurs ont également été organisées.

► [La RPF](#), 29 Mai 2015



WEST ASIA

11. Undersecretaries for Environmental Affairs in GCC Meet in Doha (Qatar)



Doha will host the 35th meeting of the undersecretaries responsible for environmental affairs in the Gulf Cooperation Council (GCC) at the Ritz Carlton Hotel tomorrow.

- The two-day meeting, to be inaugurated by assistant undersecretary of the environment ministry for environmental affairs Ahmed Mohammed Al Sada, will discuss a number of issues, including cooperation with each of the United Nations

Environment Program Regional Office for West Asia, and the Regional Organization for the Protection of the Marine Environment and the World Bank, in addition to cooperation in the framework of the strategic dialogue with Turkey, Jordan and Morocco.

- The meeting will also review a study to establish the GCC Environmental Monitoring Center and the working group in charge of studying the developments of the UN Convention on Climate Change, the Kyoto Protocol, the Vienna Convention for the Protection of the Ozone Layer, and the Montreal Protocol on Substances that Deplete the Ozone Layer as well as the GCC environment and wildlife award.

- Other topics for discussions include GCC network on land degradation studies, Sultan Qaboos Prize for human and environmental affairs, the promotion of environmental education in school curricula in GCC countries as well as the unification of the environmental affairs' meetings in the GCC states and the GCC Framework convention on environmental protection and the inclusion of the environment meetings' documentation in the GCC website and the project of Kuwait environmental portal. [...]

► [QANA](#), 19 May 2015



FEATURED

OZONE SECRETARIAT

– Browse through the Ozone Secretariat "[In Focus](#)" to learn about latest updates.

[Montreal Protocol Meetings](#) Dates and Venues

- [Methyl Bromide Technical Options Committee 2014 Assessment Report](#)
- [Medical Technical Options Committee 2014 Assessment Report](#)

Progress & Quadrennial Assessment Reports:

- Environmental Effect Assessment Panel ([EEAP](#))
- Scientific Assessment Panel ([SAP](#))
- Technology and Economic Assessment Panel ([TEAP](#))

Halon Technical Options Committee Reports:

- [Halons Technical Options Committee 2014 Assessment Report \(Volume 1\)](#)
- [Halons Technical Options Committee 2014 Supplementary Report #1 - Civil Aviation \(Volume 2\)](#)
- [Halons Technical Options Committee 2014 Supplementary Report #2 - Global Halon 1211, 1301, and 2402 Banking \(Volume 3\)](#)
- [Technical Note #1- Revision 4 - Fire Protection Alternatives to Halon - 2014](#)
- [Technical Note #2 - Revision 2 - Halon Emission Reduction Strategies - 2014](#)
- [Technical Note #3 - Revision 2 - Explosion Protection - Halon Use and Alternatives - 2014](#)
- [Technical Note #4 - Recommend Practices for Recycling Halon and Halocarbon Alternatives - 2014](#)
- [Technical Note #5 - Halon Destruction - 2014](#)

THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL



- The Executive Committee of the Multilateral Fund 74th meeting, Montreal, Canada, 18 - 22 May 2015. >>> [Meeting Documents](#)
- The 73rd meeting of the Executive Committee of the Multilateral Fund took place 7 - 13 November 2014, Paris, France. The final report of the meeting containing the 75 decisions taken by the Committee is available as document UNEP/OzL.Pro/ ExCom/73/62 on the Multilateral Fund's [web site](#).

The Executive Committee approved a total of US \$68,784,379 including support costs for agencies for phase-out projects and activities in 62 Article 5 countries.

[▶ Learn more](#)

OZONACTION

NEW Publications Recently Launched



[Guide on Good Practices: Phasing out HCFCs in the Refrigeration and Air-conditioning Servicing Sector -](#)



[Phasing out HCFCs in Small and Medium-sized Foam Enterprises](#)

Publications/ Factsheets Launched During MOP-26:



[Financing the Climate Co-benefits of the HCFC Phase-out](#)



[UNEP OzonAction CAP Achievements 2014](#)



[OzonAction Special Issue 2014: New Responsibilities under the HCFC Phase-out](#)

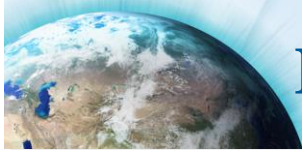


[Demonstrating the feasibility of R-290 based AC manufacturing: China's Midea and Meizhi case](#)



[Low-GWP Alternative for Small Rigid PU Foam Enterprises](#)

[▶ Learn more](#) about OzonAction publications and events throughout the MOP-26



EVENTS

2015



[AIRAH's Refrigeration 2015 Conference](#), 3 June, Sydney, Australia.



[FRIGAIR Africa 2015 Is A Go!](#) 3-5 June 2015, Gallagher Estate, Midrand. South Africa. FRIGAIR 2015 Showcasing the crucial role played by the HEVAC&R industry and the rapidly developing technology in eco-friendly efficiency.



[16th European Conference](#) The Latest Technology in Air Conditioning and Refrigeration Industry with Particular Reference to F-Gas Regulation Revision, New Refrigerants, New Regulations, New Plants. 12-13 June 2015, Milano, Italy.



[4th Annual ATMOsphere America 2015](#) – The Business Case for Natural Refrigerants in North America will take place on 25-26 June 2015, Atlanta, Georgia, USA.



[ASHRAE's 2015 Annual Conference](#) will take place on 27 June – 1 July 2015, in Atlanta, Georgia, USA.



[Advancing Ozone & Climate Protection Technologies: Food Cold Chain](#), 18 July 2015, Paris, France - The United Nations Environment Programme, the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants, the United States of America, and the Alliance for Responsible Atmospheric Policy are pleased to announce the Advancing Ozone & Climate Protection Technologies: Food Cold Chain to be held July 18, 2015, Paris, France.



The [24th International Congress of Refrigeration](#), 16-22 August 2015, Yokohama, Japan.

[See more events from the IIR website](#)



[The Future of HVAC Conference 2015](#), 18-19 August 2015, Melbourne, Australia.



[Salon interprofessionnel du froid et de ses applications \(SIFA\)](#), 13 au 15 octobre 2015, Event Center (Porte de la Villette), Paris, France



[4th European Heat Pump Summit](#), 20-21 October 2015, Nuremberg, Germany.



[Salon Energies Froid](#), 2-3 Décembre 2015, Nantes, France.



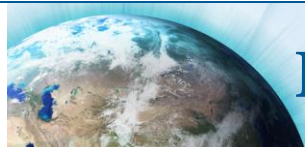
India Cold Chain Show 2015 Conference (ICCS), 16 - 18 December 2015, Goregaon (east), Mumbai, is the leading exhibition and conference for cold chain, cold logistics, temperature controlling, refrigeration, storage, distribution and cold supply chain sectors...

[View details](#) | [are you attending?](#)

2016



12th IIR Gustav Lorentzen Natural Working Fluids Conference, 21 - 24 August 2016, Edinburgh, Scotland. World experts gather in Edinburgh to discuss the future of natural working fluid...



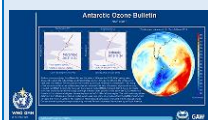
READING



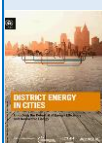
A new publication, **[Twenty Questions and Answers About the Ozone Layer](#)**, presents complex science in a straightforward manner. It complements the **[2014 Scientific Assessment Report of Ozone Depletion](#)** by WMO and the U.N. Environment Programme.



[Our Planet: Time for Global Action](#) - As we move towards the historic post-2015 Summit at the 70th UN General Assembly next September, governments will be expected to adopt a transformational sustainable development agenda, including the finalization of the Sustainable Development Goals. The March 2015 issue emphasizes the importance of an integrated and universal approach to the Sustainable Development Goals and the post-2015 agenda. ...



[WMO Antarctic Ozone 2014 Bulletins](#) - The World Meteorological Organization Secretariat issues bulletins containing information on the state of the ozone layer in the Antarctic at roughly two week intervals from August to November. The bulletins are based on data provided by WMO Members which operate ozone monitoring stations in the southern hemisphere and satellites to observe ozone globally.



[District Energy in Cities: Unlocking the Potential of Energy Efficiency and Renewable Energy](#) is among the first publication to provide concrete policy, finance and technology best practice guidance on addressing the heating and cooling sectors in cities through energy-efficiency improvements and the integration of renewable energy technology. Related [video](#) | UNEP [Press Release](#)



[Summary of The meeting of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants \(CCAC\) Working Group took place from 24-25 February 2015 in Kathmandu, Nepal](#). More than 100 participants attended the meeting which focused on developing a 5-year Strategic Plan for the CCAC, as requested by Ministers and Heads of the CCAC Partner organizations. During the meeting, the Working Group made progress on developing key elements of the Strategic Plan. It also approved the SAP Work Plan, together with six funding requests for Initiatives on Agriculture, Diesel, Hydrofluorocarbons (HFCs), Regional Assessment and Supporting National Planning for Action on SLCPs (SNAP). The Working Group also adopted decisions on Demonstrating Impact, the 5-Year Strategic Plan, and the Road to Paris...



[AREA Guidance on minimum requirements for contractors' training & certification on low GWP Refrigerants](#)

- AREA has updated its Guidance on minimum requirements for contractors' training & certification on low GWP Refrigerants. The revision includes an Annex II, which lists training facilities in AREA countries. The list provides website addresses and information on the type of training (theoretical and/or practical) by type of low GWP refrigerant.

Latest issue of Centro Studi Galileo magazine [Industria & Formazione](#).

[Free guide to F-gas changes](#) The European contractors association AREA has produced a timely guide to the F-gas regulations which clarifies the new rules, their impact and their practical application...[Read more](#)

The recent [Alternatives to HCFCs/HFCs in developing countries](#) with a focus on high ambient temperatures" study carried out by Öko-Recherche for the European Commission stresses that the refrigerant and blowing agent demand is expected to triple by 2030 in developing countries as a result of economic growth. A sector by sector analysis shows that a climate-friendly replacement for current and future of HCFCs and high GWP HFCs is possible in most applications ...

[Primer on Hydrofluorocarbons](#), Fast action under the Montreal Protocol can limit growth of HFCs, prevent up to 100 billion tonnes of CO₂-eq emissions by 2050, and avoid up to 0.5°C of warming by 2100. IGSD, January 2014, Lead authors: Durwood Zaelke, Nathan Borgford-Parnell, and Danielle Fest Grabel. Contributing authors: Stephen O. Andersen, Xiaopu Sun, Dennis Clare, Yuzhe Peng Ling, and Alex Milgroom.

[Flammable Refrigerants Safety Guide](#), AIRAH - Many of the refrigerants traditionally used in refrigeration and air conditioning systems in Australia have been non-flammable, non-toxic, synthetic greenhouse gases (SGGs) that have a high global warming potential (GWP). These were typically synthetic refrigerants including CFCs, HCFCs and HFCs. Due to the growing national and international concern regarding the resulting atmospheric effects of SGGs, the use of alternative low GWP refrigerants is increasing. ...

[Energy Efficiency Fact Sheet: Refrigeration](#) - Refrigeration is of critical importance to many small businesses – from keeping simple kitchen facilities in commercial premises to equipment for the food service industry where needing to preserve perishable items or cool non-perishable products for sale is a day to day imperative. [...] Whether making the most out of existing refrigeration solutions or implementing new energy efficient ones, energy can be saved through quick wins or longer term projects...

[Recent Trends in Global Emissions of Hydrochlorofluorocarbons and Hydrofluorocarbons: Reflecting on the 2007 Adjustments to the Montreal Protocol](#). S. A. Montzka *†, M. McFarland ‡, S. O. Andersen §, B. R. Miller †||, D. W. Fahey †, B. D. Hall †, L. Hu †||, C. Siso †||, and J. W. Elkins †

† Earth System Research Laboratory, National Oceanic and Atmospheric Administration, Boulder, Colorado 80305, United States ‡ DuPont Chemicals & Fluoroproducts, Wilmington, Delaware 19805, United States § Institute for Governance & Sustainable Development, Washington, D.C. 20007, United States|| Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder, Colorado 80309, United States

[Geothermal Heating and Cooling: Design of Ground-Source Heat Pump Systems](#)- ASHRAE

Principles of Heating, Ventilating and Air-Conditioning, 7th Ed. ASHRAE



A first edition, the IIR guide “**CO₂ as a Refrigerant**” highlights the application of carbon dioxide in supermarkets, industrial freezers, refrigerated transport, and cold stores as well as ice rinks, chillers, air conditioning systems, data centers and heat pumps. This guide is for design and development engineers needing instruction and inspiration as well as non-technical experts seeking background information on a specific topic. Publication, IIR Technical Guide, 2014.



Bottled air from all over the world tells story of ozone-depleting gases and their connection to climate change [...] Filled with air samples from all over the world, the flasks arrive week in and week out at Montzka’s lab in Boulder, Colorado, where he leads NOAA’s effort to monitor the atmospheric concentration of the chemicals that, thanks to the Montreal Protocol, are replacing the CFCs that harm Earth’s ozone layer. [...]



GUIDE to Natural Refrigerants in China - State of the Industry 2015 - Launched by shecco - is the first-ever in-depth report on the use of natural refrigerants - carbon dioxide (CO₂), hydrocarbons (HCs), ammonia (NH₃), water (H₂O) and air - in China. The GUIDE done in collaboration with the Chinese Association of Refrigeration (CAR) identifies market trends, business opportunities, policy drivers, and outlines suitable applications for natural refrigerants in the country’s cooling, heating and refrigeration sectors...



Chlorofluorocarbon Market: Global Industry Analysis and Forecast 2014 – 2020, [...] The key segments considered for this market include North America, Europe, Asia Pacific and Rest of the World (RoW). The market for chlorofluorocarbons is mature in North America and Europe and is not expected to rise by much in the next few years. This is due to the stringent and restricted policies passed by the respective governments due to the harmful effects they cause to the environment especially the upper layer of the ozone and due to the green house effects that it causes. In these countries, the demand for green refrigerants is expected to rise in the next few years. The market for chlorofluorocarbons is still high in India, Latin American and Middle Eastern countries and is expected to rise due to its ever-growing economy and fast expanding manufacturing bases and lack of laws and regulations against its use. India and China manufacture chlorofluorocarbons to a huge extent and the market demand for the compound is still large here and not expected to decline anytime soon over the next few years. [...]



MISCELLANEOUS



GreenChill Webinar: **Supermarket Experiences with Micro-Distributed Refrigeration System Architecture**, Date: Thursday, June 4, 2015 | Time: 2:00 pm to 3:00 pm (Eastern time)

The webinar will focus on supermarket experiences with micro-distributed refrigeration system architecture. Quentin Crowe from Hussmann will be presenting information on how these systems are designed and how they function. Gary Cooper from Lowes Market will be presenting on his company's experiences using these systems in supermarkets. To join the webinar:

1. Go to <https://epa.connectsolutions.com/micro-distributed/>
2. Select "Enter as a Guest". It is important that you select the option to enter as a guest.
3. Enter your name. | 4. Click "Enter Room". | 5. Click "OK".

For audio: 1. Call the toll free call-in number: 1-866-299-3188 (706-758-1822 from outside the U.S.)

2. Use Conference Code: 202 343 9185#



GreenChill Webinar: **Supermarket Experiences with CO₂ System Designs – Case Study: Target,**

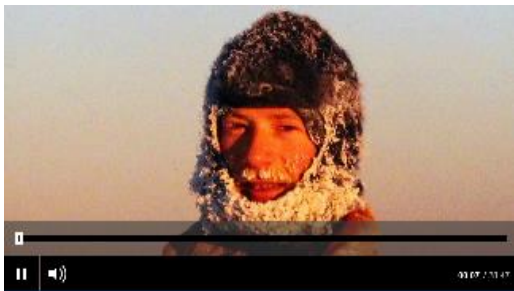
Date: Tuesday, June 9, 2015 | Time: 2:00 pm to 3:00 pm (Eastern time)


Erich Schwab from Target will be discussing the company's decision to adopt a hybrid R-134a/CO₂ system as the prototype for new stores. To join the webinar:

1. Go to https://epa.connectsolutions.com/target_co2/
2. Select "Enter as a Guest". It is important that you select the option to enter as a guest.
3. Enter your name. | 4. Click "Enter Room". | 5. Click "OK".

For audio: 1. Call the toll free call-in number: 1-866-299-3188 (706-758-1822 from outside the U.S.)

2. Use Conference Code: 202 343 9185#



 [The Ozone Hole Thirty Years On](#) - In May 1985 Joe Farman, Jonathan Shanklin and Brian Gardiner of the British Antarctic Survey published their paper in the scientific journal Nature. It revealed there was a large and expanding hole in the ozone layer above the Antarctic and that the cause was the chlorofluorocarbons or CFCs then commonly used in aerosols and refrigerants....

BBC, Costing the Earth

[Scientific Debate Heats Up Over Safety of Grease-Resistant Chemicals,](#)

[...] “Global action through the Montreal Protocol (United Nations Environment Programme 2012) successfully reduced the use of the highly persistent ozone-depleting chlorofluorocarbons (CFCs), thus allowing for the recovery of the ozone layer,” claim the signatories. “It is essential to learn from such past efforts and take measures at the international level to reduce the use of PFASs in products and prevent their replacement with fluorinated alternatives in order to avoid long-term harm to human health and the environment.” [...]

Lexology, Shook Hardy & Bacon LLP, 8 May 2015, By:Mark Anstoetter and Madeleine McDonough

[Global Cold Chain Directory](#), The Global Cold Chain Directory is an annual buyer’s guide featuring listings of GCCA member companies from every sector of the cold chain, including cold storage warehouses, logistics providers, construction companies, and industry suppliers. The directory is available in print, [online](#), and, now, as a mobile app. [Browse the Directory](#)

Download the GCCA Directory App - Download the new mobile app of the Global Cold Chain Directory for a convenient way to access the world’s largest directory of cold chain providers on tablets or Smart Phones. The app is available for complimentary download in [iTunes App Store](#) or [Google Play](#).



[Modernizing District Energy Systems](#) Could Reduce Heating and Cooling Primary Energy Consumption by up to 50% finds New Report ... Download the [full report](#)



[ASEAN Japan Chemical Safety Database \(AJCSD\)](#). The on-line database is a product of a two year-long and ongoing collaborative effort among Japan and each of the member states of the Association of Southeast Asian Nations (ASEAN). AJCSD is intended to serve as an information sharing platform for government agencies as well as a comprehensive compliance resource for chemical manufacturers and suppliers operating in the region. According to the statements on its website, the METI hopes this information tool will contribute in the development of a harmonized chemical management system in the region...



MONTREAL PROTOCOL
WHO'S WHO

The Montreal Protocol Who's Who

Nominate Ozone Layer Protection Champion

From Your Country /Region >>

<http://www.unep.fr/ozonaction/montrealprotocolwhoswho>

Disclaimer: The United Nations Environment Programme Division of Technology, Industry and Economics (UNEP DTIE) OzonAction Programme provides OzoNews as a free service for internal, non-commercial use by members of the Montreal Protocol community. Since its inception in January 2000, the goal of OzoNews is to provide current news relating to ozone depletion and the implementation of the Montreal Protocol, to stimulate discussion and promote cooperation in support of compliance with the Montreal Protocol. With the exception of items written by UNEP and occasional contributions solicited from other organizations, the news is sourced from on-line newspapers, journals and websites. The views expressed in articles written by external authors are solely the viewpoints of those authors and do not represent the policy or viewpoint of UNEP. While UNEP strives to avoid inclusion of misleading or inaccurate information, it is ultimately the responsibility of the reader to evaluate the accuracy of any news article in OzoNews. The citing of commercial technologies, products or services does not constitute endorsement of those items by UNEP.

If you have questions or comments regarding any news item, please contact directly the source indicated at the bottom of each article.

Follow OzonAction on:



<http://www.facebook.com/ozonaction>



<http://www.slideshare.net/ozonaction>



<http://twitter.com/ozonaction>



<http://www.youtube.com/ozonaction>



Prepared by: Samira Korban-de Gobert, OzonAction

Reviewed by: Shamila Nair-Bedouelle, Head OzonAction Branch, and Ezra Clark, OzonAction

If you wish to submit articles, invite new subscribers, please contact:

Mrs. Samira Korban-de Gobert, Tel. (+33) 1 44.37.14.52,
samira.degobert@unep.org

To unsubscribe, send a blank message to samira.degobert@unep.org with 'unsubscribe OzoNews' as the subject.