

OZONNEWS

15 April 2015

Vol. XV

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Multilateral Fund
for the Implementation of the Montreal Protocol

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



On 1 June 2015 UNEP will move to a new administrative platform ' UMOJA' which involves a complete re-work of the way the organization manages its administration including business and information technology processes.

Umoja means “unity” in Swahili. Umoja is a complete re-working of the way the United Nations Secretariat manages its administration, in both business processes and Information Technology solutions.

It will deeply transform UNEP’s work patterns, how we conduct our business and how we manage our resources. At the center of this transformation is the implementation of leading-edge Enterprise Resource Planning (ERP) software that will provide a harmonized and streamlined approach to the Organization’s management of finance, human resources, procurement and assets.

"Umoja is designed to help harmonize the way the UN works, providing a single data repository with reliable, real-time information. It is far more than an Information Technology project; it is an organizational transformation that will enable high-quality and cost-effective service delivery around the world."



- Secretary-General Ban Ki-moon

▶▶▶ [Learn more](#) about UMOJA

▶▶▶ UNEP, [Ozone Secretariat](#), April 2015



INVITATION to Join Upcoming OzonAction Webinar Session on:

"Eco cooling for hot climates: high ambient temperatures and natural refrigerants",

Tuesday , 12 May 2015, at 17:00 CEST

REGISTER NOW

Other time zones: [22:00 Bangkok, 18:00 Manama, 18:00Nairobi, 10:00 Panama City] | Check your [time zone](#).



GLOBAL

1. InforMEA E-course on the Montreal Protocol



The Montreal Protocol is highlighted as a successful international multilateral environmental agreement (MEA) through which international cooperation has led to the reduction of ozone depleting substances. The Protocol offers the international community an exemplary process and outcome from which it can extrapolate and apply lessons learnt to current negotiations and discourse.

InforMEA, a project of the MEA Information and Knowledge Management Initiative (InforMEA) is offering an e-course on the Montreal Protocol. The course provides a tool to help stakeholders build awareness of what multilateral success looks like, with a view to facilitating further protection of the ozone layer and lending support to other processes that rely on successful interstate cooperation to achieve critical environmental outcomes.

The e-course is a brief guide to the international legal framework protecting the ozone layer. Using accessible language and videos, it leads users through several units that begin with the science of ozone depletion, particularly important findings such as the 1985 discovery of a hole in the ozone layer over the Antarctic, and then discuss the international response. The e-course then details the provisions of the Vienna Convention, the Montreal Protocol, the amendments to the Protocol, and touches on issues such as the compliance mechanism, implementation measures and future challenges. The multilateral response to ozone depletion represents, as the e-course highlights, a milestone among MEAs for two reasons: it set

targets and timelines; and laid the foundations for the emergence of the precautionary principle.

For those interested in the politics of the possible, the Montreal Protocol is a lesson worth studying. InforMEA's e-course seeks to equip stakeholders with an understanding of the most impactful elements of the Montreal Protocol, particularly its provisions for implementation by developing countries and step-wise approach to governance.

▶ [Visit InforMEA & Begin Learning Now](#)

▶ UNEP, [Ozone Secretariat](#), March 2015

2. Which Refrigerant Analyzer do I have?

UNEP has supplied hundreds of refrigerant identifiers and conducted many customs training sessions over years. Accordingly, there have been many queries and questions received during and after these UNEP trainings. Over the last 10 years, there has only been one global manufacturer producing appropriate units with the required specification although they were supplied by different companies. It is also to be noted that models of identifiers have been developed over the years which are now able to identify a greater range of blended/mixed refrigerants and which have greater functionality.

This year in January, OzonAction met with manufacturing company, *Neutronics Co.* and requested to them to produce a fact sheet that could answer the frequently asked questions and that also describes differences between models.

They welcomed the idea!

OzonAction is glad to share with you the document - FAQs- that Neutronics developed so that the Refrigerant Identifiers commonly supplied in HPMPs projects can be better utilised.

Additional advanced hands-on training sessions on the best use of the identifiers will be organised in future relevant workshops.

We at UNEP hope that this document will help you to better monitor and manage the trade in ODS, taking into consideration that these identifiers can be very useful in identifying and documenting cases of fraud and counterfeited illegal trade shipments.

▶ Contact: Ayman Eltalouny, Programme Officer, UNEP OzonAction, Compliance Assistance Programme, Regional Office West Asia

▶ UNEP [OzonAction](#), April 2015



3. What Will Happen to Life on Earth if Ozone Depletion Continues?

Most scientists are agreed that without the earth's ozone layer, we would all cease to exist. That's one of the main reasons that global ozone levels are now constantly monitored and worldwide research is taking place into ozone depletion...

▶ [Ozone Depletion](#), 8 April 2015, By: Susan Hunt MA

4. Natural Refrigeration Gains Ground, But Obstacles Remain

Natural refrigeration technology is gaining traction with end-users, according to speakers at the Atmosphere Conference in Brussels last month.



Furthermore, it was revealed that despite technological successes, there are still challenges to overcome in the form of regulatory obstacles and skill shortages...

▶ [RAC Magazine](#), 31 March 2015, By Andrew Gaved, Editor

See Also: [ATMOpsphere](#), 23 March 2015: Presentations and pictures from ATMOsphere Europe 2015 are now available online: [View presentations](#) | [View pictures](#)

5. AHRI Creates Flammable Refrigerants Subcommittee

AHRI establishes Flammable Refrigerants Subcommittee to develop a set of application requirements for the use of 2L refrigerants.

The Research and Technology (R&T) Committee of the Air-Conditioning, Heating, and Refrigeration Institute's (AHRI) has recently established a Flammable Refrigerants Subcommittee that will seek to

develop a set of application requirements for the use of 2L refrigerants...

▶ [RacPlus](#), 8 April 2015, By: Julian Milnes

6. Polar Vortex: A Major Contributor to Depletion of Ozone Layer

Question-Polar vortex contributes in the depletion of ozone layer. What is Polar Vortex and what role does it play in the absence of Arctic Hole compared to the Antarctica Hole? ...

▶ [CareerRide](#), 14 April 2015, By: Soliya Dantas



▶ [A Story of Ozone: Earth's Natural Sunscreen](#) - Several decades ago, chlorofluorocarbons (CFCs) were chemicals used in hairspray, deodorants, foam products, air conditioners and more. In 1974 chemists Sherwood Rowland and Mario Molina published a paper that indicated CFCs were damaging the ozone layer, which protects Earth from the sun's ultraviolet rays. Dr. Paul Newman is the chief scientist for atmospheric sciences at NASA's Goddard Space Flight Center. In this video he discusses chlorofluorocarbons' effects on the ozone layer, what policy-makers did in response, and what challenges the ozone layer faces today... [Watch](#) the video



AFRICA



7. AMCEN Declaration on HFCs Phase Down Taken to the Parties of the Montreal Protocol

This proposal by Senegal on behalf of the African Group on the process to regulate the production and consumption of hydrofluorocarbons under the Montreal Protocol was submitted as a 'non-paper' and requested to be circulated to all parties to the Montreal Protocol on Substances that Deplete the Ozone Layer for their information.

Noting that the 15th session of African Ministerial Conference on the Environment (AMCEN) that met in Cairo (Egypt) from 2-6 March 2015 adopted a Declaration which, among other things, supported a gradual global phase down of the production and consumption of hydrofluorocarbons (HFCs),

Recognizing that the phase-out of ozone-depleting substances is resulting in a rapid increase in the use and release of high global-warming potential HFCs to the environment,

Noting that for over twenty-five years the Montreal Protocol on Substances that Deplete the Ozone Layer has proved to be effective at phasing out the consumption and production of high global warming potential (HGWP) fluorinated gases similar to HFCs,

Further noting the advantage of complementary initiatives through multilateral approaches including using the expertise and the institutions of the Montreal Protocol to phase down the production and consumption of HFCs, based on the examination of economically viable and technically feasible alternatives and using the United Nations Framework Convention on Climate Change and its Kyoto Protocol for accounting and reporting of HFC emissions.

In order to implement the relevant sections on HFCs of the AMCEN Declaration the African group proposes the amendment of the Montreal Protocol in order to phase down the production and consumption of HGWP HFCs by establishing a contact group at the 36th OEWG meeting in July 2015 that will consider any proposals for amendments to the Protocol submitted by Parties and by taking into account the following elements in the ensuing discussion:

1. the selection of an appropriate baseline, a freeze date for developed countries, a grace period before a

freeze for developing countries, and appropriate phase down schedules for both developed countries and developing countries, and other appropriate elements to implement the principle of common but differentiated responsibilities,

2. the phase down schedule of HFCs will take into account confirmation and availabilities of technologies to be confirmed by the TEAP,

3. proposed alternatives to HFCs will take into account costs, safety considerations, energy efficiency and other relevant environmental benefits,

4. the financial and technical support from developed countries to developing countries in order to transit from ozone-depleting substances and/or high-GWP HFCs towards economically viable and environmentally sound alternatives to HFCs has to be confirmed, sufficient and unconditional, and

5. exceptional measures to be agreed for countries with high ambient temperature conditions by taking into account:

- Availability of adequate alternatives;
- Flexible schedule according to the advancement of the appropriate technologies to be confirmed by TEAP;
- Availability of HCFCs and or HFCs for countries with high ambient temperature conditions so long as alternatives are not available ;

6. amend the Montreal Protocol by adding to the Protocol a new Annex F, after the present Annex E and listing the following HFCs:

Annex F: Group	Controlled Substances Substance	100 year Global Warming Potential
Group 1	HFC-32	675
	HFC-41	92
	HFC-125	3 500
	HFC-134	1 100
	HFC-134a	1 430
	HFC-143	353
	HFC-143a	4 470
	HFC-152	53
	HFC-152a	124
	HFC-161	12
	HFC-227ea	3 220
	HFC-236cb	1 340
	HFC-236ea	1 370
	HFC-236fa	9 810
	HFC-245ca	693
	HFC-245fa	1 030
	HFC-365mfc	794
	HFC-43-10mee	1 640
	HFC-1234yf (HFO-1234yf)	4
	HFC-1234ze (HFO-1234ze)	6
Group II	HFC-23	14 800

Note by the Ozone Secretariat: ... non-paper submitted by Senegal on behalf of the African Group. The information presented in the non-paper concerns the implementation of the Declaration adopted by the African Ministerial Conference on the Environment in Cairo on 6 March 2015 as it relates to hydrofluorocarbons.

The party has requested that the non-paper be circulated to all parties to the Montreal Protocol on Substances that Deplete the Ozone Layer for their information. Senegal has indicated that it would like the Open-ended Working Group at its thirty-fifth meeting to agree to set up a contact group to discuss any proposed amendments to the Montreal Protocol during its thirty-sixth meeting, to be held in July 2015. The non-paper is presented as received by the Secretariat, without formal editing.

▶ UNEP, [Ozone Secretariat](#), April 2015



ASIA PACIFIC



8. Proposed Amendment to the Montreal Protocol Submitted by India

India has submitted a proposal to amend the Montreal Protocol in respect of hydrofluorocarbon phase-down.

[...] It is proposed to phase-down production and consumption of HFCs using expertise and institutions of the Montreal Protocol and continue to include HFCs within the scope of the UNFCCC and its Kyoto Protocol for accounting and reporting of emissions.

The amendment proposal for phase-down of HFCs takes into account challenges in phase-out of Hydrochlorofluorocarbons (HCFCs) in Article 5 Parties by incorporating flexibilities in terms of choice of alternative technologies and timeframe for transitioning from HFCs to safe, technically proven, energy-efficient, economically viable, environment friendly, commercially available low-GWP/zero-GWP technologies. [...]

► UNEP, [Ozone Secretariat](#), April 2015

9. Heating and Cooling Industry Experts Gather in City (China)

Designing energy-saving air-conditioners is important for the economy and environmental protection since about 40 percent of the city's electricity is used to power air conditioners during the summer in Shanghai, experts told the 26th International Exhibition for Refrigeration, Air-conditioning, Heating and Ventilation, Frozen Food Processing, Packaging and Storage. [8-10 April 2015, Shanghai, China]...

► [Shanghai Daily](#), 7 April 2015, By Cai Wenjun

10. Fair Conditioning's Workshops Put Focus on Need for Hydrocarbon Training in Indian Universities

The Fair Conditioning Programme, an Indo-Swiss initiative, has published a report on their two recent workshops that focused on improving energy efficiency in buildings. The workshops had the overall aim of increasing awareness of green and sustainable alternatives to those currently used among both students and lecturers, including the use of hydrocarbons in air-conditioning applications.

Fair Conditioning is a joint programme between Noé21, a Geneva-based NGO and cBalance Solutions Hub, an Indian business development company, which seeks to significantly improve awareness, knowledge and know-how in tomorrow's architecture and building engineering graduates in the field of energy efficiency. Fair Conditioning endeavours to achieve these goals through various means such as through the promotion and availability of training...

► [Hydrocabons21](#), 8 April 2015



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

11. F-Gas : quels sont les devoirs des distributeurs et grossistes ?



Outre la F-Gas, les distributeurs et grossistes sont impactés par le décret fluide de 2007. L'Alliance froid climatisation environnement vient de publier un document de vulgarisation de la réglementation F-Gas, à destination des distributeurs et grossistes. Il fait suite à celui adressé aux opérateurs et détenteurs d'équipements de froid et climatisation...

- ▶ [La RPF.fr](#), 3 avril 2015, Par : Elise Kuntzelmann



LATIN AMERICA & CARIBBEAN

12. Solar Cooling System Keeps Water at Nine Degrees Celsius for Up to Three Months



Maintaining food in places where high temperatures prevail, using little energy at a low cost, is now possible with Mexican technology, thanks to the creation of a solar cooling system designed by Susana Elvia Toledo Flores. The prototype developed in the Research Department in Zeolites, at the Institute of Science of the Meritorious University of Puebla (BUAP), in center Mexico, works 24 hours per day and maintains the temperature for up to three months...

- ▶ [Phys.org](#), 2 April 2015



NORTH AMERICA

13. Protection of Stratospheric Ozone: Listing of Substitutes for Refrigeration and Air Conditioning and Revision of the Venting Prohibition for Certain Refrigerant Substitutes

Pursuant to the U.S. Environmental Protection Agency's (EPA) Significant New Alternatives Policy program, this action lists five flammable refrigerants as acceptable substitutes, subject to use conditions, in several end-uses: Household refrigerators and freezers, stand-alone retail food refrigeration equipment, very low temperature refrigeration, non-mechanical heat transfer, vending machines, and room air conditioning units. ...

▶ [US Federal Register](#), 10 April 2015

14. California Issues 608,000 Carbon Offset Credits

The California Air Resources Board (ARB) issued 608,000 offset credits to four developers across seven projects [...]

ARB also approved four projects operated by Environmental Credit, with about 180,000t total credits issued to three livestock projects and one for destroying ozone-depleting substances (ODS). The three livestock projects total about 54,000t of credits, and use anaerobic digestion to capture methane that will be used to generate electricity at three Indiana dairy farms. The ODS project will destroy refrigerants at the Clean Harbors facility in El Dorado, Arkansas, and produce about 126,000t of credits. [...]

▶ [Argus](#), 9 Apr 2015

15. Canada Publishes Proposed Regulations for Ozone-Depleting Substances and Halocarbon Alternatives

In the 21 March 2015 edition of the *Canada Gazette, Part I*, Environment Canada and Health Canada, under the Canadian Environmental Protection Act, 1999 (CEPA, 1999), published proposed regulations that would repeal and replace the current Ozone-Depleting Substances Regulations, 1998 (ODSR, 1998) and its subsequent amendments...

▶ Reference: [Canada Gazette, Part I, March 21, 2015 edition](#)

▶ [ChemAdvisorInc.](#), 24 March 2015

16. Gunston Students Take Prizes in Science, Engineering Fair

Five Gunston students participated in the 48th annual Anne Arundel County Regional Science and Engineering Fair held last week and all won awards. They were competing with the best projects from schools in Anne Arundel County and Queen Ann's County. [...]



A team of three students from the Near Space Balloon Project won first place for 12th-grade earth science with their "Mission to the Stratosphere" project. Sutter Phillips, Jason Staley and Justin Covell put temperature, pressure and altitude sensors on a balloon that ascended 12 miles above the surface of the earth to verify that the bottom of the ozone layer heats up as it absorbs ultraviolet radiation.

▶ [MyEasternShoreMD](#), 9 April 2015



FEATURED

OZONE SECRETARIAT

What's New Highlights: <http://ozone.unep.org/en/>

Pursuant to Article 9, paragraph 2 of the Vienna Convention for the Protection of the Ozone Layer, the Ozone Secretariat has received a joint amendment proposal by the Governments of Canada, Mexico and the United States of America for amendment of the Montreal Protocol on Substances that Deplete the Ozone Layer to phase down the production and consumption of hydrofluorocarbons (HFCs). The full text of the proposal along with its summary and a cover letter from the submitting parties has been posted as an advance version, document UNEP/OzL.Pro.WG.1/35/3 on the meeting portal and the Secretariat's website. The document can be accessed at the following links:

- <http://conf.montreal-protocol.org/meeting/oewg/oewg-35/presession/default.aspx>
- http://ozone.unep.org/en/in_focus.php?year=2015

The Ozone Secretariat is pleased to inform you that once again a mobile app has been created for both the forthcoming Workshop on Hydrofluorocarbon (HFC) Management, to be held in Bangkok, Thailand, on 20 and 21 April 2015, and the 35th Meeting of the Open-ended Working Group of the Parties to the Montreal Protocol (OEWG 35) to be held from 22 to 24 April 2015 at the same venue.

The app contains general information about the meetings, the venue and meeting documents, including fact sheets for the workshop and background documents. It also provides details on planned side events. The content of the app will be updated continuously before and during the meetings to keep parties updated. The app also seeks to enhance interaction during the meetings, as attendees will be able to communicate with each other instantly once they log in within the app. How to get the app:

Step 1: Tap the 'App Store' icon (on Apple iOS devices) or the 'Google play store' icon (on Android devices). You will be prompted to enter your iTunes or Google password and if you don't already have an account, you will need to create one.

Step 2: Search for the 'UNEP Events' app in the store and install it on your device.

Step 3: Open the 'UNEP Events' app and tap the event titled 'Workshop on HFC Management and 35th OEWG Meeting of the Parties to the Montreal Protocol' to download it.

Step 4: Once the download is complete, the app is available to use. Tap any icon on the app to browse and engage with the content.

Step 5: To personalize the content of the app, you will be required to log in. Tap the 'Log In' link on the top left and log in using your LinkedIn, Twitter, Facebook or Google account. Or tap 'Sign Up' and create a CrowdCompass account, after which you will receive an email to confirm your account. Once you confirm your account, you will be able to log in.

Step 6: To interact with other attendees, please join the attendee list after you log in.

You can also download the app directly through this link: <https://events.crowdcompass.com/unep>

Or by scanning the QR Code available on our conference portal at this link: <http://conf.montreal-protocol.org/default.aspx>

The content of the app can also be accessed through any web browser at this link: <https://event.crowdcompass.com/hfcs>

- ▶ Contact the Ozone Secretariat's Communications Officer, [Dan Teng'o](#)

Pre-Session documents of the Workshop on Hydrofluorocarbon (HFC) Management, to be held in Bangkok, Thailand, on 20 and 21 April 2015, and the 35th Meeting of the Open-ended Working Group of the Parties to the Montreal Protocol (OEWG 35) to be held from 22 to 24 April 2015 at the same venue. Are available for the Ozone Secretariat web site. The documents can be accessed through the following links:

<http://conf.montreal-protocol.org/meeting/oewg/oewg-35/presession/default.aspx>

http://ozone.unep.org/en/in_focus.php?year=2015

▶ [UNEP Ozone Secretariat](#), March 2015



- [IMPCOM53: Report of the Implementation Committee under the Non Compliance Procedure for the Montreal Protocol on the work of its fifty-third meeting](#)
- [Report of the 10th Meeting of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer and the report of the 26th MOP - \[\[A\]\(#\) \[C\]\(#\) \[E\]\(#\) \[F\]\(#\) \[R\]\(#\) \[S\]\(#\) \]](#)

Montreal Protocol Meetings Dates and Venues

- Workshop on Hydrofluorocarbon Management, Bangkok, Thailand, 20 - 21 April 2015
- [35th Meeting of the Open-Ended Working Group](#) of the Parties to the Montreal Protocol, Bangkok, Thailand, 22 - 24 April 2015. [Provisional agenda](#) - Advance copy - UNEP/OzL.Pro.WG.1/35/1
- [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 is scheduled to take place in Montreal, Canada, 18 - 22 May 2015. [Agenda for the 74th Meeting of the Executive Committee \(May 2015\)](#)
- 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



[International Conference IIR Commission B2 with B1 and D1 / Ammonia and CO₂ - Refrigeration Technologies](#), 16-18 April 2015, Ohrid, Republic of Macedonia. See more events from the [IIR website](#)



[REHVA Annual Meeting and Conference 2015](#), 6-9 May 2015, Riga, Latvia, This event will bring together leading experts from the international heating, ventilation and air condition community.



Come and discuss [legislation and refrigerant options at F-Gas Question Time](#) -On Friday 22 May 2015, RAC will host its second Question Time devoted to the issues around the new F-Gas legislation, at the Royal Society of Chemistry in Piccadilly, London.



ASHRAE [International Conference on Ships](#), 22-24 May 2015, Athens, Greece. During this event the United Nations Environment Program will present a special session with a range of topics and presenters that addresses the management of ozone-depleting substances in the fishing and shipping sectors.



[The 6th International Conference on Heating, Ventilating and Air Conditioning](#), 26-28 May 2015, RIPI Conventions Center, Tehran, Iran



AIRAH's Refrigeration 2015 Conference will be held on Wednesday, 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 Future of HVAC Conference 2015 - Calls for abstracts – 18-19 August 2015, Melbourne, Australia



Salon Energies Froid, 2-3 Décembre 2015, Nantes, France



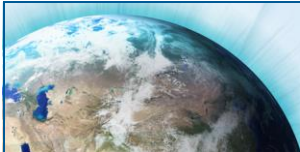
India Cold Chain Show 2015 Conference (ICCS), 16 - 18 December 2015, Goregaon (east), Mumbai, is the leading exhibition and conference for cold chain, cold logistics, temperature controlling, refrigeration, storage, distribution and cold supply chain sectors...

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

2016



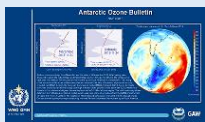
12th IIR Gustav Lorentzen Natural Working Fluids Conference, 21 - 24 August 2016, Edinburgh, Scotland. World experts gather in Edinburgh to discuss the future of natural working fluid...



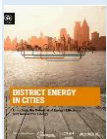
READING



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

Advanced Energy Design Guide For Grocery Stores. ASHRAE

Analysis of the Success of the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol, Michigan Journal of International Law, Vol. 36, 2 April 2015, By: Marjorie Mygrants, Associate Editor

Whatever happened to the ozone hole? Lessons in timely action to avert global disaster, Atmospheric scientists Prof David Karoly and Dr Robyn Schofield discuss the hole in the ozone layer over the Antarctic, and what effect timely global action taken in 1987 seems to have had in reversing ozone degradation...

Ozone Depleting Substances – what you need to know In the January-March 2015 edition of Environment Quarterly, Lubabalo Maweni (Deputy Director: Ozone Depleting Substances (ODS), Department of Environmental Affairs) talks about existing mechanisms to manage ozone depleting substances in South Africa. Maweni looks at the 2014 ODS regulations, investigating the various roles and responsibilities of the phase out.

The Manitoba Ozone Protection Industry Association Inc. (MOPIA), [April 2015 E-Bulletin](#)



MISCELLANEOUS

Modernizing District Energy Systems Could Reduce Heating and Cooling Primary Energy Consumption by

up to 50% finds New Report ... Download the [full report](#)



On April 6, 2015, Japan's Ministry of Economy, Trade, and Industry (METI) rolled out a chemical information database, [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...

There is a type of agriculture that "grows forests from fields!" This is called "agroforestry", a method which mixes a bunch of different size crops. Agroforestry is spreading more and more in Brazil..., [JFS Weekly](#), 31 March - 6 April. 2015

[Ammonia Refrigeration System Safety](#), Course April 13-15, 2015, Pyle Center, 702 Langdon Street, Madison, Wisconsin. By attending this course you will:

- Learn best practices for ammonia system safety and operation
- Understand relevant safety codes and standards
- Get answers to your specific questions
- Avoid operational risks with a solid understanding of safety in ammonia refrigeration
- Receive the latest updates on ammonia safety regulations

Une journée pour tout maîtriser. [Les fondamentaux du CO₂](#) : de la théorie aux cas pratiques. Savoir proposer une solution au CO₂... Lyon le 21 mai... [Programme et Inscription](#)

[Highly Hazardous Pesticides: Finding Alternatives and Reducing Risk by 2020](#), International Institute for Sustainable Development, 13 April 2015, By: Mark Davis, Senior Officer-Pesticides Management, UN Food and Agriculture Organization



MONTREAL PROTOCOL
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The Montreal Protocol Who's Who

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

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