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WMO/UNEP Ozone Research Managers of
the parties to the Vienna Convention for
the Protection of the Ozone Layer

Tenth Meeting
Geneva, 28-30 March 2017

Agenda

28 March (Tuesday)

08:00 onwards Registration

09:00 – 09:30 Opening of the Meeting

- Opening statement, *Tina Birmpili, Executive Secretary, Ozone Secretariat*
- Welcome statement, *Representative of the World Meteorological Organization (WMO)*
- The 2018 Scientific Assessment of ozone depletion and the interface with the Ozone Research Managers (ORM) recommendations, *Paul Newman, Co-Chair of the Scientific Assessment Panel (SAP) and Michael Kurylo, 9ORM Co-Chair*

09:30 – 09:40 Election of the 10ORM Co-Chairs

09:40 – 09:50 Adoption of the 10ORM agenda

Session 1: Issues related to the Vienna Convention for the Protection of the Ozone Layer

This session aims at providing an overview of relevant recommendations and decisions as well as updates on the status of the trust fund and associated activities.

09:50 – 10:10 Review of the recommendations of the ninth Meeting of the Ozone Research Managers, and the resultant decisions of the tenth Conference of the Parties to the Vienna Convention, *Michael Kurylo and Gerrie Coetzee, 9ORM Co-Chairs*

10:10 – 10:40 Activities under the Vienna Convention Trust Fund for Research and Systematic Observation

- The status of the Trust Fund, *Sophia Mylona, Ozone Secretariat*
- Report on activities under the Trust Fund, *Geir Braathen, WMO*
- Report of the Advisory Committee of the Vienna Convention Trust Fund on Research and Systematic Observations, *A.R. Ravishankara, Advisory Committee Chair*

- 10:40 – 11:00 Discussion
- 11:00 – 11:10 Appointment of discussion leaders and rapporteurs for the various recommendation areas: research needs, systematic observations, data archiving, capacity building

Session 2: The state of the ozone layer

This session aims at summarizing the status of the ozone layer, surface UV radiation and expected levels in the 21st century as well as highlighting key related issues.

- 11:10 – 11:30 Past, current and future states of the ozone layer, *Wolfgang Steinbrecht, DWD*
- 11:30 – 11:45 The mystery of carbon tetrachloride, *Paul Newman, SAP Co-Chair*
- 11:45 – 12:00 Technology and Economy related issues under the Montreal Protocol: Progress made and challenges ahead, *Marta Pizano, Technology and Economic Assessment Panel (TEAP) Co-Chair*
- 12:00 – 12:15 Surface UV Radiation in the 21st century: Environmental effects of changes in ozone and climate, *Alkis Bais, Environmental Effects Assessment Panel (EEAP) member*
- 12:15 – 13:45 *Lunch*

Session 3: Interactions between ozone layer depletion and climate change – Phasing down of hydrofluorocarbons under the Montreal Protocol

This session aims at quantifying and analyzing the consequences of the Kigali Amendment to the Montreal Protocol for the climate system.

- 13:45 – 14:05 Links between stratospheric ozone, ozone-depleting substances and climate, *John Pyle, SAP Co-Chair*
- 14:05 – 14:25 Observations and trends of HFCs, *Stephen Montzka, NOAA*
- 14:25 – 14:45 Scenarios and projected climate impacts of the Kigali Amendment, *Guus Velders, RIVM*
- 14:45 – 15:30 Discussion

Session 4: International monitoring programmes

This session aims at taking stock of the current activities in monitoring of climate gases, ozone, and UV radiation.

- 15:30 – 15:45 The International Ozone Commission (IO₃C), *Sophie Godin-Beekmann, IO₃C President*
- 15:45 – 16:00 The WMO Global Atmosphere Watch (GAW) Programme, *Oksana Tarasova, WMO*
- 16:00 – 16:15 The Global Atmosphere Watch Ozone Observing System, *Alkis Bais, Ozone Scientific Advisory Committee (SAG) Chair*
- 16:15 – 16:30 The Network for the Detection of Atmospheric Composition Change (NDACC), *Martine De Mazière, IASB-BIRA and Anne Thompson, NASA*
- 16:30 – 16:45 *Coffee/tea*
- 16:45 – 17:00 Ground-based networks for measuring ozone and climate-related trace gases and current state of the atmosphere, *Stephen Montzka, NOAA*
- 17:00 – 17:15 International ozonesonde activities, *Anne Thompson, NASA*
- 17:15 – 17:30 Global Climate Observing System (GCOS) including GRUAN, *Geir Braathen, WMO*

- 17:30 – 17:45 The stratosphere-troposphere processes and their role in climate project of WCRP: The joint SPARC/IO₃C/WMO/NDACC initiative on past trends in the vertical distribution of ozone, SI²N, and new initiatives such as OCTAV-UTLS and LOTUS, *Sophie Godin-Beekmann, CNRS*
- 17:45 – 18:00 The European COST Action EUBrewNet: Towards consistency in quality control, quality assurance and coordinated operations of the Brewer Instrument, *John Rimmer, University of Manchester*
- 18:00 – 18:30 Discussion
- 18:30 – 20:00** *Cocktail Reception (WMO Attic, 9th floor)*

29 March (Wednesday)

Session 5: Satellite research and monitoring

This session aims at taking stock of the current and planned monitoring from space.

- 09:00 – 10:00 Current and planned ozone and climate observations from space
- U.S. Satellite Programmes: NASA, NOAA, and Other Agencies, *Kenneth Jucks, NASA*
 - European Space Agency Activities, *Claus Zehner, ESA/ESRIN*
 - KNMI Space-Based Measurement Activities, *Peter van Velthoven, KNMI*
- 10:00 – 10:20 Lessons learned in creating long-term ozone datasets: Recommendations for the future, *Richard McPeters, NASA*
- 10:20 – 10:40 Summary of the key issues in space-based measurements: Identification of future needs and opportunities, *Jean-Christopher Lambert, IASB-BIRA*
- 10:40 – 11:40 Discussion: Initial framing of recommendations

Session 6: National and regional reports on ozone research and monitoring

In this session, region representatives will present the situation of ozone monitoring and research at the regional and national levels, focusing on the key issues raised by the countries in the national reports submitted for the meeting. Representatives are also expected to highlight activities related to the implementation of the 9ORM recommendations.

- 11:40 – 12:00 **Region 1:** Africa, *Gerrie Coetzee, South African Weather Service*
- 12:00 – 12:20 **Region 2:** Asia, *Nozomu Ohkawara, JMA*
- 12:20 – 12:40 **Region 3:** South America, *Eduardo Luccini, IFIR-CONICET*
- 12:40 – 14:00 *Lunch*
- 14:00 – 15:00 **Region 4:** North America, Central America, and the Caribbean
- USA, *Kenneth Jucks, NASA, and Stephen Montzka, NOAA*
 - Canada, *SumChi Lee, Environment and Climate Change Canada*
 - Central America, Mexico and the Caribbean, *Juan Carlos Peláez Chávez, INSMET*
- 15:00 – 15:20 **Region 5:** South-West Pacific, *Matt Tully, BoM*
- 15:20 – 15:40 **Polar regions**
- Antarctica, *Jonathan Shanklin, British Antarctic Survey*
 - Other Activities in Antarctica and in the Arctic, *Geir Braathen, WMO*

- 15:40 – 16:00 *Coffee/tea*
- 16:00 – 17:00 **Region 6: Europe**
- European Union, *Vincent-Henri Peuch, ECMWF, European Commission*
 - Northern Europe, *Weine Josefsson, SMHI (Sweden)*
 - Western, Central and Eastern Europe, *Wolfgang Steinbrecht, DWD (Germany)*
 - Southern Europe, *Alberto Redondas Marrero, AEMET (Spain)*
- 17:00 – 18:30 **Discussion:**
- Long-term strategy and short-term plan of action of the Trust Fund
 - Breakout groups meet to frame initial recommendations
(*Review of research, systematic observations, data archiving and capacity building activities conducted by parties by decision VCX/2; Identification of needs and gaps*)

30 March (Thursday)

Session 7: Discussion on and adoption of recommendations

In this session, short introductory presentations will be given on the draft recommendations arising from the breakout groups, followed by discussion and adoption of the final recommendations.

- 09:00 – 09:45 **Research Needs:** Presentation of initial draft by Michael Kurylo and David Fahey, (*Paul Newman and A.R. Ravishankara, rapporteurs*)
- 09:45 – 10:30 **Systematic Observations:** Presentation of initial draft by Wolfgang Steinbrecht and Jean-Christopher Lambert, (*Richard McPeters and Niels Larsen, rapporteurs*)
- 10:30 – 11:15 **Data Archiving and Stewardship:** Presentation of initial draft by Martine De Mazière and John Rimmer, (*Stephen Montzka and SumChi Lee, rapporteurs*)
- 11:15 – 11:45 *Coffee/tea*
- 11:45 – 12:30 **Capacity Building:** Presentation of initial draft by Bonfils Safari and Geir Braathen (*Anne Thompson and Matt Tully, rapporteurs*)
- 12:30 – 14:30 *Lunch*
- 14:30 – 17:00 Discussion and adoption of the recommendations
- 17:00 – 17:30 Other matters
- 17:30 **Closure of the meeting**

Glossary

AEMET: Agencia Estatal de Meteorologia (Meteorological State Agency, Spain)

BoM: Australian Bureau of Meteorology

COST: European Cooperation in Science and Technology

CNRS: Centre National de la Recherche Scientifique (National Centre for Scientific Research), France

DWD: Deutscher Wetterdienst (German Meteorological Office)

ECMWF: European Centre for Medium-Range Weather Forecasts

EEAP: Environmental Effects Assessment Panel

ESA: European Space Agency

ESRIN: ESA Centre for Earth Observation

EUBrewNet: European Brewer Network

GAW: WMO Global Atmosphere Watch

GCOS: Global Climate Observing System

GRUAN: GCOS Reference Upper-Air Network

IASB-BIRA: Institut royal d'Aeronomie Spatiale de Belgique-Koninklijk Belgisch Instituut voor Ruimte-Aeronomie (Royal Belgian Institute for Space Aeronomy)

IFIR-CONICET: Instituto de Fisica Rosario (Argentinian National Scientific and Technical Research Council)

IGACO-O3: Integrated Global Atmospheric Chemistry Observations - Ozone

INSMET: Instituto de Meteorologia de Cuba (Cuban Institute of Meteorology)

IO3C: International Ozone Commission

JMA: Japan Meteorological Agency

KNMI: Koninklijk Nederlands Meteorologisch Instituut (Royal Netherlands Meteorological Institute)

LOTUS: Long-Term Ozone Trends and Uncertainties in the Stratosphere

NASA: National Aeronautics and Space Administration (USA)

NDACC: Network for the Detection of Atmospheric Composition Change

NOAA: National Oceanic and Atmospheric Administration (USA)

OCTAV-UTLS: Observing Composition Trends and Variability in the Upper Troposphere/Lower Stratosphere

ORM: Ozone Research Managers

RIVM: Rijksinstituut voor Volksgezondheid en Milieu (Dutch National Institute for Public Health and the Environment)

SAG: Scientific Advisory Group

SAP: Scientific Assessment Panel

SI²N: SPARC/IO3C/IGACO-O3/NDACC initiative on past trends of the vertical distribution of ozone

SMHI: Swedish Meteorological and Hydrological Institute

SPARC: Stratosphere-tropospheric Processes And their Role in Climate

TEAP: Technology and Economic Assessment Panel

WCRP: World Climate Research Programme

WMO: World Meteorological Organization