Technology and Economic Assessment Panel

Progress of work and emerging issues
29th MOP high level segment
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Role of TEAP

• Montreal Protocol, Article 6: “Beginning in 1990, and at least every four years thereafter, the Parties shall assess the control measures provided for in Article 2 and Articles 2A to 2J on the basis of available scientific, environmental, technical and economic information.”

• Under its TOR “Scope of work”:
  – **TEAP analyzes and presents technical information and recommendations when specifically requested**
  – **TEAP does not evaluate policy issues and does not recommend policy**
  – **TEAP presents technical and economic information relevant to policy**
  – **TEAP does not judge the merit or success of national plans, strategies or regulations**
  – **TEAP members function on a personal basis as experts and do not accept any instruction from governments or other organizations**
Role of TEAP - 2

- Over 300 Progress, Assessment, Task Force, and other reports
- Today, TEAP and its TOCs bring together nearly 150 experts from over 30 countries
- Since its creation in 1989, over 900 experts from about 65 countries have participated in the assessment process
SECTOR ACHIEVEMENTS AND LOOKING AHEAD
Foams

• ~30 Million tonnes of Foam/year; critical for insulation
• >1/3 of HCFC blowing agents now converted to alternatives
• Hydrocarbons have been widely implemented globally with substantial co-benefits in terms of climate change
• Foams made with zero ODP alternatives have improved insulation performance by 5-10%.
• Additional gains in insulation performance of 5-10% are expected with HFOs/blends
• HFO blends with Water, Hydrocarbons and Oxygenated Hydrocarbons (Methyl Formate and Methylal) are increasing
Halon Sector: Montreal Protocol Success

- 30 years ago annual worldwide halon production was ~40,000 t (~225,000 ODP t) and growing
- Since 2010 worldwide production has ceased
- 30 years of the Montreal Protocol has avoided in excess of
  - 1,000,000 t halon production
  - 6,700,000 ODP t
  - 3,500,000,000 t CO$_2$-eq
Halon Sector - Current Status

- Halons alternatives are available for all new fire protection designs, except for aircraft cargo bays
- The International Civil Aviation Organisation (ICAO) has recently mandated 2024 as the date by which new designs can no longer use halons
  - All civil aviation applications now have dates for which new designs can no longer use halons
  - These achievements were made possible only through more than a decade of personal engagement between the Montreal Protocol and ICAO
Halon Sector - Looking Forward

- Many new designs continue to need high GWP HFCs.
- Some limited applications still require HCFCs.
- New low GWP fire suppressants are only in the very early stages of development, and the outlook is unclear.
- Halons will continue to be needed for the life of existing equipment and current aviation designs (excl. those with EU retrofit requirements).
- While banked halons continue to supply needs for all current halon requirements, there is still concern that there will not be adequate long-term halon supplies.
- Continued coordination with ICAO will be critical to the further success of this sector.
Medical and Aerosols

• Global transition away from CFC MDIs is almost complete, after 30 years of global action.
• Affordable CFC-free alternatives to MDIs are available worldwide.
• The global use of HCFCs in aerosols and sterilants is relatively very small, with alternatives available.
Chemical uses

- The global phase-out of CFCs used as solvents in aerospace applications is almost complete.
- ODS quantities used for process agents has decreased, with some applications phased out entirely.
- Laboratory and analytical uses of ODS continue under the global exemption, and with one essential use exemption.
- There is an overall upward trend in global ODS production for feedstock uses for the last decade.
- TEAP is collaborating with SAP and other experts to share information on global CTC emissions estimations.
- TEAP will report on dichloromethane and dichloroethane in its 2018 Assessment report.
Methyl Bromide - Successes

- Article 7 data indicates that 99% (~65,000 t) of MB has reportedly been phased out globally.
- This has broadly contributed to an increased adoption of sustainable production practices in agriculture.
- However, approximately 18,000 t of MB is produced and used for other uses (i.e., QPS, feedstock, critical uses, unreported use).
- 28 countries have phased out MB for all uses including QPS.
- QPS uses are currently reported by 68 Parties. Reduction of remaining QPS use would benefit ozone layer protection and still facilitate international trade.
Methyl Bromide - Challenges

- Some Parties continue to report difficulties distinguishing between controlled and exempted uses.
- Concerns exist about non compliant and unreported uses.
- Better tracking systems are needed to avoid QPS MB being used in controlled applications.
- Some key Parties have improved their reporting under Article 7, but concerns on accurate reporting still remain.
- SAP and MBTOC are working together to further clarify the relationship between MB consumption and its atmospheric concentration.
Refrigeration, Air Conditioning and Heat Pumps

- Use of CFCs in RACHP has ceased
- In non-A5, the HCFC phase-out is almost complete
- In A5, HCFC-22 consumption in RACHP is decreasing and HCFCs will soon be used in RACHP servicing only
- Low GWP solutions are becoming increasingly available for many RACHP applications
- Results of many tests of HCFC and high GWP HFC alternatives under high ambient temperature conditions are available
- RACHP technology is rapidly evolving
- An integrated approach is needed for low GWP solutions including energy efficiency, flammability, toxicity.
Decision XXVII/6 requests TEAP reports to consider,

a) Impact of the phase-out of ODS on sustainable development;

b) Technical progress in the production and consumption sectors in the transition to alternatives and practices that eliminate or minimize emissions of ODS in consideration of factors stipulated in the Vienna Convention;

c) Technically and economically feasible choices for reduction and elimination of ODS in all relevant sectors;

d) Status of banks containing ODS and their alternatives, including those maintained for essential and critical uses, and options for handling them;

e) Accounting for production and consumption for various applications and relevant sources of ODS and their alternatives;
2018 Assessment Reports - 2

- Based on the TOR, TEAP through its TOCs have initiated work on the assessment report including planning for peer review for certain reports.
- 2018 TOCs meetings will focus on reports:
  - FTOC: 26-28 March, Sao Paulo, Brazil
  - HTOC: 19-23 March, London, UK
  - MBTOC: 5-9 March, Melbourne, Australia
  - MCTOC: 12-16 March, Bruges, Belgium
  - RTOC: 13-15 March, New Delhi, India; December, Rome, Italy.
- Final TOC reports submitted by 31 Dec 2018
- TEAP Assessment Report May 2019
TEAP going forward

- TEAP composes its TOCs and TSBs to maintain a balance of expertise to provide comprehensive, objective, and policy neutral reports
- TEAP provides a list of needed expertise which is updated annually and posted on the Secretariat website
- TEAP and TOCs strive to achieve gender, A5/ non-A5, and geographical balance
Remains ready to respond to tasks.
Seeks to be aligned with the current and future needs of the parties, with access to appropriate expertise.
Continues to identify emerging issues for Parties
Appreciates parties’ continued consideration of the tasks that come to TEAP, of the overall workload and the timeline needed to produce quality outcomes that meet the needs of the parties.
Thank you