

Milestones of the Montreal Protocol



Global

First steps

- 1984: Discovery of ozone hole over the Antarctic
- 1987: Adoption of Montreal Protocol (MP) to globally phase-out ozone-depleting substances (ODS)
- 1991: Establishment of Multi-lateral Fund (MLF) to support ODS phase-out projects in developing countries

1994–1999

- MLF implements first technology-oriented projects focusing on equipment provisioning
- Global implementation of CFC-ban leads to reduction of manufacturers' production capacities in developing countries: their import dependency increases

1999–2004

- 1999: Inclusion of provisions for further substances (Bromochloromethane and Hydrochlorofluorocarbon (HCFC)) in the MP
- Introduction of refined MLF approach: from "project-by-project" to the creation of sector programs
- Global price drop of green refrigerator technology: German industry gains competitive advantage

2004–2009

- Growing awareness of linkage between ozone- and climate protection: global warming potential (GWP) of synthetic refrigerants moves into focus
- 2005: The UNFCCC 's Kyoto Protocol requests parties to reduce emissions from highly climate potent HFCs
- 2007: MP decision to accelerate phase-out of HCFC. In line with German/EU position, the first reference to climate protection is established
- 2008: In India 50 % of all new refrigerators are green. Globally more than 300 million green refrigerators have been sold

2009–2014

- 2009: MP is the first universally ratified treaty in the history of the United Nations
- 2010: Phase-out of CFCs in developing countries is completed
- From 2010: Parties to the MP agree on 25 % bonus payment for the introduction of climate-friendly technologies in MLF projects

2014–2019

- 2014: World Meteorological Organization (WMO) predicts recovery of ozone layer by 2050
- 2016: Adoption of Kigali Amendment: Parties commit to binding HFC phase-down targets. Climate community celebrates largest climate mitigation measure
- 2017: Kigali Amendment enters into force?



German Contributions

- 1987: German industry voluntarily reduces Chlorofluorocarbon (CFC) consumption
- 1993: Within the "Greenfreeze" initiative of Greenpeace in cooperation with German manufacturers, Foron rolls out the first CFC-free refrigerator using natural refrigerants

- 1996: Federal Budget Committee decides for full exhaustion of bilateral MLF quota: On behalf of the Federal Ministry of Economic Cooperation and Development (BMZ), GIZ Proklima starts implementing first MLF projects

- Against pressure of chemical industry, Germany calls for focus on natural refrigerants in bodies of MP

- German manufacturers, present "Greenfreeze" refrigerators to Chinese industry

- GIZ Proklima starts first pilot projects supporting the transfer of green refrigerator technology from German "Greenfreeze" companies to manufacturers in India and China

- 2006: German partner countries, Mauritius, Namibia, Lesotho, are the first developing countries in the world to approve exit plans for ODS

- The Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) kicks-off complementary climate mitigation projects in the refrigeration and air-conditioning sector

- 2010: With German support, Chinese manufacturer Gree demonstrates first green room air conditioners using natural refrigerants

- 2011: Germany's integrated approach to ozone and climate protection shows effect: German MLF projects have saved at least 100 MtCO₂e

- 2014: Adoption of new EU F-Gas Regulation to phase-down highly climate potent HFCs

Global Future

- 2020: Refrigeration and mobile air-conditioning units with HFC are prohibited in the EU
- By 2040: Developing countries have completed their HCFC phase-down; most of them have reduced 50 % of HFC consumption
- By 2050: Ozone hole said to have recovered to pre-1980 levels
- 2050: Implementation of the Kigali Amendment has prevented a global temperature increase of 0,5 °C

Legend

- Scientific milestone
- Technology milestone
- Policy milestone
- Reduction milestone

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