

Long-Lived Halocarbons and Other Atmospheric Trace Species Trends

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In the mid-1970s, the NOAA Geophysical Monitoring for Climate Change (GMCC) program started. Among many obligations, GMCC focused on long-term trace gas measurements. As GMCC grew into a division and then a premier laboratory (NOAA ESRL), the trace gas measurement program evolved into groups with separate programs. Today's Halocarbons and other Atmospheric Trace Species Group measures 40+ atmospheric trace gases via flasks or *in situ* methods at surface sites and aboard airborne platforms. NOAA halocarbon measurements in the 1970s and 80s demonstrated the rapid increase due to unregulated anthropogenic uses. Throughout the 1990s, global growth rates of all major chlorofluorocarbons (CFCs), excluding CFC-12, steadily declined as a result of commitments to the Montreal Protocol. By the mid-2000s, CFC-12s growth rate had reached zero and continues to decline. Current and past global tropospheric trends of halocarbons and nitrous oxide (N_2O) will be shown in this presentation.

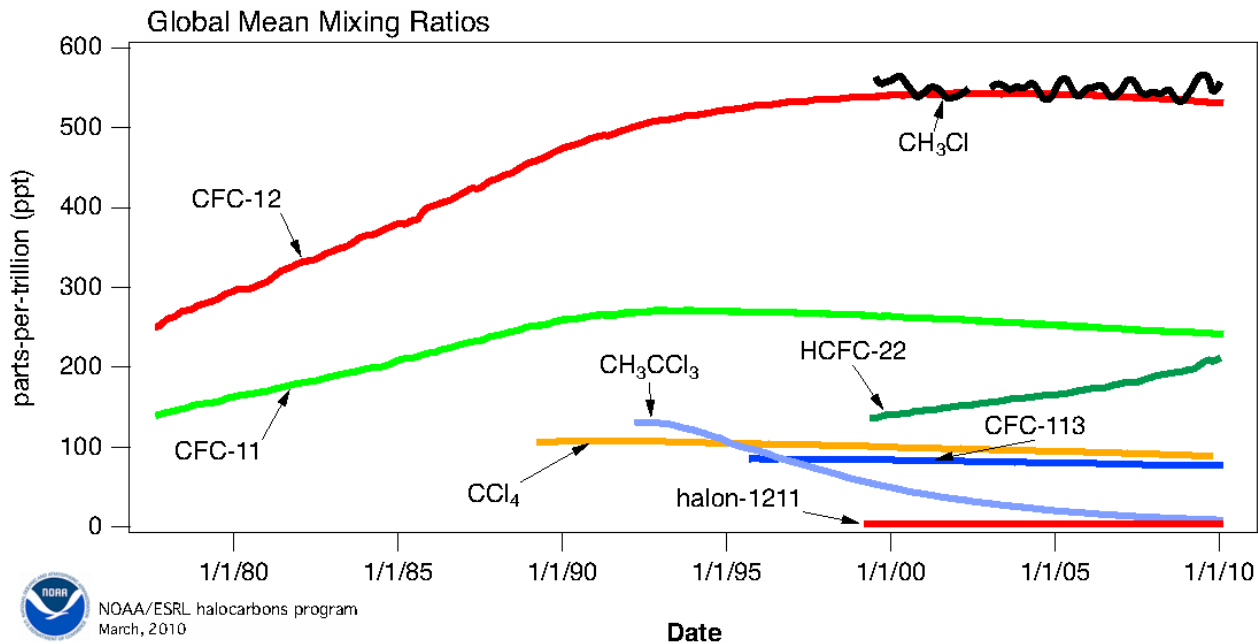


Figure 1. Global atmospheric trends of halocarbons measured by ESRL Global Monitoring Division show the dramatic rise (CFC-11 and CFC-12) and decline (CH_3CCl_3) of ozone depleting gases.