

GHG MEASUREMENT AND DATA ANALYSIS IN MONGOLIA

Oyunchimeg Dugerjav

Researcher, Environmental research section

Information and Research Institute of Meteorology, Hydrology and Environment

Juulchiny gudamj-5, Ulaanbaatar-210646, Mongolia.

E-mail: oyunchimeg_du@yahoo.com, dugerjavoyunchimeg@yahoo.com

Abstract

Mongolia is located in central Asia and harsh climate. Ecosystem has changed rapidly under climate change and human activities. We have some international studies are going on in the south east region of Mongolia for air quality. The east-southern region is arid and semi-arid desert of Mongolia which is freedom of anthropogenic influence.

Since 2005 to 2014, Scientific expedition of Buryat science centre /BSC/ of Russian academy science/RAS/ and Institute of Meteorology and Hydrology of Mongolia has worked in the Mongolian arid and semi-arid region desert /Sainshand/ We have measured surface ozone, NO₂, CO₂, aerosol optical depth and meteorological parameters. Since 1992 NOAA is started GHG sampling with Institute of Meteorology and Hydrology / under NAMHEM/ of Mongolia. The sampling point /UUM/ is located south desert of Mongolia. The site has been measured CO₂, CH₄, SF₆, N₂O, CO. The sampling results are shown CO₂ is increasing by 39 ppm /11%/ from 1992 to 2012 and SF₆ has been increased 70 percent 1997-2009. There is a lot of diurnal and seasonal variation. But CO₂ concentration is increasing in every season. [Data from GMD - NOAA]. The some results are shown that several days, very high concentrations of GHG were observed in the region. The numbers of days with high concentration are increasing. It may be indicated polluted air mass transport from industrial region from Russia and China to Mongolia. I have compared non- CO₂ greenhouses trends for the sampling sites Mongolia, China and Kazakhstan [data from NOAA].

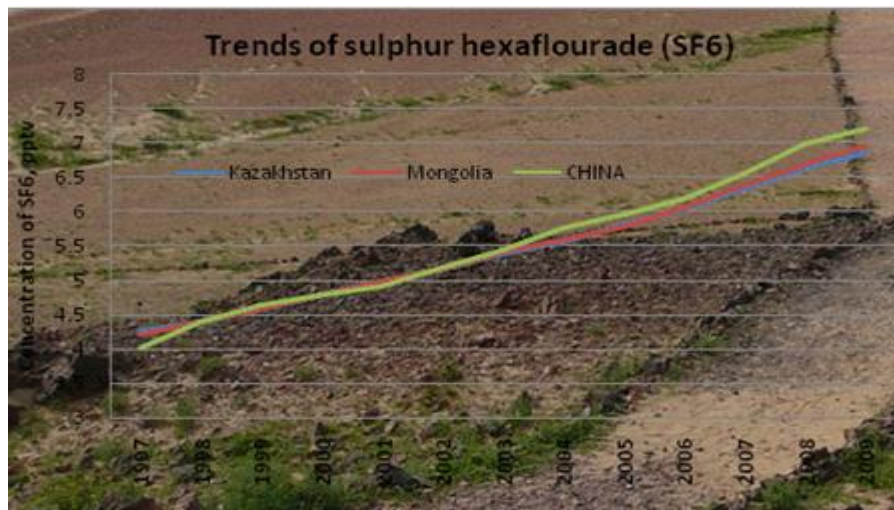


Figure 1. Trends of sulphur hexafluoride at 3 different sites [data from GMD-NOAA]