

# Major 2013 Chinese air pollution event linked to Arctic ice loss

*Ronan – Thursday 16 March 2017*

Due to large-scale economic growth and major industrialisation in China, it suffers from severe air pollution. In January 2013 China set a record for air pollution, with haze lasting almost an entire month. Around 70% of China's 74 major cities exceeded the daily air quality standard for particulate matter (PM). Exposure to such high concentrations of air pollution puts public health at risk.

The event confused scientists as the Chinese government had taken many steps to reduce emissions from coal fired power plants, one of the largest contributors to air pollution. Researchers are now claiming that a large arctic sea ice decline in 2012 as well as abundant snowfall over Siberia disturbed wind patterns and produced stagnant air over China. The research team looked back at the ventilation conditions for the past 35 years and were able to show that the event in 2013 was unique. The research team were not able to find which one of the causes contributed most to the poor ventilation conditions; however they do know that the combination of the two factors made the event much worse. It is also known that anomalous winter cold extremes and heavy snowfalls in northern high latitudes are partially attributed to arctic sea loss.

The research team predicted that if the arctic sea ice loss and the Eurasian snowfall continue that the poor ventilation conditions in 2013 could occur more frequently and possibly impact the 2022 winter Olympic Games in Beijing. Although a higher frequency of these events would pose a difficult challenge for winter haze mitigation, it also provides a strong incentive for China to reduce greenhouse gas emissions.