

Because of the favorable site location, continuous monitoring, and careful selection and scrutiny of the data, the Mauna Loa record is considered to be a precise record and a reliable indicator of the regional trend in the concentrations of atmospheric CO<sub>2</sub> in the middle layers of the troposphere. (1). This rise in CO<sub>2</sub> atmospheric concentrations cannot be accounted for without considering human activities, particularly the combustion of fossil fuels.

Once emitted, CO<sub>2</sub> can remain in the atmosphere for hundreds to thousands of years. This means that emissions from a long time ago are still in the atmosphere, affecting the Earth's climate system. Countries in the developed world have been emitting substantial quantities of CO<sub>2</sub> since the start of the industrial revolution in the mid-18<sup>th</sup> Century.

Although CO<sub>2</sub> is a naturally occurring gas and plays an important role in the Earth's ecology, excessive amounts of CO<sub>2</sub> contribute to increases in the Earth's surface temperature and global climate change. For more information, please contact Edith Thompson in the office of Rep. Gilchrest at x55311 or Abbie Meador in the office of Rep. Olver at x55335.

  
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(1) Keeling, C.D. and T.P. Whorf. 2004. Atmospheric CO<sub>2</sub> records from sites in the SIO air sampling network. In Trends: A Compendium of Data on Global Change. Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, U.S. Department of Energy, Oak Ridge, Tenn., U.S.A.