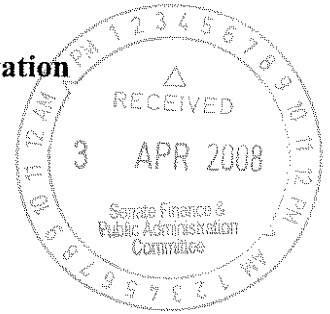


Senate Standing Committee on Finance and Public Administration
ANSWER TO QUESTION ON NOTICE
Prime Minister and Cabinet Portfolio
Department of Climate Change
Additional Estimates Hearing—February 2008



Written question reference: CC19

Outcome/Output: Response to climate change

Topic: Australia's influence over global emissions

Hansard Page: Not relevant for written QoN

Question: (JOYCE)

Can you rate Australia's emissions as a proportion of ocean degassing, seismic and volcanic activity in the world?

Answer:

The 2007 Fourth Assessment Report of the Intergovernmental Panel on Climate Change (Working Group I) identifies that the changes in the climate system already observed are dominantly caused by the global emissions of greenhouse gases and other factors resulting from human activities. Changes in natural processes have had a much smaller effect.

Natural causes of changes in global temperatures ("radiative forcings") are due primarily to solar changes and explosive volcanic eruptions. The effects of ocean degassing and other seismic activity on climate change are perceived not to be significant.

Particles discharged into the upper atmosphere by massive volcanic events cause a cooling of the earth ("negative radiative forcing") for a short time (2 to 3 years). The last such major eruption was in 1991 (Mt. Pinatubo).

Due to the episodic and unpredictable nature of major volcanic events and their short term effect on the atmosphere, and due to the typically very long residence time of anthropogenic emissions of greenhouse gases in the atmosphere, there is no useful comparison between volcanic activity (and similar events) with Australia's level of greenhouse gas emissions.