

## **Climate Change A Statement of Concern by Scientists**

(June 4, 2010) We, the undersigned, have been participating in discussions of the latest scientific results on our changing climate. We are increasingly concerned about the rate of climate change and the impacts on our planet, now and in the future. We feel that an urgent message must be brought to the attention of all Canadians.

Some key messages, presented this week at scientific meetings of Canadian Meteorological and Oceanographic Society and the Canadian Geophysical Union in Ottawa, include:

- **Current warming will continue and get worse.** Human-made warming, occurring due to increases in carbon dioxide concentration, will likely be irreversible for more than 1,000 years after emissions stop.
- **Sixty percent of sea-level rise is due to ocean warming.** Argo, a Canadian-led global network of 3,300 devices, already provides striking measurements of oceanic warming and sea-level rise.
- **Life will continue to change rapidly in our melting polar regions; we must adapt.** Projections show significant changes within this century. Increased rates of permafrost degradation are resulting in new conditions to which northern communities and industries will have to adapt.
- **Acidification of the oceans, particularly in coastal waters, will change marine ecosystems significantly.** Due to industrial and agricultural activities over the past 200 years, atmospheric CO<sub>2</sub> concentrations are now at their highest in the last 800,000 years and oceans are absorbing 30% of this carbon leading to acidification.
- **Proposed geoengineering actions are questionable and may have dangerous unknown side effects.** Science questions some key assumptions underpinning strategies, such as those to inject sulphate aerosols into the stratosphere to offset global warming.
- **Water supplies in the Prairies are dwindling and will continue to do so.** The Canadian Prairies are susceptible to droughts, which are among the most costly natural disasters in Canada in terms of socio-economic impact.

On 26 November 2009, the Canadian Meteorological and Oceanographic Society (CMOS), Canadian Geophysical Union (CGU), Canadian Association of Physicists (CAP), Canadian Society of Soil Science (CSSS) and Canadian Society of Zoologists (CSZ) jointly issued a [statement reflecting their concerns about climate change](#). They noted that rigorous international research reveals that greenhouse gases resulting from human activities contribute to the warming of the atmosphere and the oceans and constitute a serious risk to the health and safety of our society, as well as having an impact on all life.

