

## **“The Fierce Urgency of Now”:**

### **Four of Canada’s most prominent scientists warn Canadian political leaders of the urgency of reducing emissions of greenhouse gases.**

In a letter to the Prime Minister, leaders of opposition parties, and Provincial and Territorial Premiers, three recipients of Canada’s Gerhard Herzberg Gold Medal, Canada’s highest honor for science and engineering, and David Suzuki, Canada’s premier science communicator, are urging all Canadian political leaders to work together to reduce greenhouse gas emissions as rapidly as possible, in order to minimize the increasingly damaging ecological, social and economic effects of climate warming. The scientists believe we have run out of time for idle speculation and sporadic planning, and use the quote from the late Dr. Martin Luther King, Jr., exclaiming “The fierce urgency of now”. They point out that the most recent IPCC report showed clearly that even allowing the average climate to warm by 1.5 degrees C would have very costly and damaging effects, and that allowing a 2 degree increase would cause far more damage. The IPCC report was followed last week by US and UN-sponsored evaluations that revealed the inadequate performance of the world’s nations in meeting carbon emissions targets. They project that we are on track to see an average warming of 3-5 C by the end of the century.

“Events since the millennium have shown that past IPCC predictions were underestimates, not the exaggerations claimed by climate skeptics. The intensity and frequency of forest fires, droughts, floods and hurricanes are already at levels that the IPCC predicted for mid-century. Polar and glacial ice is melting more rapidly than predicted” says David Schindler

The new IPCC report is the product of hundreds of scientists from many countries. It shows that to hold warming to an average of 1.5 degrees means that greenhouse gas emissions must be reduced much more rapidly than has been planned, with most carbon-emitting activities ceasing by 2030. To do this requires that expansion in the fossil fuel industry must be severely curtailed, and that heavy investment must be made in renewable energy and in retraining fossil fuel workers to do the necessary work.

“Fortunately, rapid developments in electric vehicles, solar, wind and geothermal power, and large storage batteries make the necessary transition to clean energy within reach, if subsidies now allocated to fossil fuel development are transferred to clean energy development,” say the scientists.

The IPCC report also emphasizes that large northern land masses, including Canada, warm much more rapidly than the global average, which is moderated by the oceans. According to IPCC maps and Canadian climate records, most of Canada has already warmed by 1.5 degrees. It is now widely agreed that such warming can intensify extreme weather events, amplifying events like the fierce recent forest fires in BC in 2017 and 2018 and the flooding in southern Alberta in 2013. Such events cost millions to repair infrastructure, in addition to decreasing biodiversity, lost forests, poor crops and lost jobs.

John Smol, who holds the *Canada Research Chair in Environmental Change* at Queen's University and specializes in the study of responses of ecological communities to past climates, reminds politicians that "In times of national crises like wars, politicians have often abandoned their political allegiances and worked together for a common goal. We are now at war to save our planet from ourselves. Stop asking what is the cost of cutting emissions and instead start asking what is the cost of *not* cutting emissions. The data are in! We are in an international crisis and we keep sleepwalking to disaster". Smol notes that about half of Canada's landmass is in the Arctic, and that the warming in northern regions is occurring much more rapidly, causing enormous rates of change in biodiversity and productivity, which are having devastating effects on the Indigenous Peoples who inhabit these lands.

Schindler points out that drought, flooding, insect outbreaks and forest fires are already costing Canada tens of billions of dollars annually, and the costs are expected to increase rapidly. Forest fire smoke is also known to cause a significant increase in health costs, premature deaths, and lost revenues to tourism. In the USA, similar increases in the intensity and size of fires and floods, and more frequent extreme tornados, hurricanes and shoreline damage have been observed, with devastating consequences. "These are signs that we may be near the tipping point for a runaway climate," he adds.

Richard Peltier of the University of Toronto draws attention to the increasing frequency of severe climate related weather events, including regionally specific heat waves and floods and the devastation they are causing globally. An especially concerning impact of greenhouse warming is the rise of sea level that is imperilling coastal communities in many of the most densely populated regions on earth. This impact is especially destructive when taken together with the storm surges that accompany the landfall of hurricanes in the Atlantic and typhoons in the Pacific Ocean basins as a multitude of recent events have demonstrated.

The scientists emphasize that the time has gone when slowly phasing out fossil fuels via transitional strategies is a viable option. It is also time for all parties and jurisdictions to work together and agree on an aggressive and immediate plan of action. "Instead of squabbling over carbon taxes, pipelines, LNG plants and new oil sands developments, politicians must turn to completing plans to reduce greenhouse gases more rapidly. In times of national crisis, Canadians expect politicians from all parties to put the best interests of the country ahead of partisan politics and work together. This is such a time," the scientists say.

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David Suzuki is out of the country and unavailable.