

Environment

Climate Change

Scientific evidence indicates that industrial activity is seriously impacting global climate change. The common thread which links us together is the fact that we are all intrinsically dependent on our planet's life-support system, the ecosystem, the air, land, water and all other living things around us. [Dr. David Suzuki, speaking in Windsor, Ontario, as quoted in the "The Global Guardian", Winter 2000 Vol. 6 issue.]

Global Temperatures are Rising

Did you know that the 20th Century was the warmest in the past 600 years? In fact, the 1980s and 1990s are the warmest decades on record. When we Canadians are in the depths of winter in most parts of Canada, we like to joke about the need for warmer weather. But global climate change is no joke - especially for Canadians.

Data show significant increases in temperatures, especially during the past decade. Every single year of the 1990s was among the 15 hottest in the last 1,000 years, with the highest temperatures recorded at the end of the 1990s and the beginning of the new millennium. Scientific analysis of data from tree rings show us past centuries' temperatures; our own experience and the evening news show us current evidence.

Global warming change is driving **severe weather**. Droughts, hurricanes, floods, blizzards, ice storms and tornados are all examples of the severe consequences of our changing climate. But don't take our word for it. Ask the Canadian insurance industry. Insurance claims for property damage due to severe weather events have risen to billions of dollars a year.

As well **flooding and erosion of coastal regions** is a consequence of global warming. Our forests and farms are at greater risk from **fires, soil erosion, diseases and pests**.

Our precious Canadian **water sources** are also at risk. The Great Lakes have been at record low levels in the past several years. Our members who visit the CAW Family Education Centre in Port Elgin have noticed the drop in the level of Lake Huron.

Our health is at risk from global warming. Many large Canadian cities will experience significant increases in the number of hot, smoggy days. Air pollution problems will increase placing children, elderly people and people suffering from respiratory and heart problems at greatest risk of health effects. Increases in moulds and pollens due to warmer temperatures will also cause respiratory problems such as asthma for some people.

Melting of the polar ice cap and melting of the permafrost which covers 50% of Canada are particular risks to our northern country. Water level changes to our extremely long coastlines and economic changes to those who live in the north or in coastal regions will be significant.

Habitat change for animals affects those who depend on them for their livelihood. Some fish such as sockeye salmon thrive only in a very narrow range of temperature. We've already seen the effects of warmer temperatures in the Pacific Ocean off the West Coast where our members have seen the closures of the salmon fisheries.

What is the Greenhouse Effect?

The earth's atmosphere works like a greenhouse. You know what happens if you park your car on a hot summer day and forget to open the windows. When you get back inside your car, it is hot as an oven. This rapid warm-up is due to the greenhouse effect. The sun's radiant energy easily passes through the car's windows, and some of this energy is then converted into heat or infrared radiation. This type of radiation cannot easily escape back through the windows. It is trapped inside and the car warms up.

Greenhouse gases, such as carbon dioxide (CO₂) behave the same way. In a sense they form a "gas window" over the earth. They trap heat that would otherwise escape from the earth's surface into outer space.

Carbon dioxide is continuously removed from the atmosphere by green plants during photosynthesis. For millions of years these processes were in balance with the amount of carbon dioxide removed from the atmosphere equalling the amount entering it. Since fossil fuels began to be burned to fuel industry in the 1860s, however, atmospheric levels of CO₂ have risen substantially. Before the industrial era we know from ice core samples that the levels of carbon dioxide were about 280 ppm (parts per million). During the last two decades, carbon dioxide levels have escalated dramatically. Deforestation throughout the world means that there are fewer trees to absorb this excess carbon dioxide. In 1999, carbon dioxide levels were at 368 parts per million, more than a 30 % increase over the pre industrial era. This change compares to the increase in carbon dioxide at the end of each of the last three Ice Ages, so you can see that increasing levels of carbon dioxide can produce worldwide climate changes. The difference is in prehistoric times these increased levels took 600 or more years. We've produced similar changes in less than a hundred years with the bulk of the changes occurring over the last 20 years. If we do nothing to reduce our production of CO₂, we could see levels of 500 to 700 ppm by 2050.

By itself, fossil fuel consumption is responsible for the annual release of 5 billion metric tons of carbon into the air. Roughly one ton for each person on earth. The clearing and burning of tropical rain forests to make room for cattle ranches and farms release an additional 1.6 billion tons into the air annually. At current rates of increase, the CO₂ concentration will hike up the global thermostat about 4°C

Are Greenhouse Gases Increasing in Canada?

Environment Canada continues to measure slow, steady increases in the levels of CO₂ in stations from coast to coast to coast. Here's the data over the last twenty years:

What are Greenhouse Gases?

There are three greenhouse gases of particular concern because they are associated with human activity.

More and more of these gases are being created and trapped in our atmosphere, leading to increased global temperatures.

Carbon Dioxide (CO₂)

Carbon dioxide is the most significant greenhouse gas released by human activities, primarily through the burning of fossil fuels. It is the main contributor to climate change.

Methane

Methane is produced when vegetation is burned, digested or rotted without the presence of oxygen. Large amounts of methane are released by garbage dumps, rice paddies and grazing livestock.

Nitrous Oxide

Nitrous oxide occurs naturally in the environment but human activities are increasing the quantities. Nitrous oxide is released when chemical fertilizers and manure are used in agriculture.

Halocarbons

These are a family of chemicals that include CFCs (which also damage the ozone layer) and other human-made chemicals that contain chlorine and fluorine. They have a variety of uses such as refrigerants.

What Can Happen When the Climate Changes?

A warmer planet can have a huge effect on all forms of life. The global sea level could rise due to several factors including melting ice and glaciers. Rising sea levels would damage coastal regions through flooding and erosion. The climate of various regions would change too quickly for many plant and animal species to adjust. Harsh weather conditions, such as heat waves and droughts, would also happen more often and more severely. We could see tropical diseases such as malaria, spread northward.

In What Way Does Canadian Industry Contribute to Climate Change?

Canadian industry has been built on fossil fuels and nuclear energy, rather than other types of environmentally friendly sources of energy such as wind and solar power. Canadian industry has relied on consuming more energy, rather than conserving what we have. The Canadian public has subsidized Canadian industry by providing this energy cheaply through publicly funded megaprojects such as hydroelectric dams and the nuclear power plants. Just in time production has seen a shift in transportation from rail to trucks which use far more fossil fuels. Canadian manufacturers produce vehicles which use fossil fuels, rather than vehicles which rely on environmentally friendly sources of energy such as fuel cells. In order to change industry behaviour away from contributing to climate change in the direction of reducing climate change, we need strict laws requiring different practices and strong government enforcement to ensure compliance.

What Do We Do About Global Warming? *Kyoto Protocol*

In Kyoto, Japan, in December 1997, Canada and some 160 industrialized nations around the world committed to reduce their greenhouse gas emissions, as part of an international agreement on climate change called the Kyoto Protocol.

Canada's goal under the Kyoto Protocol is to reduce its emissions to six percent below 1990 levels by the period between 2008 and 2012. This would be a 20% reduction over current levels.

But the best scientific evidence is that the world would have to cut total emissions of greenhouse gases by more than half over the next few decades simply to hold this century's rise in global average temperature to no more than 3 degrees, which is roughly five times the temperature increase during the last century. For an energy-intensive country like Canada, the best estimate is that emissions would have to be cut by almost 70 per cent to about a third of today's level.

It is our union's position that governments must take leadership in stopping global warming.

Unifor Perspective

Since the forming of our union we have repeatedly rejected the arguments of those who would have us choose our jobs over the environment and those who would have us choose the environment over our jobs. We have invested heavily in the environmental education and activism within our union and in working together with environmental activists outside our union. We view protection of the environment as a key priority for protecting and improving the quality of life of our members, their families and communities. Importantly, we reject arguments that there's any essential "trade-off" between protecting the environment and protecting our jobs.

Workers need both good jobs and a clean sustainable environment. We can win both if we position our demands and our campaigns effectively.

Emphasizing the fact that we can have both jobs and the environment is a political statement which encourages us to look beyond the specific tensions which inevitably arise. While there is no inherent contradiction between jobs and the environment, our current economic system (including the effects of globalization) acts in conflict with the environment.

We will challenge employers and governments to create and satisfy those markets based on local production and good jobs. A high-wage, green industrial strategy is what we need.

We Need Different Energy Sources

We must lobby for replacements for fossil fuel. Governments should subsidize the development of alternative sources of energy rather than providing direct or indirect subsidies to industries which rely on fossil fuels or nuclear energy. We need to develop environmentally friendly sources of energy such as:

- wind
- solar
- fuel cells
- co-generation

We Each Can Act

The actions of individual Canadians account for about 28 percent of Canada's total greenhouse gas emissions.

Here are 10 things you can do to reduce your personal greenhouse gas emissions which will reduce your energy consumption, save money and help create a healthier environment for all Canadians:

1. Turn off lights, appliances, televisions and computers when they're not needed;
2. Seal all leaks around doors, windows and cracks where heat escapes from your home - and save up to 25 % on your heating bill.
3. Insulate when you renovate. Over the years, a small up-front cost can pay for itself several times over in energy savings.
4. Check the EnerGuide label. When buying a new household appliance, room air conditioner or vehicle, the EnerGuide label can help you select the most energy-efficient model that meets your needs.
5. Leave the car at home - walk or bike for short trips. For longer trips, take the bus. One busload of passengers takes 40 vehicles off the road during rush hour, saves 70,000 litres of fuel and avoids over 175 tonnes of emissions per year.
6. Avoid idling your vehicle. Ten seconds of idling uses more fuel than restarting your engine. Use an automatic set-back thermostat for your central air conditioner, or better still, use

Taking Action Will Save Us

Implementing measures to conserve energy, use alternative forms of energy, substantially reduce our production of greenhouse gases and stop deforestation will:

- create jobs in new industries; develop new renewable technologies; and see strong local economies emerge
- vastly improve our health with cleaner air in our cities

- improve world security as tensions over the control of oil in the Middle East and elsewhere are diminished
- save the planet's rainforests, the lungs of the world and home to 50-80% of the world's animal and plant species, are saved from destruction
- improve food security and attain better health with ecologically sustainable methods of agriculture

More Information

More information on climate change issues can be found on the federal government web site:

www.climatechange.gc.ca/info

Information about business, labour and the environment can be found on the web site of the Canadian Centre for Policy Alternatives at www.policyalternatives.ca

CAW-TCA Canada, Discussion Paper: Climate Change and Our Jobs, Finding the Right Balance- 2007 can be found on our website: www.caw.ca/en/3531.htm

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