

A wake-up call for Canadians

Adaptation necessary to keep 'reasonable quality of life': climate report author
Vancouver Sun (April 1, 2014)

Top scientists say the latest international report on climate change shows Canadians must wake up to the impact of warming temperatures on land, on water and in communities across the country.



A vineyard is destroyed by a wildfire in Peachland, B. C., in September 2012. The Intergovernmental Report on Climate Change says disruptions to normal rain and snowfall patterns will cause problems for crops around the globe.

They say the Intergovernmental Report on Climate Change, released Sunday in Japan, shows changes are on their way and further delays in responding to them only narrow the options.

"We no longer have the option of choosing between mitigation and adaptation," Debra Davidson, a University of Alberta sociologist and lead author of the report, said Monday.

"We're already locked into a global-warming scenario in which adaptation will be absolutely necessary if we want a reasonable quality of life," said Davidson, one of more than 2,000 scientists and expert reviewers from 70 countries who contributed.

The report says crop patterns will need to shift. Although some studies predict better growing conditions in more northern latitudes, disruptions to normal rain and snowfall patterns will cause problems, it suggests.

"There's always been some predictions in some areas that some crops will do better," said John Smol, a biologist at Queen's University. "But if the drought frequency continues, what's the economic cost of a 10-year drought?"

Global warming makes feeding the world harder and more expensive, the report said. A warmer world will push food prices higher, trigger "hot spots of hunger" among the world's poorest people, and put the crunch on western delights like fine wine and robust coffee.

"We're facing the spectre of reduced yields in some of the key crops that feed humanity," chairman Rajendra Pachauri said in a news conference releasing the report.

Even though heat and carbon dioxide are often considered good for plants, the overall effect of various aspects of man-made warming is that it will reduce food production compared to a world without global warming, the report said.

Food prices are likely to go up somewhere in a wide range of three per cent to 84 per cent by 2050 just because of climate change, the report said.

"In a world where a billion people are already going hungry, this makes it harder for more people to feed their families," said Tim Gore of Oxfam International, who wasn't part of this study.

While some crops may do slightly better, staples like wheat and corn will be hurt, the Nobel Prize-winning panel of scientists said. The report specifically mentions warming squeezing out crops in some of the richer coffee-growing areas in Central and South America, apple orchards in eastern Washington and cherry orchards in California.

And where you get your wine may be changing. Both quantity and quality of wine can be hurt in much of Europe, the United States and Australia, but Portugal and British Columbia may become better places for wine, according to the report.

The last time the panel reported on the effects of warming in 2007, it said it was too early to tell whether climate change would increase or decrease food production, and many skeptics talked of a greening world. But in the past several years the scientific literature has been overwhelming in showing that climate change hurts food production, said Chris Field of the Carnegie Institution of Science and lead author of the climate report.

Some Canadian lakes are already seeing algae blooms increase at rates that can't be explained by agricultural runoff, Smol said. Popular fish such as lake trout could be threatened by changing patterns of spring thaw and winter freeze-up.

Floods, too, will be an issue for Canada, predicted Andrew Weaver, a B. C. Green party legislature member, climate modeller and lead author on previous editions of the report. The number and value of insurance claims are already on the rise in Canada, he pointed out.

The report warns the entire freshwater ecosystem of the vast boreal forest that stretches almost across the country is under threat.

"Rates of climate change associated with medium- to high emission scenarios pose high risk of abrupt and irreversible regional-scale change in the composition, structure and function of terrestrial and freshwater ecosystems," it says. "Examples that could lead to substantial impact on climate are the boreal tundra Arctic system."

Look for other nations to eye Canada's abundant fresh water with envy, Weaver warned.

"If you look at the climate projections, we get a heck of a lot more water and the southern U.S. gets a heck of a lot less. Where we have water, we get more, where they don't have water, they get less.

"There are issues of water transportation that are going to raise their head in the near future whether we like it or not."

Davidson warned that the consequences of climate change will fall more heavily on poor communities. Wealthy centres have more money to upgrade homes, build seawalls or buy more insurance. They're more likely to have better infrastructure in the first place.

And if they need to change how they fish or farm, they can make the investments more easily.

"A poor community will have relatively fewer resources at the household level," Davidson said.

Canada needs to stop thinking about climate change as something that only affects sea ice or low-lying tropical islands, said Smol.

"These are things that many people in the scientific community have known and have been saying: 'It's getting worse and worse and worse and worse. And if anything, the rate of getting worse is accelerating.'

"The longer we wait, the harder it is to do anything. And we're losing options."

An Environment Canada scientist was one of the lead authors of the study. The department declined to make him available for an interview and instead outlined in an email the measures the federal government has taken to fight climate change.



A 2012 report by Environment Canada acknowledged the country will miss its 2020 greenhouse gas reduction targets by nearly one-third.