

According to forecasts, precipitation will move northward; as a result the southern part of the country will be drier. Climatologists are concerned that the eventual dry periods will adversely affect the plentiful Prairie grain production. They also worry that if water levels go down, particularly in the Great Lakes, there would be a greater concentration of contaminants. Reduced water reserves would have a harmful effect on hydro-electric production and would lead to competition for available resources.

The advantage of longer growing seasons might well be nullified by drought, the spread of blight and the devastations of insects. The tree line would slowly move northward at the rate of about 100 km for each degree Celsius increase in temperature.

Specialists believe higher temperatures would cause thermal expansion of the oceans around the world. By 2050 ocean levels might be 1 m higher, which would endanger a number of coastal areas of Hudson's Bay and Prince Edward Island, as well as river deltas in the lower part of Vancouver Island and the Mackenzie delta. All these predictions are somewhat speculative, however, because of the many factors involved.

What should be done? The Canadian Climate Program, which brings together authorities from federal and provincial governments, industries and universities, has made Canada a leader in the study of the consequences of a possible warming of the planet. Although not all the facts are known, it is obvious that from now on any major economic decisions have to include consideration of global warming in order to minimize unfavourable effects and maximize any possible benefits. By increasing energy savings and using renewable energy sources, it would be possible to reduce the concentration of carbon gas in the atmosphere and thus lessen the warming effect while reducing urban smog, acid rain and even air pollution in the Arctic.

The ozone layer

The deterioration of the ozone layer is another worldwide problem that causes Canada concern. The ozone layer in the upper atmosphere protects humans from the sun's harmful rays. It absorbs ultraviolet rays that can cause skin cancer, reduce crop yields and harm aquatic life. It seems to have been growing thinner for some years now, due mainly to CFCs (chlorofluorocarbons), synthetic chemicals that are quite stable in the lower atmosphere but when reaching the stratosphere, react with gases. This reaction forms, among other things, chlorine, a single molecule of which can destroy thousands of ozone molecules. CFCs are used as a propellant in aerosol cans, in the manufacture of insulation and foam padding, as a coolant in refrigerators and air conditioners, and as solvents in cleaning electronic equipment.