

A wide range of environmental data and traditional ecological knowledge providing information about the state of the environment has been collected in Canada by governments, academic institutions, Aboriginal peoples, the private sector, and conservation groups. It includes information about air, water, and land quality and the status of species. However, there is still a need for information on topics such as the level of toxic substances in the atmosphere, water quality, and changes in urban land use.

The federal government, provinces, and municipalities across Canada are developing indicators, or key statistics, to reflect trends over time of various aspects of the state of the environment. For example, the Government of British Columbia, along with the federal government and United States agencies in the Puget Sound region, is currently working on a suite of environmental indicators aimed at reporting on the state of the Georgia Basin–Puget Sound ecosystem. A set of national environmental indicators has been developed for 10 key environmental issues, including stratospheric ozone depletion, climate change, toxic contaminants, acid rain, urban environmental quality, marine fish resources, forest resources, energy consumption, and transportation.

In the 1990s, the demand grew for information on the overall condition of ecosystems. Collecting this information requires an integrated network of sampling sites and the assessment of long-term cumulative effects, rather than short-term isolated effects. An example is the Acid Rain National Early Warning System established by the Canadian Forest Service in 1984. This network of 150 sites, encompassing major forest ecosystems across the country, monitors and detects the effects of acid rain on Canadian forests. Another example is testing by the Ontario Ministry of Natural Resources of the use of satellite imagery to monitor changes in forest cover, water quality, and other environmental and land use aspects.

Better inventories of biological resources are needed. While Canada's six Conservation Data Centres have made great strides in collecting data on the conservation status of wild species and communities, and research surveys have quantified the abundance of marine fish on Canada's Atlantic and Pacific coasts since the 1970s, knowledge of our biological resources is weak. In Canada, 71 000 species of wild plants and animals (terrestrial and marine) have been recorded. Scientists estimate that 68 000 have yet to be discovered and classified. Of the recorded species, we understand the ecological function, status, trends, and survival needs of less than 3 percent. Comprehensive and reliable biological inventories at the seascape, landscape, species, and genetic levels require highly skilled and

Environmental Indicators

Environmental indicators are selected key statistics that represent or summarize a significant aspect of the state of the environment, natural resource sustainability, or related human activity. They focus on trends in environmental changes, the stresses that are causing them, how ecosystems and their components are responding to these changes, and societal responses to prevent, reduce, or ameliorate these stresses.

Importance of Nature to Canadians

A 1996 survey on the importance of nature to Canadians indicates that 20 million Canadians (85 percent) took part in one or more nature-related activity that year. They spent a total of 1.5 billion days and about \$11.0 billion enjoying nature-related activities such as sightseeing, camping, and boating. More than one third (38 percent) of Canadians observed or cared for birds and other wildlife around their homes.