

Environment (CCME), which brings together environment ministers from the federal, provincial, and territorial governments for discussion and joint action on environmental issues of national and international concern. The recently released Canadian environmental quality guidelines, which provide a nationally consistent scientific basis for protecting and sustaining the major beneficial uses of land and water, are one example of the CCME's coordinated action in addressing environmental issues across Canada. In 1998, the CCME committed to a new approach to environmental management in Canada when all jurisdictions except Quebec signed the Canada-wide Accord on Environmental Harmonization, under which many sub-agreements are being struck on a wide range of important environmental management issues. Recent work under the accord has resulted in the new Canada-wide Standards for Particulate Matter and Ground-level Ozone and an agreement in principle on standards to deal with priority toxic air contaminants in the Canadian environment, including mercury, benzene, dioxins, furans, and petroleum hydrocarbons.

Integrating Information Geographically

Because human-environmental interaction exhibits variability over space and time, many sustainable development issues can be examined in a geographic context. Integration of spatial and temporal data contributes to the understanding of the geographic nature of sustainable development issues. Technological advancements in satellite positioning and information systems are improving the means by which we collect, integrate, analyze, and share data. Together with these technologies, new forms of communications, including high-speed connectivity, are paving the way for real-time integration and access to spatial knowledge.

Advancements to support data integration are also occurring through the development of data standards, policies for data exchange and consistency, and framework data sets such as Canada's National Ecological Framework.

The Canadian Earth Observation Network (CEONet) and The National Atlas of Canada are Canadian initiatives that facilitate access to national-scale geographic information in digital and conventional maps that reflect the social, economic, environmental, and cultural fabric of Canada. The Canadian Geospatial Data Infrastructure, which includes tools and a national set of standards and policies for national and continental consistency and high accuracy, is evolving to meet the demands and opportunities related to geospatial information.

Canada's National Ecological Framework

Canada's National Ecological Framework divides Canada into several levels of detail. From the broadest to the smallest, the hierarchical classification consists of ecozones, ecoprovinces, ecoregions, and ecodistricts, which are based on climate, vegetation, landform, soils, wildlife, and land use factors. Fifteen ecozones were first defined on a subcontinental basis to meet the reporting requirements of the first state of the environment report for Canada in 1986. Ecozone, ecoregion, and ecodistrict boundaries were refined in 1995 by a team of land resource specialists from government agencies across Canada and subsequently used in the 1996 report on the state of Canada's environment.

GeoConnections

GeoConnections is the Government of Canada's initiative to build a Canadian infrastructure for geospatial information, developed collaboratively and available on the Internet. One major thrust of the initiative is to establish a framework of core data layers that can be integrated consistently for decision making in areas as diverse as resource management, marine navigation and charting, traffic and transportation, business planning and operations, public health, public safety and disaster management, emergency response, property mapping, and environmental assessment. Matching international standards is a key goal.