

Sector Industries

Canada's primary sector industries, such as agriculture, forests, minerals and metals, energy, and fisheries, all depend on a strong natural capital stock. They have all been the focus of efforts to improve sustainability and reduce negative environmental impacts.

Agriculture depends on healthy ecosystems, including the quality of soil, air, and water. Between 1971 and 1991, the total area of Canadian farmland remained relatively constant, while its productivity increased. The impact of increasingly intensive use has been alleviated by improvements in fertilizers and pest management products and innovative practices due to ongoing advances in knowledge and technology. As the sector continues to recognize the linkages between farm operations and the larger ecosystem, a new approach is emerging, for the most part driven by concern for human health and off-farm environmental effects. Maintaining and improving water quality are important challenges that depend on proper management of soils, nutrients, pesticides, and animal manure. Cooperation among producers, processors, and governments to work toward sustainable practices is increasing, and Canadian farmers are adopting more sustainable land management practices. One example is the growth in use of methods of tilling fields that reduce soil erosion. Between 1981 and 1991, use of these methods rose from nearly zero to about one third of Canada's cultivated land.

Forests cover about 45 percent of Canada's land area and are significant components of Canada's environment, economy, and culture. During the past twenty-five years, the forest sector has been a focal point of sustainable development efforts. Between 1975 and 1993, the area harvested increased by 42 percent; the area planted or seeded increased by 228 percent. Sixty-eight percent of harvested areas is regenerated naturally. Pollution from pulp and paper mills has decreased, and woodlands practices have been

extensively revised to reduce the impact of logging on watersheds and to protect sensitive areas. Significant progress has been made under the 1992 National Forest Strategy to improve sustainable forest management. Results include the protection by policy or legislation of more than 12 percent of Canada's forests; the development by the Canadian Council of Forest Ministers of a scientifically based framework of criteria and indicators of sustainable forest management; the review and updating of policies and legislation by governments; the adoption by industry associations of self-regulating codes of practice; and the development of national codes of ethics, principles, and standards by the Canadian Federation of Professional Foresters Associations. As well, a network of working-scale model forests has been established across the five major forest ecozones of Canada to test the best sustainable forestry practices available. Nevertheless, additional work needs to be done, particularly research into ecosystem management, assessment of clear-cutting and alternative harvesting practices, and promotion of sustainable forest management internationally, including a forest convention.

Canada's minerals and metals industry is the world's leading mineral exporter and a significant contributor to the Canadian economy. The mineral development process, including mining, smelting, and refining, has the potential to cause significant environmental effects, including surface disruption, toxic and nontoxic air emissions, and liquid effluents. A multistakeholder process, the Assessment of the Aquatic Effects of Mining in Canada, recommended the establishment of a cooperative national environmental protection framework, including revising regulations to ensure a consistent level of effluent quality at Canadian mines.

An effective and efficient regulatory regime, technological advances, and voluntary measures on the part of industry have resulted in greatly improved mining practices. The Mining Association of Canada has adopted an environmental policy that commits members to the concept of