

Sector Priorities for 2004-2006

Canada and the World

Poverty alleviation and economic growth are dependent on investment. For many developing countries and remote regions of Canada, the minerals, metals and other resource industries are a major source of investment and economic development. Canadian exploration and mining companies operate in over 100 countries, hold more than 2600 properties abroad and, as a result, represent Canada's most significant economic linkage with many developing countries and economies in transition.

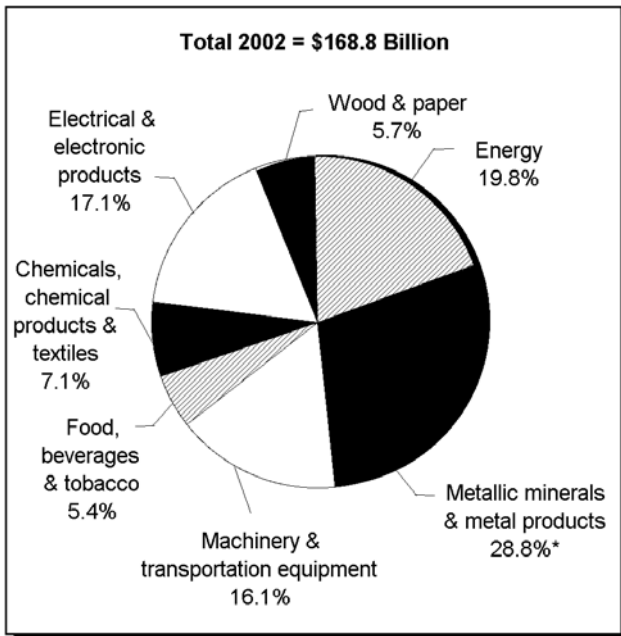
Significant investment by Canada's minerals and metals industries has created extensive trade and investment opportunities. For example, the industries' investment in Chile established a viable basis upon which Canada was able to negotiate the Canada-Chile Free Trade Agreement. This has provided additional opportunities to other sectors of the Canadian economy, including technology exporters. Investments by Canadian exploration and mining companies in other parts of the Americas continue to support similar opportunities in ongoing trade negotiations.

Canada, through its geography and geology, is blessed with an abundance of natural resources. Through extensive experience and wise stewardship of these naturally occurring assets, Canada has successfully fostered an innovative and responsible natural resource sector that has come to be recognized internationally. Consequently, Canada can make significant contributions in areas such as governance, financing, resource policy, the organization and management of data, and science and technology to many developing countries that currently have investment opportunities. Canada can advance wise and efficient resource stewardship through a uniquely Canadian lens, the benefits of which will accrue to both developing countries and Canada. MMS, through its extensive participation in various bilateral and multilateral fora on policy and scientific matters, has an excellent platform for promoting Canadian interests.

In addition to poverty alleviation in developing countries, investment abroad will also benefit Canadian allied industries. These allied industries include suppliers of goods and equipment, as well as services, including financial services. More than 2200 allied companies are located across Canada in all provinces and territories. Indeed, minerals and metals industries provide markets for many of these allied industries both domestically and internationally.

Canada's minerals and metals industries are the largest investors abroad among Canada's goods-producing industries with assets valued at nearly \$50 billion. To fully realize the potential benefits, it is important that Canada's minerals and metals industries act and be viewed as economically, socially and environmentally responsible. In addition, some of Canada's smaller companies have leveraged international opportunities provided by the mining industry as part of their growth strategies, successfully moving them into the ranks of mid-sized companies. Clearly, the trend towards increased international activity by Canadian companies can bring important benefits to Canada.

**Canadian Direct Investment Abroad, 2002
Goods-Producing Industries**

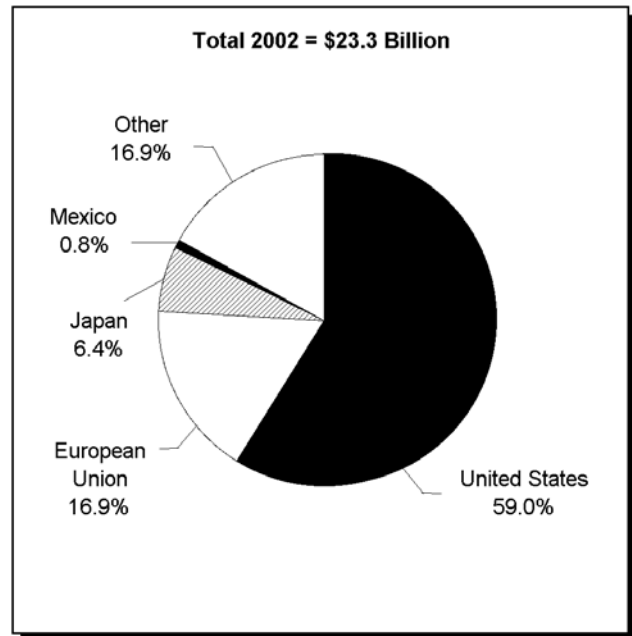


Source: Natural Resources Canada.

Note: Excludes nonmetals.

* Canada's metallic mineral and metal products companies lead our economy in foreign direct investment abroad.

**Canadian Domestic Exports
Mining and Smelting/Refining**



Source: Natural Resources Canada.

Canada's exports of mineral and metal commodities average \$23 billion annually. In the development of vibrant domestic industries, there are significant challenges to the growth of these exports. The roles of environment and health have increasing importance to the growth of non-tariff barriers. Many of these non-tariff barriers are unjustified and may be inspired by competing commercial interests. This is one of the main challenges facing Canada's minerals and metals industries, and MMS's scientific and policy expertise will be essential in responding to these challenges.

MMS's international activities will result in the following outcomes:

- an Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development is established whereby governance and other issues facing developing and developed countries can be discussed and acted upon ([click here](#) for initial steps towards this goal);
- an NRCan-industry market access review committee is established;
- Canadian expertise is provided to developing countries in supporting the sustainable development of mineral resources and its contribution to poverty alleviation;
- sound science and arguments are developed in support of DFAIT's representation in opposing unnecessary barriers to trade ([click here](#) for information about MMS's research into metals in the environment);
- the participation of allied industry exporters in trade shows and missions is increased within the context of an overall strategy for allied industries; and
- guidelines for best practices are developed that result in Canada being an internationally leading force in the sustainable development of minerals and metals ([click here](#) for information about MMS's current program to promote corporate social responsibility in mining).

Aboriginal People

The minerals and metals industries are among Canada's largest actual and potential employers of Aboriginal people. In many instances, they offer relatively long-term future employment opportunities, notably for younger Aboriginal people in rural and northern communities. In addition, the industries purchase significant supplies and services from Aboriginal companies and, indeed, have inspired the creation of many such companies. To illustrate, the Diavik diamond mine spent \$500 million in its construction phase through Aboriginal joint ventures. During operations over the last 10 years, Syncrude has purchased about \$500 million in services and supplies from Aboriginal companies.

Approximately 1200 Aboriginal communities are located within 200 kilometres of producing mines in Canada. The future prosperity of these communities in rural and northern regions is inextricably linked to the natural resources that surround them. Many skills and Aboriginal companies developed to serve mining are transferable to other mining companies and other industries. Consequently, the mining industry is, and continues to be, part of the solution to the challenges confronting Canada's Aboriginal people and communities. Moreover, the increased role of Aboriginal people in mining may assist in meeting the expected shortage of skilled workers in the industry. Canadian Aboriginal-industry leading practices may also serve as a basis to promote international discussions aimed at sharing know-how for implementing sustainable development in indigenous communities elsewhere in the world.

A key challenge is to advance initiatives that will increase the contribution of the minerals and metals industries to the prosperity and well-being of Aboriginal communities. Opportunities to be pursued include: economic and business development in Aboriginal communities; and capacity building, skills and knowledge for enhancing resource management and participation in the economy over the long term. Movement in this direction will improve Aboriginal-industry-government mutual understanding and expand partnerships aimed at increasing Aboriginal participation in minerals and metals activities.



This group of Aboriginal workers (Jason Mamakua, Tom McKay, Desmond Keewasin, Joe Singleton and Sherman Gliddy) successfully completed diamond drilling helper training at Placer Dome's Musselwhite gold mine in northern Ontario (photo courtesy of Placer Dome).

MMS's Aboriginal initiatives will result in the following outcomes:

- an information toolkit on mining for use in Aboriginal communities is prepared and distributed;
- a web site and an on-line Aboriginal communities minerals and metals activities map are established ([click here](#) for more information);
- a national workshop and/or roundtable is held involving Aboriginal organizations, governments and other stakeholders in cooperation with mining companies;
- adequate Aboriginal representation is provided at the annual federal-provincial/territorial Mines Ministers' Conference;
- a video and other communication products are produced for and distributed to Aboriginal communities in northern Ontario; and
- taking into account the above, a strategy is developed to optimize the contribution of minerals and metals activities to the well-being of Aboriginal communities.

[Click here](#) for general information about MMS's work with Canada's Aboriginal people.

Innovation

Innovation is a critical requirement for the future survival and growth of Canada's minerals and metals industries and for the communities and allied industries that depend upon them. Canada's minerals and metals industries are facing fierce international competition, globalization of markets, consolidation, and low metal prices in the long term. Also, high environmental performance expectations confront the industry (e.g., the Kyoto Accord, the Metal Mining Effluent Regulations, and increased international concerns over metals as "hazardous materials"), as do public concerns over safety and security.

Internationally, Canada has one of the finest and strongest scientific and technical infrastructures (comprising expertise and facilities in government, industry and universities) related to the minerals and metals industries. This infrastructure provides Canada with a timely and unique opportunity to contribute to new innovative technologies and productivity improvements. Indeed, this range of expertise offers the potential for developing new manufacturing opportunities that serve the industry and contributes to problem-solving in Canada and abroad. However, much of this scientific infrastructure has been eroded over the past decade.

To realize the value-added benefits of minerals and metals, cost-effective advanced materials need to be developed for the construction, energy and automotive industries. The minerals and metals industries require processes that will lead to reduced emissions, energy savings and cost-effective technologies while increasing productivity, meeting environmental regulations and providing a safer work environment. Partnerships with industry, universities and other stakeholders are essential to the development of innovative solutions to all of these challenges.

MMS's activities will result in the following outcomes:

- new materials are developed to improve the durability and reduce the life-cycle costs of major concrete infrastructure ([click here](#) for information on MMS's ongoing concrete research);
- the [Academic User Access Facility](#) is utilized to add value to minerals and metals and to train highly qualified personnel;
- a strategy is developed to maintain the viability of Canada's smelting industry ([click here](#) for information on MMS's metallurgical processing research);
- an international program is designed to research alternatives to cyanide use in gold processing;
- an international research program is designed and initiated on the behaviour of metals in soils and aquatic environments;
- a national inventory of orphaned and abandoned mine sites is designed and submitted to provincial and territorial governments; and
- taking into account the above and in support of innovation, an S&T strategy is developed in relation to minerals and metals.

Investment Climate

Continued increased investment in Canada's minerals and metals industries is essential for development in remote regions of Canada, for sustaining Canada's international role in mining and metals, for increasing the growth of allied industries and communities, and for contributions to Canada's positive

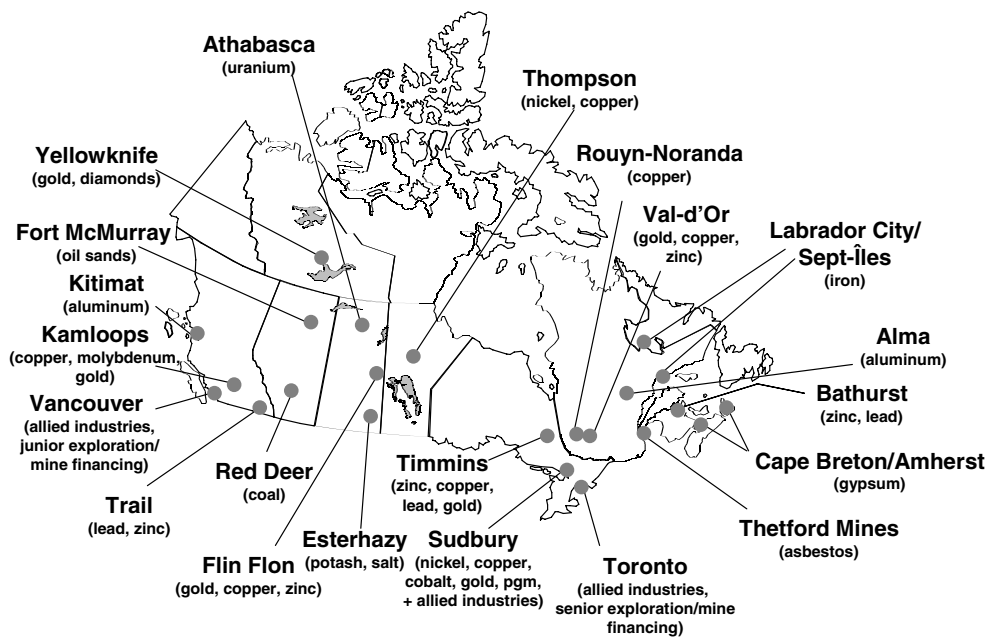


Canadian mining continues to innovate and automate to maintain its international competitive edge. The remote-controlled scoop tram shown here is being used to collect and transport uranium ore 640 metres underground at the world's highest-grade uranium mine at McArthur River, Saskatchewan (photo courtesy of Cameco Corporation).

balance of trade, among other things. Although Canada has a large landmass with favourable geology, mineral resources will only be discovered and developed with a supportive investment climate that attracts the needed capital. In addition to its legal framework and political stability, where Canada typically ranks high relative to competing jurisdictions, other important business climate factors include corporate and personal taxation, the regulatory environment, and timely access to resources. Improvements in the competitiveness of Canada's mineral investment climate would be successful in leveraging a quick and significant response in the form of increased mining activity and jobs throughout Canada.

The minerals and metals industries are among Canada's world-class industries. A significant proportion of the world's exploration and mining companies are Canadian-controlled and maintain head offices in Canada, even in the face of a growing share of international activity in their overall business. Head office location is an important factor in providing markets for allied industry sales of services and supplies. However, the current global environment of greater industry concentration, if coupled with a relative deterioration in Canada's investment climate, could lead to the loss of head offices.

A positive investment climate that attracts increased investment by the minerals and metals industries would be a major signal to the world that Canada attaches importance to this sector. It also attests to the fact that Canada is open for increased investment and would welcome foreign companies that are considering locating their head offices in Canada. An improved investment climate, including a competitive tax regime, would strengthen the success of Canada's minerals and metals industries and clusters of allied industries. Many communities in Canada owe their existence to investments by the minerals, metals and allied industries, for example, Labrador City, Rouyn-Noranda, Sudbury, Fort McMurray, Trail and Yellowknife, among many others (see map). Other communities in which the industries have played a major role include Sept-Îles, Saguenay, Hamilton, Toronto, Saskatoon and Vancouver.



Minerals and metals industries have played an important role in Canada's development. This map illustrates the location of communities where the minerals, metals and allied industries have had a significant impact on development.

MMS's activities will result in the following outcomes:

- an international minerals and metals strategy is developed on Canada's relationship with developing countries;
- analysis is provided to Mines Ministers and the Department of Finance Canada on whether the [Investment Tax Credit for Exploration](#) has been effective in stimulating mineral discoveries;
- recommendations are made to the Mines Ministers and the Department of Finance Canada on whether to enhance the tax treatment of the cost of community consultations and environmental studies ([click here](#) for information on the current Canadian Exploration Expenses tax credit program);
- options for the future of the Dominion Coal Blocks are developed;
- a strategy is developed to attract and retain head offices in Canada; and
- recommendations are developed that would lead to a more timely environmental permitting and social licence to operate.

Security and Safety

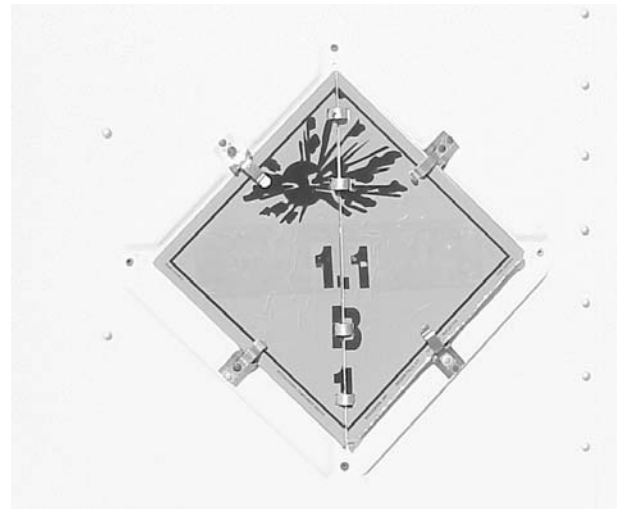
To protect the Canadian public from terrorist use of explosives, the government needs reliable technologies to detect explosives and to make buildings more resistant to explosions.

MMS is expanding its efforts to enhance the security of Canada's explosives supply in partnership with other government departments. MMS's explosives activities have traditionally been in the safety area and it will continue to ensure that the authorization, manufacture, importation, storage, transportation and possession of explosives are effectively regulated and supported by sound science. However, work in explosives has increasingly taken on a security aspect since September 11, 2001, and there will be a major effort over the next three years to support new initiatives, such as tighter controls on the possession of explosives and their precursors. Indeed, a requirement exists to better ensure that pipelines and other infrastructure are secure. MMS is also expanding its security-related scientific work on the mitigation of blast effect and improvements to explosives detection and identification. Progress on new regulations related to explosives security will require the passage of a public safety act.

MMS will also continue to help improve health and safety in the natural resource sector, for example, through research on systems to monitor and maintain the integrity of pipelines and safety in the underground mining industry, and through the development and implementation of related national and international standards. Moreover, administration of the Canada-wide program to certify personnel for non-destructive testing remains a priority.

MMS's initiatives will result in the following outcomes:

- explosives are classified and authorized;
- equipment for use in hazardous locations is certified;
- regulations and necessary means to implement a public safety act are developed;
- certificates to possess explosives and regulations to control the sale of consumer quantities of explosives precursors (such as ammonium nitrate, which can be easily used to manufacture explosives) are introduced;



MMS plays an important role in protecting Canadians from the unsafe or illegal use of explosives, pyrotechnics and fireworks.

- counter-terrorism measures established by a convention of the Organization of American States are fulfilled ([click here](#) for information on MMS's explosives regulatory activities);
- advanced systems are developed to monitor and maintain oil and gas pipelines ([click here](#) for information on MMS's work to date); and
- research is implemented to address rock bursts, ventilation, hoist inspection and other safety issues in underground mining ([click here](#) for information about MMS's current research program).