



Western Economic Diversification de l'économie
Diversification Canada de l'Ouest Canada

WESTERN CANADA AND LATIN AMERICA EXISTING AND POTENTIAL COMMERCIAL RELATIONSHIPS

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I. EXECUTIVE SUMMARY

This report is intended to provide an overview of Western Canada's current and potential commercial linkages with Latin America and the Caribbean (LAC). It will seek to inform Western Economic Diversification Canada (WD) of potential opportunities to increase Western Canada's engagement in the LAC region.

Current economic conditions in the LAC region are becoming more favourable for international involvement. Effective macroeconomic policies have resulted in increased economic growth and stability and improved social conditions to address low standards of living and inequality.

Trade activity is modest between Western Canada and LAC with the majority of exports consisting of agricultural commodities, specifically wheat and pulse crops. The oil and gas industry has experienced an increase in demand for equipment exports to the LAC region. Further negotiations of Free Trade Agreements with LAC markets will facilitate exporting opportunities for Western Canadian companies. Despite the strong connections in the oil and gas and mining sectors, few inroads have been made by Western Canadian innovation clusters in the LAC region. However, the innovation clusters sampled in this study generally are taking note of potential opportunities for collaboration in LAC and some relationship building is taking shape.

Export Development Canada (EDC) continues to be active in Latin America supporting Canadian companies in accessing high tariff markets through foreign direct investment and joint ventures. The LAC region is increasingly becoming more integrated into the global value chain because of competitive wage advantages and an abundance of natural resources. Potential opportunities for Western Canada in Latin America exist in traditional energy and natural resource sectors but also in the tech and advanced industry sectors.

There appears to be some awakening in Western Canada to the potential of Latin America. For example the Government of Manitoba has been increasing its focus on Latin America over the past year. As well the Government of Alberta has identified Latin America as one of its top market priorities, largely thanks to the strong ties in the energy sector.

WD is well positioned to contribute to the Government of Canada's whole-of-government initiative to re-engage in the LAC region. The recommended approach is to focus on enhancing science and technology (S&T) based partnerships with LAC. WD's extensive knowledge and involvement with numerous partnerships and programs in the S&T industry will allow the department to focus on innovation clusters and current S&T departmental priorities that are transferable into the LAC market.

Specific actions for WD consideration include:

- S&T Study Tour to Western Canada
- Relationship Building with Canada's Posts in Miami and Houston
- Facilitate Clusters/Academia Partnerships
- Support Industry Associations
- Embraer Outreach
- Leverage Existing Western Canadian Links with LAC
- Inter-American Development Bank Annual Meeting in Western Canada

It is important that WD target any resulting efforts to support partnership development by innovation clusters to a limited number of specific markets. Chile and Brazil appear to be the most promising areas for innovation relationships. Canada's Science Memorandum of Understanding (MOU) with Chile has strengthened the partnership between the two nations in the areas of sustainable development, S&T, and investment promotion while negotiation of the Science and Technology Cooperation Agreement with Brazil will further encourage technology commercialization ventures.

II. INTRODUCTION

II.a. Objectives of Research Study

This study addresses Western Canada's commercial linkages with Latin America (Central and South America) and the Caribbean, otherwise referred to as the Latin American and Caribbean (LAC) region. Mexico is not included in the study because of its developed relationship with Canada and engagement in the North America Free Trade Agreement (NAFTA). The remainder of this report provides a general overview of the economic relationship between Canada (particularly Western Canada) and LAC, summarizes the current engagement activities of selected Western Canadian stakeholders, reviews challenges associated with operating in LAC, highlights markets and sectors of greatest opportunity in the region, and concludes with a list of potential options for WD on how to increase Western Canada's engagement in LAC.

The study relies on research and consultations with a sample of federal, provincial, and municipal government officials, supplemented by limited outreach to innovation clusters, universities, associations, and a small sample of companies and foreign representatives. The report is illustrative of the commercial linkages between Western Canada and the study area, but makes no claim to being comprehensive.

II.b. Canada and LAC: Natural Partners

For much of the postwar period, predominantly agricultural-based trade dominated Canada's interactions with the LAC region. More recently investment, particularly in the energy and mining industries, has driven the Canada – LAC economic relationship. This relationship has been accelerated by significant shifts in trade policy towards the aggressive negotiation of free trade arrangements (FTAs) in the region. Prime Minister Stephen Harper has emphasized that Canada's neighbourhood does not end at the 49th parallel, and neither do Canada's interests. That is why Canada is seeking to re-engage relationships throughout the Americas¹.

In recent years the relationship between Canada and LAC has been driven by the Canadian mining industry. Capital flows have been impressive and have generated both the development of recipient countries' economies and trade flows from Canada to the region. Members of the Canadian Association of Mining Equipment and Services for Export have been particularly active in efforts to follow their domestic clients overseas.

The Canadian mining industry began investing in LAC in an era of few resource shortages when resource prices were low. Capital flows are now being propelled by higher resource prices given the fundamental shift in the demand-supply equation. The needs of the mining industry and the opportunities offered should be the subject of any Latin American strategies the Government of Canada eventually adopts.

¹ http://pm.gc.ca/eng/media.asp?id_1522

II.c. Canadian Free Trade Agreements with LAC

New Free Trade Agreements (FTA) are an important element of Canada's re-engagement efforts with LAC. Building on the success of NAFTA and Canada's mutually beneficial FTAs with Chile (1997) and Costa Rica (2002), FTA negotiations have been launched with Colombia, Peru, the Dominican Republic, the Caribbean Community (CARICOM) and with the Central America Four (CA4)-which includes the countries of El Salvador, Guatemala, Honduras and Nicaragua.²

On May 29, 2008, Canada and Peru signed a FTA. This FTA will benefit Canadian exporters, service providers, and investors in several sectors including, but not limited to, mining, manufacturing, agriculture, financial services, and environmental and engineering services.

On June 7, 2008, Canada concluded FTA negotiations with Colombia, providing similar benefits, as well as negotiations for an Agreement on the Environment and a Labour Cooperation Agreement.

Canada has signed other formal agreements with various LAC countries. Foreign Investment Promotion and Protection Agreements (FIPAs) are in place with the following LAC countries (listed with longer standing agreements first): Argentina, Trinidad and Tobago, Barbados, Ecuador, Venezuela, Panama, El Salvador, Uruguay, Costa Rica, and Peru. Other agreements of note include the Andean Community Trade and Investment Cooperation Arrangement, the Southern Cone Common Market (MERCOSUR) Trade and Investment Cooperation Arrangements, the Central America Memorandum of Understanding on Trade and Investment, Science & Technology Partnerships, and Air Service Agreements.³

II.d. Macroeconomics of Latin America

The period from 2004-2006 is on record as the most vigorous three years of economic activity for the Latin America region since the 1970s. Regional Gross Domestic Product (GDP) has grown on average at a rate of 5.25% each year for Latin America since 2004. In 2006, one third of all Latin American countries experienced growth rates of 7% or higher. It is estimated that LAC comprised 6.29% of the world's total GDP for 2006. The major factors that have eliminated macroeconomic volatility and thus contributed to the growth of Latin American economies are: controlled inflation, limited debt restructuring, reduced unemployment, and social improvements to address inequality and poverty. The distribution of the GDP of Latin America in 2007 is shown in the following table:

² It can be noted that FTAs in and of themselves do not reflect exactly best market prospects. It was suggested in the consultations that prospects of an FTA with Brazil are limited for several reasons, including MERCOSUR complexities and commitments undertaken therein by signatories, protectionism, and Brazil's disinclination to adopt western standards for labour and environment.

³<http://www.international.gc.ca/trade-agreements-accords-commerciaux/agr-acc/index.aspx>

Table 1: Latin America GDP⁴

Country	GDP (Billions \$US)	GDP per capita (\$US)
Brazil	1,269.0	9,700
Argentina	245.6	13,000
Venezuela	226.9	12,800
Colombia	171.7	7,200
Chile	160.8	14,400
Peru	101.5	7,600
Ecuador	44.5	7,100
Guatemala	31.4	5,400
Costa Rica	22.8	13,500
Bolivia	12.8	4,400

Although the LAC region has experienced considerable economic growth in the past five years, it continues to lag behind other developing countries. In 2006, for example, growth in other developing countries averaged 8.5%, about 3% higher than that of LAC. While the region may be closing some of the gap with industrialized countries, it still lags behind other more dynamic areas of the world, including many countries that have not directly benefited from the commodities boom in the way that Latin American has.

Investment in the LAC region still only averages 20% of the GDP, which is no higher than its peak in earlier expansions. LAC is experiencing impressive economic growth and with increased development in Trade Agreements and investment incentives, the LAC region will present opportunities for further investment and trade prosperity.

III. WESTERN CANADA'S ECONOMIC RELATIONSHIP WITH LAC

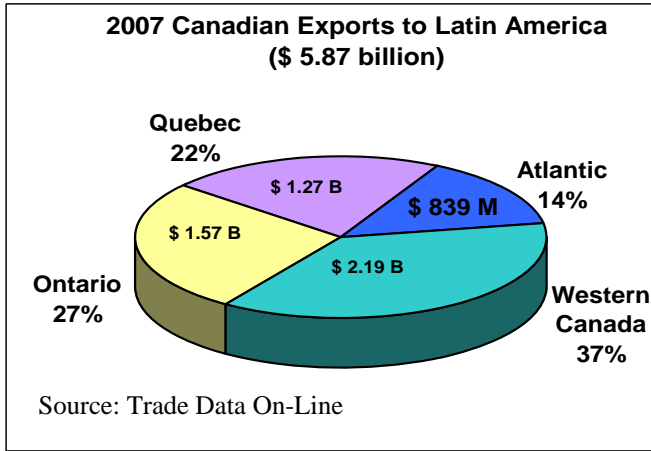
III.a. Trade Patterns

Canadian Activity

Trade flow between Canada and LAC continues to grow at a rate well above the global average. Canadian exports to the region have increased by 82.8% between 2003 and 2007 compared to an 18.5% increase in total Canadian exports to all countries. In 2007, Canada's exports of goods to LAC amounted to \$5.87 billion, down 31.5% from a record high of \$8.40 billion in 2005. Canadian exports are comprised of 40% commodities and 60% semi-finished and fully finished products. Figure 1 illustrates the regional breakdown of Canadian exports to Latin America in which Western Canada accounts for 37% of the national total.

⁴ Compiled by WD staff from CIA World Factbook, 2007

Figure 1: 2007 Canadian Exports to LAC

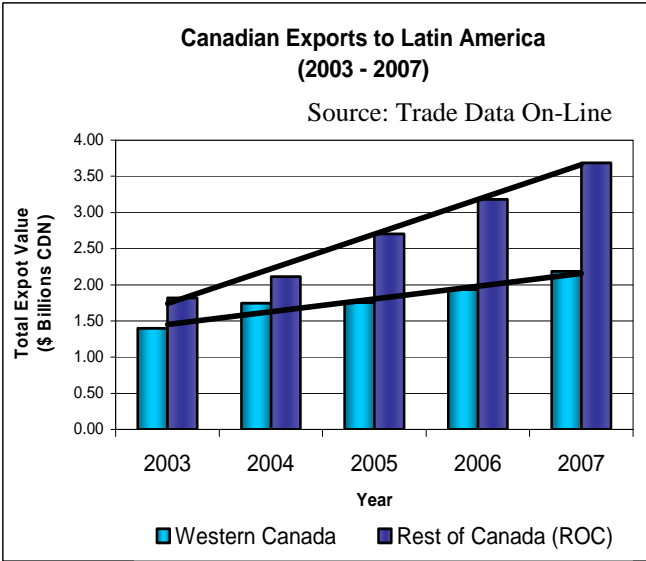


Western Canadian Activity

2007, the value of exports to LAC from Western Canada was \$2.19 billion compared to \$1.4 billion in 2003. Although the total value of exports indicate sufficient growth, the share of Western Canada’s total exports accounted for by the LAC region has remained relatively steady, increasing from 1.33% to 1.53%. In comparison, the share to LAC from the rest of Canada increased from 0.73% to 1.34% in the same five-year period.

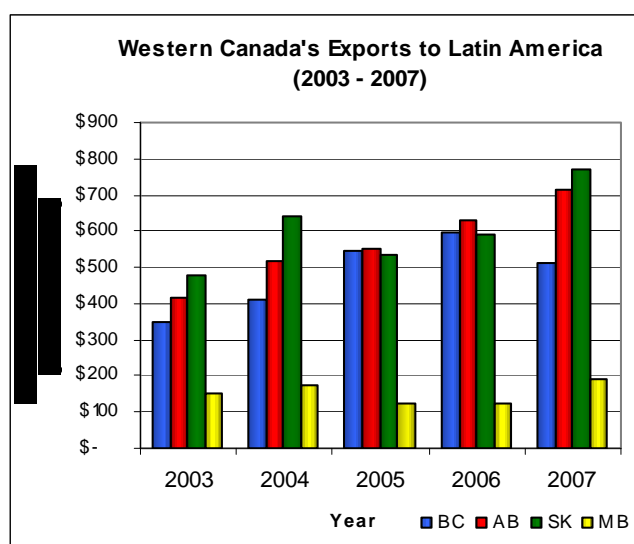
Figure 2 illustrates the growth of Canadian exports to Latin America. The annual percentage growth rate from 2003 to 2007 for Western Canada is 11.35% compared to the rest of Canada (ROC) at 20.56%. However, the average annual percentage growth rate between 1998 to 2007 for Western Canada and the rest of Canada are very similar at 3.26% and 3.28% respectively. This indicates that although the LAC region provides substantial market potential for Western Canadian commodity exports, in the past five years the rest of Canada has been successful in increasing merchandise exports in machinery and equipment, building materials, consumer goods, and food products to the LAC region. It is expected that the dollar value increase in Canadian exports may be attributed to an increase in commodity prices more so than a substantial increase in export volume.

Figure 2: Growth of Exports to LAC



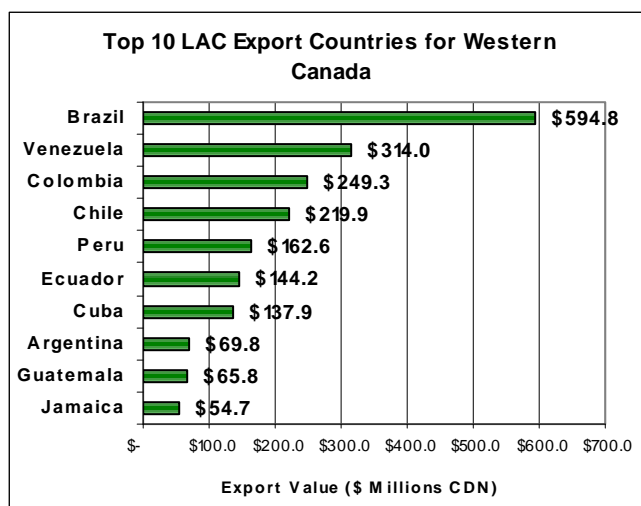
Exports from the four resource rich Western provinces are heavily inclusive of commodities and agricultural equipment. Wheat is the top export product from the Prairie Provinces and Canada as a whole accounting for approximately 20% of the total export value to Latin America from Western Canada. Over the past five years, Saskatchewan has had the greatest presence in the LAC region largely due to increased demand in wheat and other grains and potash for fertilizer. Alberta's exports to LAC include oil, mining, and gas field manufacturing machinery as well as raw materials such as wheat, crude oil and natural gas. British Columbia's dominance in the mining and paper mill industries has generated exports of minerals and paper products to the LAC region. Manitoba's trade presence in Latin America is less significant than the other Western provinces. Exports include agricultural food products and manufacturing materials. Western Canada's availability of an abundance of natural resources will enable continued export growth to the LAC region.

Figure 3: Western Canada's Exports to LAC⁵



Western Canada's top 10 LAC export markets are illustrated in Figure 4. Brazil, Canada's largest trading partner represents 27.2% of the total Western Canadian export revenue from LAC in 2007. The Canada-Chile Free Trade Agreement has assisted in a 134% increase in exports from Western Canada to Chile in the past ten years since its inception. In the past five years export of Western Canadian products has increased the most to Venezuela, Peru, Argentina, and Colombia. Further negotiations of Free Trade Agreements with the Andean (Bolivia, Colombia, Ecuador, and Peru) community countries, Central America Four (El Salvador, Nicaragua, Guatemala and Honduras), and the Caribbean will further promote Western Canadian trade to Latin America.

⁵ Source: Trade Data On-Line

Figure 4: Top 10 LAC Export Countries⁶

III.b. Investment Patterns

LAC is experiencing strong economic growth and numerous major infrastructure projects are underway or planned. As a result there are huge infrastructure investment requirements and opportunities in sectors such as power and hospitals, ICT, oil and gas, agri-food, forestry, and bio-energy. Canadian firms are extending their reach into LAC and taking advantage of the region's growing economic opportunities through increased investment.

In the LAC market Canadian firms have to undertake supply chain investment in order to protect and grow market share. A case in point is Brazil, a country of high tariffs on both agricultural and manufactured products. The Brazilian tariffs on manufactured products, as of 2004, averaged about 13%.⁷ Canadian companies can access the market in a substantial manner only through investment and joint ventures. For example, Brazil has numerous home grown mining equipment suppliers, less capable than their Canadian counterparts, and if Canadian companies wish to do business they need to joint venture with Brazilian counterparts.

Figure 5 illustrates the growth in Canadian Direct Investment Abroad (CDIA) in South and Central America over the past decade.⁸

Canadian private sector investment in the LAC region has grown substantially over the last decade. Canadian Direct Investment Abroad (CDIA) to South and Central America has grown from \$7.9 billion in 1995 to \$23.1 billion in 2006. In 2006, South and Central America accounted for 4.4% of Canada's total CDIA, down slightly from 4.9% in 1996. For comparison purposes, Asia/Oceania accounted for 6.5% of Canada's total CDIA in 2006.

⁶ Source: Trade Data On-Line

⁷ <http://dsp-psd.pwgsc.gc.ca/Collection-R/LoPBdP/EB-e/prb0401-e.pdf>

⁸ http://www.dfait-maeci.gc.ca/eet/trade/sot_2007/sot-2007-en.asp#v2 In addition to CDIA in Central and South America there are large financial flows to Caribbean countries such as Barbados and Bermuda.

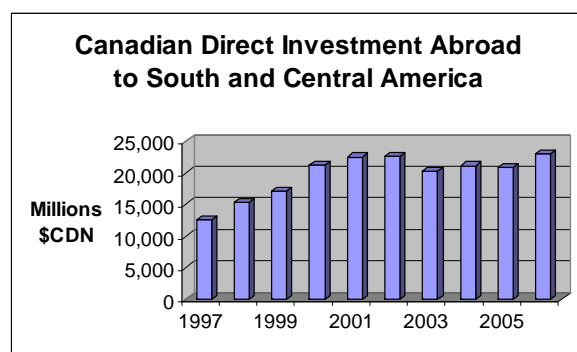
Figure 5: CDIA in South and Central America⁹

Table 2 illustrates the importance of selected South and Central American countries, with Brazil and Chile standing out, as destinations for Canadian investment.

Table 2: Canadian Direct Investment (2006)¹⁰

	'000,000 CDN \$
Brazil	\$8,244
Chile	\$5,171
Argentina	\$3,981
Peru	\$2,910
Dominican Republic	\$1,847
Venezuela	\$574
Colombia	\$453
Costa Rica	\$448
Trinidad and Tobago	\$276
(Excludes reported CDIA in Barbados, Bermuda, and Cayman Islands)	

According to EDC, the following markets are best suited for Canadian investment: Brazil, Chile, Peru, Dominican Republic, Trinidad, Panama, and Colombia. Venezuela has been traditionally important for Canada, but political developments are complicating the existing and potential investment relationship.

Brazil

Canada is increasingly on Brazil's radar screen as a desirable investment location with several of Brazil's most prominent multinationals now established in Canada. Canada was Brazil's number one destination for outward investment in 2006, largely due to the recent acquisition of Canadian mining giant Inco by Brazilian-owned CVRD (Companhia Vale do Rio Doce). That single transaction created one of the top three diversified mining companies in the world and boosted Canada's stock of investment from Brazil to approximately \$23 billion.¹¹ Other examples of

⁹ Statistics Canada, Cansim Table 376-0051

¹⁰ www.ccbc.org.br/download/Fernanda_Custodio_301107rj.ppt

¹¹ <http://www.americas-society.org/article.php?id=600>

foreign direct investment to Canada from Brazilian interests includes Labatt's, St. Mary's Cement, and Nova Steel.

Table 3 illustrates how investment patterns have increased bilaterally between Canada and Brazil, with notably strong recent increases in Brazilian investment into Canada. Seventy percent of Canadian investments in Brazil are supported by EDC. Since 2006, EDC has also been involved in facilitating Brazilian purchases of Canadian assets, based on the rationale that the resulting growth of companies contributes to greater exports of Canadian goods and services and related investments.

Table 3: Canada/Brazil Investment

Canada's international investment position, BRAZIL,¹²						
\$x1,000,000	2001	2002	2003	2004	2005	2006
Canadian direct investment in Brazil	6,276	6,661	5,728	7,021	6,710	8,244
Foreign direct investment from Brazil in Canada	855	774	1,097	1,863	3,070	9,405

Caribbean

The Caribbean is a very large recipient of Canadian investment. Most Canadian investment in the region is directed towards the financial service sector. The tax-friendly jurisdictions of Barbados, Bermuda, and the Cayman Islands are major destinations for CDIA. There has been significant investment in Trinidad and Tobago's energy sector.

Other LAC Countries/Regions

Canada's key investments in the Andean region¹³ include natural resources (especially oil) and telecommunications development. Canada's foreign direct investment in Peru is primarily in mining, hydro-electrical transmission, and banking. Canada is heavily invested in Colombia's oil and telecommunications sectors. In Chile, Canada directs most of its investment to mining, energy, and information technology. In Argentina, Canada's investment focuses on natural resources specifically petroleum and is also involved in the telecommunications, agri-business, mining, and energy sectors.¹⁴

IV. WESTERN CANADA'S ENGAGEMENT WITH LAC

IV.a. Western Canadian Science Innovation Institutes

Generally Western Canada's innovation clusters have minimal interaction in the study area. For the most part the innovation clusters recognize that opportunities may exist for partnerships in Latin America, but other international relationships have higher priority. Some of the specific factors contributing to the limited nature of current interactions may include the following, based on the consultations undertaken:

- outside intellectual property is very much at risk in Latin America, where the immediate public good trumps corporate and other interests;

¹² Statistics Canada, Cansim Table 376-0051

¹³ The Andean region comprises Venezuela, Colombia, Ecuador, Peru, and Bolivia.

¹⁴ United Nations Economic Commission for Latin America and the Caribbean, January 2003.

<http://www.eclac.org/publicaciones/xml/0/11960/lclwasl61.pdf>

- uncertainty concerning scientific capabilities in Latin America and difficulties in identifying the best potential scientific interlocutors;
- the long duration required for project development in LAC;
- the lack (until recently) of rigorous regulations in areas such as environment that can drive the need for advanced solutions; and
- where innovation clusters are driven by private sector company members, there is little current activity of the companies in Latin America, perhaps in part based on the view of some member companies that "there is no money in Latin America".

One can also observe that the lack of existing relationships means there is no momentum for further interaction. And one can speculate that the degree of outreach from Latin America may be limited, in part perhaps because Canada may be somewhat in the shadow of the United States in the view from Latin America. Nonetheless, some plans for enhanced interaction are beginning to take shape. Current engagement is summarized below, by sector (i.e. aerospace, ICT, energy, ocean industries, and bio/life sciences).

Aerospace

Western Canada's aerospace industry is becoming increasingly engaged with the Brazilian company Embraer, one of the world's largest aircraft manufacturers. Embraer is seen as having high growth potential in the commercial, defense, and executive aviation target markets. In September 2007, Embraer visited Winnipeg in order to engage with a dozen Western Canadian aerospace companies. Overall, the companies were very impressed with Embraer and there is much potential for future partnership opportunities.

To date, the Composites Innovation Centre is not engaged in the Latin American market. The Centre focuses its activities on Western Canada, and to the degree that international thrusts are undertaken, the focus is on the areas of most interest to the membership, that is the United States and Europe.

The Canadian Light Source is doing nothing in the study area at this time. A delegation has visited Saskatchewan, so there is potential. Quality assurance, perhaps for composites products for Embraer by way of example, is a possible area for future collaborations.

Information Communication & Technology (ICT)

Latin America is not a priority market for TRILabs and none of TRILabs' member companies are known to have substantial activities in the study area. To date, TRILabs only engagement in the region was a fiber optic network project completed for the Government of Jamaica. Two years ago, TRILabs was approached by the Government of Jamaica to design a new fiber optics network, to replace infrastructure damaged by hurricane. The work was successfully performed, valued somewhere in the \$100,000 range (order of magnitude only).

Calgary Technologies Inc. (CTI) has had virtually no engagement with the LAC region, however, several of CTI's client firms are reported to be active in the region. Several years ago CTI considered organizing a wireless mission to the region (specifically Brazil), but there was insufficient interest from CTI's client firms and the Calgary wireless industry.

Energy

The Office of Energy and Environment at the University of Regina indicated that to date no LAC country oil companies have approached the Petroleum Technology Research Centre. The International Test Centre for Carbon Dioxide Capture has limited researcher-to-researcher ties to Brazil.

The National Research Council's (NRC) Institute for Fuel Cell Innovation in Vancouver is also not very active in South America. However, the Institute is aware of Brazilian expertise in biofuels, primarily the use of sugarcane to produce ethanol (which can be a fuel for fuel cells). NRC has made a couple of preliminary visits to Brazil to explore potential relationships with Brazilian experts. However, there is no strong push from either side. Brazilian science capability in bio-fuels is well regarded.

Ocean Technologies

Relationships are not well developed between B.C. and Latin America in ocean technologies research. Aquaculture was noted as a very important industry in South America, with specific reference to Chile. Port security is another growth area. The B.C. experts view the marine science capabilities in South America as strong, notably in Chile, Brazil, and Argentina. The B.C. experts recognized the effort ACOA is making in support of Atlantic ocean technologies.

Life Sciences and Biotechnology

Manitoba's Richardson Centre for Functional Foods and Nutraceuticals is not considering Latin America at the current time. The only engagement has been an enquiry from Chile with respect to improving feed for fish farming.

The NRC Institute for Biodiagnostics in Winnipeg has several research collaborations with Brazilian entities. In particular, an MOU has just been signed with one of Brazil's federal universities, Universidad Federal de Uberlandia. Areas of focus are breast cancer and heart surgery. The Institute finds Brazilian scientific capabilities to be good and noted that the Brazilian researchers are particularly attuned to commercial potential. The Institute has undertaken only limited biodiagnostics outreach to Chile.

Genome BC currently has no activities in Latin Americas but some plans are taking shape. Genome BC finds project development in South America to be slow. Chile is an area of note and has world-class science in some niches.

Saskatchewan's Vaccine and Infectious Disease Organization has limited links to the study area in the cattle field.

The expert consulted at the NRC National Institute for Nanotechnology (NINT) in Edmonton, was not aware of any activity in the study area. The consultant was advised elsewhere that Cuba has expressed senior level interest in Alberta's nanotechnology in the health field, but the consultant was unable to confirm this with NINT.

IV.b. Private Sector

Many of the Canadian companies currently engaged in Latin America are in the mining and oil and gas sectors. The research results on active companies are illustrative but they do not fully capture the extensive number of Western Canadian suppliers active in the market. For example, the Canadian Embassy in Santiago, Chile has an internal list of over 100 Canadian companies supplying the Chilean mining industry. An example of the breadth of commercial linkages is the MOU recently signed by Saskatchewan's Agribition with a Brazilian agricultural trade show.

In the consultations a representative from Chile Invest was asked to name the top Canadian companies active in Chile. The firms listed were TransAlta, Brookfield, Hydro Quebec, Methanex, Scotiabank, Terra Remote Sensing, and Imaging Dynamics Corporation. It was also observed that there are many joint ventures wherein the Canadian participation is less visible. Table 4 highlights a small selection of Western Canadian companies that are particularly active in the LAC study area.

Table 4: Sample of Western Canadian Companies Notably Active in LAC

Manitoba	Alphair, Wardrop, Cubex, Loewen Windows
Saskatchewan	Clifton Associates, Erin Consulting, CanNorth, Bioriginal Food & Science
Alberta	TransAlta, Alta Steel, Nova Chemicals, Smart Technologies, Matrikon, Global IQ, Seminoe Communications, Hexagon Technologies, Symbiosis Genetics, Agriteam, EECOL Electric, Matrix, Challenger Energy, Stantec, Imaging Dynamics Corporation
British Columbia	Methanex, Teck Cominco, Finning, Rescan Environmental Services, Terra Remote Sensing, Fluor Daniel, Canadian Mill Gear Solutions, Lions Gate Learning Alliance, Microtek International, SyncWave Energy, Rimex, DynaMotive Energy Systems, Intervista, MDA, Sandwell, Wenco Systems

Profiles of selected Western Canadian companies active in the study area are also presented in Appendix B. While mining and oil and gas are the main areas of activity, the profiles were selected to illustrate the wider market potential.

IV.c. Business Associations

The following summarizes the major Canadian business associations with interests in LAC. Additional bilateral associations can be found in Appendix D.

Canadian Association of Importers and Exporters¹⁵ (I.E.Canada)

The Canadian Association of Importers and Exporters works with embassies in Ottawa, Washington, and around the world to keep Canadian companies informed about international trade issues and to represent Canadian company interests globally. I.E.Canada also administers The Canadian Council for the Americas (CCA) and The Brazil-Canada Chamber of Commerce (BCCC). The CCA stimulates Canadian commercial interests in the markets of Latin America and the Caribbean. The BCCC promotes stronger commercial relations between Canada and Brazil.

¹⁵ http://brazcan.org/business_events.html

I.E.Canada has been active, with others, in establishing the Canada-Brazil Trade Portal (brazcan.org). The website provides users with access to profiles of the leading business and government organizations in Brazil and Canada and offers a useful list of upcoming events in Canada and Brazil.

Canadian Council of the Americas¹⁶ (CCA)

The Council plays a critical role in enhancing the number and strength of corporate relationships between Canada and LAC. There are two CCA associations operating in Western Canada, one in Alberta and the other in British Columbia. CCA-Alberta is the pre-eminent link between Alberta-based businesses and the markets of Latin America and the Caribbean. Through a variety of informational events and networking opportunities, CCA-Alberta's mission is to forge enhanced trade between Alberta companies and countries in this region. CCA-British Columbia is the leading not-for-profit organization that facilitates business and trade between B.C. and the countries of Latin America and the Caribbean

CCA-B.C. and CCA-Alberta are separate associations that cooperate. There is also a CCA in Ontario, again with informal affiliations to the B.C. and Alberta CCA associations. CCA Alberta has maintained an active program for some time, and CCA-B.C. is attempting, through volunteer efforts, to regenerate itself. It is said that the membership of CCA-Alberta is 90% oil and gas. Mining sector companies are an important part of the membership at CCA-B.C. CCA-AB and B.C. Economic Development are both currently working on developing lists of companies active in Latin America.

A year ago, CCA International Trade Advisor Ken Frankel, testified before the Standing Committee on International Trade¹⁷. He recommended support for business facilitation programs, business partnerships and outreach, bilateral and sub-regional trade agreements, and Foreign Investment Protection Agreements and emphasized taking advantage of the potential with Brazil.

Brazil-Canada Chamber of Commerce¹⁸

The Brazil-Canada Chamber of Commerce is a business association whose primary objective is to foster stronger commercial relations between Canada and Brazil. The Chamber is exploring a full range of infrastructure and program investments to ensure that companies in both countries react to opportunities being created by the new wealth evident in both countries. A Brazil-Canada Trade Portal has been created and is having a significant impact. Webinars and virtual trade missions are planned.

Canadian Manufacturers and Exporters¹⁹ (CME)

Generally speaking, CME in Western Canada encounters little pressure from their membership for support in Latin America markets and therefore currently have no targeted engagement programs with the LAC region.

¹⁶ www.cca-bc.com, www.cca-alberta.com

¹⁷ www.cmte.parl.gc.ca/Content/HOC/Committee/391/CIIT/Evidence/EV2683239/CIITEV45-E.PDF

¹⁸ <http://www.ccacanada.com/bccc/>

¹⁹ www.cme-mec.ca

Canadian Foundation for the Americas²⁰ (FOCAL)

FOCAL is an independent policy institute, based in Ottawa, that fosters informed analysis and debate on social, political, and economic issues facing the Americas.

IV.d. Western Canada's Provincial Governments

Government of Manitoba

Chile is the top priority LAC country for the Manitoba Trade and Investment unit of the Government of Manitoba. Following Chile, Manitoba is also active in pursuing trade development efforts in Brazil. Argentina, Peru, Colombia, and Venezuela are of secondary interest. Manitoba was part of the Canada delegation at the EXPOMIN mining trade show in Chile in April 2008. Manitoba had been dormant in the Latin America market until about a year ago, when the decision was taken to take a closer look at economic opportunities in Chile and Brazil. The province is working on a Latin America strategy, which once completed should better outline the Manitoba Government's intended approach to engaging in the region. Manitoba is aware of the FTA connections with Costa Rica, but has not emphasized the development of this market.

Government of Saskatchewan

The Saskatchewan Trade and Export Partnership (STEP) is pursuing agricultural prospects in LAC particularly in fertilizers, pork, grain, and special crops. A level playing field with the United States on FTAs with the LAC region is critical to the success of integrating Saskatchewan products into the region. Currently the export of agricultural equipment is limited because of high tariffs in Brazil and Argentina. Despite the challenges to exporting, three or four Saskatchewan firms will attend an upcoming agricultural equipment show in Argentina.

STEP has made a substantial effort in Latin America to develop contacts and study the market potential in order to facilitate involvement for Saskatchewan companies. STEP's top priority countries in LAC include Chile, Brazil, and Argentina. Other countries of special interest are Peru and Colombia. However, not much has been achieved in the way of results beyond the important agricultural commodity exports.

Government of Alberta

The Latin American markets of most interest to the Alberta government are Brazil, Venezuela, Argentina, and Colombia. Alberta's focus is oil and gas, particularly heavy oil. There is recognition of opportunities in agriculture, alternative energy, and environment. As reflected in the country priorities, hot areas for oil and gas are Brazil, Venezuela (conventional and heavy oil), and Colombia. Argentina has energy price caps, but some Alberta companies still do well.

In Alberta's Electronic Business Intelligence Service (EBIS) system²¹ Brazil and Colombia are the most prominent countries, with entries also for Argentina, Venezuela, and Bolivia in the current reports. All current reports in the EBIS system address the energy sector.

Government of British Columbia

The B.C. government's trade development emphasis is strongly on Asia-Pacific markets with secondary attention to North America and the European Union. Opportunities in the Latin America study area are acknowledged but no LAC countries have been identified as priority markets.

²⁰ http://www.focal.ca/home_e.asp

²¹ <https://ebis.alberta.ca/>

Notwithstanding the provincial government's position, there has been a steady stream of incoming missions from Latin America to B.C. In the past the provincial government trade effort focused on mining and mining services and equipment exports to Chile, Peru, and Colombia.

Historically, there was significant movement of mining companies' activities from B.C. to Latin America in the late 80s and early 90s. This was in part due to tougher environmental regulations in B.C. and in part due to a reopening of the mining sector in LAC at that time.²² Another historical note of interest is the instrumental role played by B.C.'s aquaculture industry in the establishment of Chile's aquaculture industry. Engineering services for pulp and paper mill design has been of significance.

An issue of current importance with a LAC dimension, recognized by the provincial government, is the province's need for permanent skilled immigrants and temporary workers. (The same issue would be important to Alberta.)

IV.e. Municipalities

The consultations undertaken did not identify substantial interest in Latin America by municipal economic development agencies. Calgary Economic Development has contacts in place with Chilean economic development agencies and some representatives from LAC are expected at the Global Petroleum show.

IV.f. Educational Institutions

This study included very limited outreach to educational institutions, with the principal interviews undertaken in Saskatchewan. In addition, the limited consultations identified significant Latin American academic programs at the University of Calgary (notably the Latin America Research Centre and the Haskayne School of Business Institute for Resource Industry and Sustainable Energy Development in Latin America), the University of British Columbia, and Simon Fraser University. Conversely, it is perhaps of note that the University of Victoria's Centre for Global Studies addresses issues throughout the world, but has no Latin America activity. The Association of Universities and Colleges of Canada maintains searchable databases providing information on Canadian University International Exchange Agreements and Canadian University Projects in International Development.²³

The University of Regina (UofR) was interviewed for this study. UofR has research collaboration agreements with businesses in other parts of the world, but none in the study area. U of R does participate in student exchanges with Chile, Colombia, and Cuba. UofR sees academic institutions in Chile as the most promising for academic research collaboration and a senior staff person from the university will visit Chile shortly. The university has done a limited amount of CIDA work in LAC, on water shortage and environment projects.

The Saskatchewan Institute for Applied Science and Technology (SIASST) provides an example of community college activities in LAC. The Latin America study area has not been a priority for SIASST's consulting services, although SIASST has undertaken some work, notably a Rural Extension Development project in Panama. SIASST does see growing interest in this region from CIDA and is

²² Discussion with NRCan

²³ http://www.aucc.ca/publications/database/index_e.html

anticipating opportunities arising with CIDA in Peru and Bolivia in particular. Subject areas of potential importance include impacts of resource development on Indigenous Peoples and Corporate Social Responsibility. SIAST monitors Technical Assistance opportunities at the Inter-American Development Bank.

IV.g. Other Organizations

The research and consultations underlying this report included attention to activities of the Government of Canada, EDC, and selected multilateral development banks. Efforts focused on activities most relevant to Western Canada.

Foreign Affairs and International Trade Canada (DFAIT)

During a February 2008 speech to CCA-BC, then International Trade Minister David Emerson indicated that "To help our businesses and investors succeed in Latin American and Caribbean markets" the Government of Canada is "putting a new focus on getting more Canadian Trade Commissioners on the ground throughout the Americas".²⁴

Three key objectives that form the basis of Canada's engagement in the Americas, including the Latin America and Caribbean region, include²⁵:

- To strengthen and promote our foundational values of freedom, democracy, human rights and rule of law.
- To build strong, sustainable economies through increased trade and investment linkages, as well as mutual commitment to expanding opportunity to all citizens.
- To meet new security challenges, as well as natural disasters and health pandemics.

Through an integrated commerce agenda, Canada hopes to build prosperity, generate economic activity, and fuel corporate social investments and commitments that will create jobs, wealth, and opportunities, both domestically and throughout the LAC region. DFAIT's top country priorities in LAC are Brazil, CARICOM, Colombia, Chile, Haiti and Peru.

DFAIT recognizes that commercial re-engagement with LAC will raise important policy considerations for Canada. Sound policy formulation and delivery will be needed to address numerous issues linked to the promotion of sustainable growth. These include energy security, sustainable environmental practices, corporate social responsibility (CSR), human capital development needs, and finding creative approaches to the issue of labour mobility.

DFAIT's Science and Technology Division has led development of the Global Innovation Strategy (GIS) that seeks to relate the Government of Canada's domestic Science and Technology Strategy with its Global Commerce Strategy in a manner that is consistent, deliberate, and results-oriented. Priority countries in LAC identified in the GIS include Brazil and Chile. Priority sectors are environmental science and technologies, natural resources and energy, health and related life sciences, and information and communication technologies.

The federal Going Global Science and Technology Program²⁶ is specifically designed to promote and enhance Canada's international science and technology efforts by supporting Canadian

²⁴ http://geo.international.gc.ca/latin-america/ecuador/whats_new/default-en.aspx?id=12408

²⁵ <http://geo.international.gc.ca/cip-pic/geo/lac-alc-en.aspx>

²⁶ <http://www.infoexport.gc.ca/science/gglobal-en.htm>

researchers in accessing international R&D collaborative opportunities through the development of partnerships with key players in other countries/economies. The Going Global Science and Technology Fund has been renewed for another fiscal year period (April 1, 2008 to March 31, 2009).

While DFAIT has the lead, the Government of Canada's re-engagement with LAC is a 'whole of government initiative'. A broad range of activities supporting the LAC re-engagement initiative are underway in numerous departments of the Government of Canada.

National Research Council (NRC)

Generally speaking, NRC does not place much emphasis on Latin America. That said, NRC, as the lead federal player in developing Science and Technology (S&T) Agreements, has been active in structuring S&T agreements with Chile and Brazil. Canada's MOU with Chile is unfunded. The agreement being negotiated with Brazil is expected to be more substantial.

Canada is continuing progress towards an S&T Cooperation Agreement²⁷ with Brazil that will result in technology commercialization ventures. Brazil was chosen as a partner country for Canada's International Science and Technology Partnerships Program. This program aims to foster international partnerships and collaborative research, with an emphasis on industry-industry and university-industry partnerships. Negotiations for a Canada-Brazil Science and Technology Cooperation Agreement are well underway. The Agreement with Brazil is expected to earmark a few million dollars.

Canadian International Development Agency (CIDA)

Canada has an active program of development assistance in LAC focused in three broad sectors: governance, private sector development, and human development (health and education). Canadian development assistance to the LAC region surpassed \$500 million in 2006.²⁸ CIDA's areas of geographic focus in Latin America include Haiti, the Caribbean, and Bolivia/Peru. Haiti is CIDA's top priority in LAC and currently CIDA is developing an aid partnership with Brazil to better support Haiti.

CIDA's priority generally is improving government know-how in developing countries. The promotion of Corporate Social Responsibility is of prime importance to CIDA, along with education, governance, accountability, institution building, and security. CIDA is very active in governance and social reform, particularly in the Caribbean. However, Western Canadian companies are conspicuous by their absence in such contracts.²⁹ CIDA partners with Canadian NGOs and private sector firms to deliver its programming. In LAC it appears that very few of the firms engaged in CIDA projects are from Western Canada.

Atlantic Canada Opportunities Agency (ACOA)

ACOA and DFAIT are discussing a number of potential initiatives to be undertaken over the upcoming six to twelve months to generate interest and participation by Atlantic companies in pursuing opportunities in the Americas.

Activities include:

²⁷ <http://infoexport.gc.ca/ie-en/DisplayDocument.jsp?did=76231>

²⁸ <http://geo.international.gc.ca/cip-pic/geo/objectives-en.aspx>

²⁹ <http://www.infoexport.gc.ca/ie-en/DisplayDocument.jsp?did=66641>

- Take Advantage of Caribbean Development Bank Annual Meeting in Halifax, May 2008
- Mission to Exponaval in Chile (December 2008)
- Study on opportunities for Atlantic Canada in the Americas Region (release November 2008)
- Project in specific sectors with Post in Miami as it is the Gateway to the Americas
- Surveying Client Interest

Export Development Canada (EDC)

Latin America is an important market for EDC. Forty-four percent of EDC's energy business is done in the region.³⁰ EDC has worked with more than 400 Canadian client companies on Brazil transactions. In Western Canada, EDC's activities focus largely on oil and gas and mining sectors, while agriculture and forestry are also important markets for EDC.

EDC helped Canadian companies do \$7.4 billion worth of business in 2006 throughout LAC, an increase of 35% from 2005. Of the total, EDC provided nearly \$2 billion in financing directly to Latin American companies for the purchase of Canadian products and services, a 155% increase over 2005. In Peru and Chile, Canada is the largest investor in their enormous mining sectors, where EDC has been heavily involved with large and small companies.³¹

In Brazil EDC has offices in Rio de Janeiro and São Paulo. An EDC office in Santiago, Chile is opening in 2008. EDC is furthermore seriously considering an office in Lima, Peru. In Brazil, for example, EDC's client portfolio includes some of the largest Brazilian corporations, including: Petrobras, CVRD, Samarco, Votorantim, Gerdau, Usiminas, and Embratel. EDC also has lines of credit with Peru, Colombia, and Uruguay.³² EDC lines of credit provide access to financing for foreign buyers to facilitate the purchase of Canadian goods and services.

Development Banks

Canada participates in the activities of multilateral development banks. The Inter-American Development Bank (IDB) is the largest multilateral lender to LAC, supporting over 300 projects for social and economic development with an average of \$10 billion in financing a year³³. Bio-fuels, sustainable energy, and climate change are currently key drivers of Bank activities.³⁴ Corporate Social Responsibility (CSR) is an important issue for IDB, in particular with respect to oil companies.

The presence in Western Canada of the Private Sector Liaison Officer network (PSLO) of the World Bank and IDB is a useful tool. The PSLO network has representatives in all four Western provinces. PSLO experts work to increase the awareness and participation of private companies in development activities.

Other important multilateral development banks active in the region are the World Bank and Caribbean Development Bank (CDB). The United States is not a member of CDB, which suggests

³⁰ The 44% includes Mexico

³¹ http://edc.ca/english/docs/speeches/2007/mediaroom_12150.htm

³² http://www.edc.ca/english/financing_8865.htm

³³ <http://www.iadb.org/aboutus/index.cfm?language=English>

³⁴ 2008 U.S. Department of Commerce webinar on IDB

good access for Canadians with respect to North American technology. There are also important regional banks such as the Andean Development Corporation.

V. CHALLENGES

As in most developing countries there are numerous challenges to doing business in Latin America and the Caribbean. Barriers to enhanced economic and commercial relations with the region have been overcome and resulted in an increase in imports and exports, inward and outward investment, technical cooperation, joint ventures, and other economic linkages. Although many challenges are still present today, there is evidence of increased ease of business in many Latin American countries. Firms contemplating entering the market should be not only export ready, but export experienced with a carefully thought out plan for market entry. The range of longstanding challenges to doing business in the region includes, but is not limited to, the following:

Logistics-Shipping, Handling, Port Clearance: Air links between Canada and the region have greatly improved over the years. Even so, while both West Jet and Air Canada have several direct flights from Western Canada to the Caribbean, neither carrier has non-stop flights from Western Canada to Central or South America. There is a continuing paucity of regular direct ocean shipping routes from Canada to a number of key markets in LAC, including to Brazil. Much of Canada's trade with LAC must go via the USA, a new challenge given security issues and the "thickening" of the USA/Canada border. Customs clearance is often bureaucratically complex and pilferage can be an issue. Appointing competent, connected, and effective freight-forwarders, customs brokers, and agents can mitigate these challenges.

Culture and Language: There are often different approaches to business, business meetings, and communications. Relationship building and face-to-face meetings are particularly important, necessitating senior and often numerous (hence, expensive) visits to the market.

Import Tariffs and Non-Tariff Barriers: Import duties and often complicated non-tariff barriers and import procedures abound in the area for reasons of import control, revenue earning, excessive bureaucracy, and in some cases, corruption. The good news is that barriers have been coming down, corruption is being reduced, and Canadian suppliers are not singled out for maltreatment. Canada's Free Trade Agreement efforts in the region together with the Doha agreement should ease access for Canadian firms.

Business Regulation/ Policy and Regulation Instability: One of the challenges that many business people meet in the region is that of shifting policies and regulations with continuously changing rules and conditions. At its worst this can lead to outright contract abrogation. As a result of public policy circumstances (or even due to effective lobbying by competitors), governments may change import rulings, product certification terms, investment rules, taxes, tariffs, duties, or other regulations that may completely change the terms under which a firm entered the market as a supplier or investor. Careful due diligence prior to committing to a business partnership or to an investment is essential.

Financing Availability: Financing is often a challenge; for customers to pay for goods and services, to finance government or private sector projects, to repatriate revenues, for investments or joint ventures, and other situations. Sometimes, when money is available it may be at unreasonably

high rates. Close consultation with DFAIT offices, Embassies/Consulates, EDC, and banks active in the area should be a pre-requisite to business overtures in the region. Contact with Northstar Finance (see Appendix B) and the Canadian Commercial Corporation may also be useful. As of May, 2008 the Inter-American Development Bank Research Department expected the inflation rate for Latin America for 2008 to be about 8%. Inflation expectations for 2009 were about 7.5%.³⁵

Bureaucracy/Documentation: The governments in the area are large and interventionist and bureaucracy is normal. Delays in visa issuance, import permits, customs clearance, regulatory decisions, etc. are commonplace. Issues regarding taxation, labour, patents, and others may also be complicated and solutions long in coming.

Security and Stability: The principal challenges to security and stability in the Americas stem primarily from weak democratic institutions and profound socio-economic inequities. Though ongoing violence is present in some American states such as Haiti and Colombia, the principal threats to human security in the region stem more from crime and corruption than war or terrorism. Corruption, disparity and fragile democracies exacerbate the instability of the region and threaten the social, political, and economic cohesion of societies. Corruption, rampant or petty, may occur in many of the region's countries, though most are attempting to reduce the extent of such practices, especially at the government level. There is little control that a Canadian company can exert over this, though a connected and trustworthy partner can advise/assist.

Intellectual Property: Companies exporting high technology products or services will need to be aware of the challenge of protecting their intellectual property (IP). There are cases where local partners or agents have found means of appropriating such IP and offering it as their own, or of developing competing products based on the original.

Finding Competent and Trustworthy Agents/Representatives: This is always a challenge in new unfamiliar markets and cultures, but it is a necessary one. Stories of unreliable, dishonest or otherwise incompetent and potential damaging partnerships in the region abound. That said, every country has its share of able and reliable firms perfectly capable of representing Canadian interests, but thorough front-end research is required.

Corporate Social Responsibility: While relevant for some time, some view this as less of a traditional challenge than an emerging one. Nevertheless there is a real challenge to companies investing in the region, especially in the extractive sectors, to be sensitive to environmental, human rights, land use, and other controversial issues.

Lack of Information: Regrettably there is a continuing lack of informed and adequate knowledge by Canadian businesses about LAC and the complexities of doing business abroad, and by LAC countries of Canada and Canadian products, services, and capabilities. This is a significant factor in limiting commercial exchanges between the two business communities, but can be remedied over time. Associations such as the Canadian Council for the Americas (CCA) with chapters in Vancouver, Calgary and Toronto, and the Canada Brazil Chamber of Commerce can assist in improving Canadian knowledge about the region. DFAIT, Industry Canada, together with their offices across Canada and various programs, seminars, and other focused events can also be of great assistance.

³⁵ http://www.iadb.org/res/pub_desc.cfm?pub_id=REV-13

Variations Country to Country: A recurrent theme of the consultations is that Latin American countries are by no means peas in a pod. South America is not a homogeneous mass, nor is Central America, nor the Caribbean. Even in a block such as the Andean countries there are great variations among the component members. The consultations revealed the differences country-to-country in LAC and the important rivalries at play.

Competition: Historical, cultural, and language links with Europe and increasing American contact through immigration and business, together with the expanding presence of Japanese and Chinese, all drive the competition. Companies from the U.S. are strong competitors. Competition not only derives from other foreign suppliers, but increasingly, as the region becomes ever more educated and industrialized, competition is coming from local sources. Such competitors usually have the ear of the local government and this may result in tighter import or product certification regulations to the detriment of foreign suppliers. It can be suggested that the Americans are more readily recognized as a source of high technology, for example, than Canadians.

VI. ECONOMIC OPPORTUNITIES

Much of Latin America and the Caribbean but particularly South America relies on resource based economies, notably mining and oil and gas. Western Canada's resource extraction development expertise and experience relates directly to the developmental challenges LAC is now facing. Furthermore, Western Canadians are familiar with mining in mountainous terrains and Canadian expertise has and will continue to assist resource extraction in the mountainous Andean region.

Western Canada's advanced technology accomplishments match up well to Latin America's interest in attracting investment in high technology areas. Indeed, many of the innovation clusters WD supports can find parallel interests in the study area. Little has been done to date, however, to explore these potential opportunities.

VI.a. Opportunities by LAC Region

This section reviews economic opportunities by major LAC market area (Andean Region, Southern Cone, Central America, and Caribbean). Brazil is addressed in section VI.b. These regional reviews draw heavily on consultations with DFAIT and relevant planning material.³⁶

Andean Community Countries

(Bolivia, Peru, Colombia, Venezuela, Ecuador)

The region is rich in oil, natural gas, and minerals, making it an important market for Canadian companies active in extractive industries. The countries in this sub-region (especially Venezuela and Colombia) have large economies offering many opportunities in a variety of sectors. The complementarities with Canada that characterize the economies in the region also offer opportunities to develop strategies and alliances to capitalize on new FTAs, such as the recently concluded agreement with Peru and Colombia, for better regional penetration. The presence of extractive industries also generates demand for Canadian suppliers in the Information and Communication Technologies (ICT) and environmental sectors, as well as for technology transfer. Particularly in the extractive industries, CSR remains an important aspect of the region's business

³⁶ <http://www.international.gc.ca/commerce/assets/pdfs/r12-en.pdf>

climate. There is room for significant growth in non-traditional areas, including wireless, geomatics, and security technologies.³⁷

Southern Cone

(Chile, Argentina, Uruguay, Paraguay)

The Southern Cone countries enjoy the highest standards of living within the LAC region and therefore often generate commercial opportunities that are somewhat different from the rest of South America. Nuclear and thermal energy, higher-tech ICT, and agricultural technologies are among the goods and services that Canada could increasingly export to this region. Furthermore, geographic characteristics in Argentina and Chile such as harsh climates and huge geographic distances are similar to those in Canada, suggesting that Canadian technologies, such as communications, remote sensing, and cold weather technologies, may be very exportable to these countries.

Central America

(Belize, Guatemala, Panama, Costa Rica, Honduras, El Salvador, Nicaragua)

Central American countries offer significant opportunities in the tourism industry and in infrastructure projects. These two sectors generate demand in the building products, construction, and environmental industries sectors. Mining and hydro power are also important sectors of opportunity. DFAIT notes the significance of the upcoming Panama Canal expansion, which will reconfigure logistical flows and create new opportunities.

Caribbean

(Bahamas, Cuba, Dominican Republic, Haiti, St Kitts and Nevis, Suriname, St Maarten, Caymen Islands, Grenada, Jamaica, St. Lucia, Dominica, Trinidad & Tobago, Barbados, Guyana, St Vincent & the Grenadines, Turks & Caicos)

The tourism industry and infrastructure projects are priority sectors for Canada in many countries in the Caribbean. International Financial Institutions (IFIs) play an increasingly important role in generating greater business opportunities in the countries of the Caribbean Community. Many of the islands (such as Cuba, Trinidad and Tobago) are also rich in crude oil and natural gas, making them especially important for Canada's oil and gas industry. Canada has an important relationship with Cuba and has consistently recognized Cuba's strong commitment to economic and social rights, with its particularly important achievements in the areas of education and health. At the same time, Canada has urged Cuban authorities to achieve similar progress with respect to basic civil and political rights, such as freedom of speech, association, and the press.³⁸

VI.b. Opportunities by Selected LAC Country

This section focuses on economic opportunities in seven LAC countries, selected on the basis of their importance as current and potential markets for Western Canada and WD interest. These countries are Brazil, Venezuela, Colombia, Chile, Peru, Argentina, and Cuba. In order to provide WD with new information, these country summaries are based primarily on material from sources other than DFAIT including the consultations undertaken for this study.³⁹ Brazil is examined from

³⁷ DFAIT October 2005 report "Overview of business opportunities in the Andean region"

<http://w01.international.gc.ca/canadexport/view.asp?id=383112&language=E>

³⁸ <http://geo.international.gc.ca/latin-america/cuba/geo/cuba-bb-en.aspx>

³⁹ The Economist <http://www.economist.com/countries/>; Government of Alberta <http://www.alberta-canada.com/export/internationalMarketProfiles/index.cfm>; EDC <http://www.edc.ca/search/countryinformation.asp>;

both a regional (current DFAIT planning material) and country (primarily other sources) perspective. Inevitably there are similarities in the information material for Brazil from both the DFAIT and non-DFAIT sources. Additional information on these seven countries and others is provided in Appendix C. The country-by-country market opportunities overview presented here is illustrative and touches on only a limited number of sectors.

Brazil

The first LAC country for which DFAIT has prepared a full market plan⁴⁰ is Brazil. Here are some excerpts:

- Brazil provides opportunities for Canada because of its sheer size and sophisticated economy, its status as a rapidly expanding economy, and its substantial import market.
- Brazil, a rapidly developing and stable economy, is an economic powerhouse by most measures.
- Brazil's highly diversified and industrialized economy is the largest in Latin America. It has extensive natural resources and is a world leader in agro-industry.
- Brazil has a huge population with a young, highly educated middle class (estimated 45 million), and an innovative and entrepreneurial private sector. Brazil is steadily improving both its macroeconomic and microeconomic landscape and is now focused on stimulating domestic growth and improving its overall business climate.

DFAIT identifies the following priority sectors selected on the basis of Canadian capability, substantial growth potential, demonstrated Canadian interest, and the ability of the Trade Commissioner Service to assist and influence business development in these sectors.

- Information and communications technologies
- Environmental industries
- Oil and gas equipment and services
- Electric power equipment and services
- Arts and cultural industries

Other information sources emphasize Brazil's role as a supplier of raw materials. A large share of the world's beef, orange juice, soybeans, and iron ore comes from Brazil. Brazil has a broad and sophisticated industrial base and the government continues its program of privatization and deregulation. Under reforming democratic governments, Brazil has conquered inflation, opened a protected economy to the world, and begun to tackle its social problems such as poverty and inequality.

Brazil is also experiencing a growing middle class with increased spending power and a demand for high quality merchandise. The British trade service observes that if a product or service is generally competitive in world markets it is also likely to be so in Brazil. EDC sees solid prospects across a wide range of sectors, with strong growth opportunities in oil and gas services, mining equipment and services, telecommunications, automotive, power, and environmental applications.

Government of Ontario

http://www.ontarioexportsinc.com/oei/redirect.jsp?page=English/Target_Your_Market/Finger_Tip_World.html

CIDA <http://www.acdi-cida.gc.ca/Americas>; UK Trade and Investment

https://www.uktradeinvest.gov.uk/ukti/appmanager/ukti/countries?nfls=false&nfpb=true&pageLabel=countries_landing; New Zealand Trade & Enterprise <http://www.marketnewzealand.com/MNZ/services/14431.aspx>; Austrade

<http://www.austrade.gov.au/Industry-Country/default.aspx>

⁴⁰ <http://infoexport.gc.ca/ie-en/DisplayDocument.jsp?did=76231>

Petrobras, Brazil's partly state-owned oil and Gas Company, has announced a major oil discovery, the Tupi field, which it hopes will produce between 5 billion and 8 billion barrels. The head of Brazil's National Petroleum Agency observed that another nearby discovery might hold as much as 33 billion barrels, which would make it the third-largest field ever found. It is estimated that investments in equipment for the oil sector will represent US\$8-\$10 billion per year in the next five years. Oil extraction material and equipment opportunities for Western Canadian companies may include:

- Drilling equipment, components and tools
- Components for seismic vessels, production platforms, refineries, corrosion control, and refrigeration
- Pumps and pipeline products
- Drilling, exploration, airborne seismic surveys, catering, engineering and environmental services
- Software for drilling, exploration, oil platform management, and geophysics

Eighteen Canadian pipeline products and services companies attended the Rio Pipeline Exhibition 2007, the largest Canadian participation on record. Seven of these Canadian companies were new to the Brazilian market. This was the largest foreign delegation to ever attend Rio Pipeline.⁴¹

The Brazilian IT market is by far the largest in Latin America and is projected to grow at a compound annual growth rate of 11 per cent over the 2007 to 2012 period. The total value of spending on IT products and services should pass US\$20 billion in 2008 and US\$30 billion by 2012. Wireless penetration and the number of internet subscribers are growing rapidly. Economic growth is lifting millions into a middle class for whom computers are no longer beyond reach.

The consultations highlighted Brazil's strengths in livestock. While there are competitive factors, livestock genetics is seen as an area of potential opportunity for Western Canada. References also arose in consultations to Brazil's expertise in bio-fuels and potential technology transfer opportunities.

Venezuela

Venezuela is a country of vast economic potential but there are challenges. The business climate is turbulent and uncertain, particularly for private capital and foreign direct investment. Oil and gas agreements have required renegotiation including higher royalties and a requirement for joint venture relationships with the state-owned oil and gas company. The government is unlikely to move towards full state control of the economy, but the potential for further nationalisation in strategic sectors may curb private investment.

EDC sees opportunities in all sectors but most particularly in oil and gas, agriculture/food, and health, as well as in information and communication technologies (particularly rural). Canada and Venezuela have signed a Foreign Investment Promotion and Protection Agreement (FIPA) and a double taxation agreement.

⁴¹http://www.canadainternational.gc.ca/brazil/highlights_actualites/SolutionsRioPipeline2007.aspx?lang=en&highlights_file=

The government will continue to use the state's wealth of energy resources as leverage to deepen diplomatic and commercial relations with countries it considers friendly within and outside the region. Connections with Cuba are strong. Venezuela helped Argentina during its financial travails and now holds 70% of Argentina's debt. Venezuela is making sophisticated foreign investments, for example in the pharmaceuticals area.⁴²

Colombia

The Government of Colombia has reduced public debt levels, improved security, and adopted an export-oriented growth strategy, resulting in a growing sense of confidence in the economy. Equal treatment has been granted to foreign and domestic investors. Colombia has experienced a sharp rise in investment and is expected to continue receiving strong capital inflows and be one of the best economic performers in the region.

Notwithstanding these advances, Colombia is faced with complex challenges including 50 years of internal armed conflict. The poverty level hovers around 50 percent and income inequity is extremely high. The problems of inequality and exclusion are exacerbated by the complex issues of illegal cultivation and drug trafficking.

EDC consider the potential for Canadian trade and investment opportunities in Colombia to be high in all sectors, but most particularly in oil and gas, mining, power, as well as in information and communication technologies. Assuming the FTA is signed with the United States, there will be opportunities in the manufacturing sector as the local industry looks to upgrade process and technology.

Wheat, pulses, newsprint and paper products, automobile parts, copper, fertilizers, barley and aluminum lead Canadian exports to Colombia. Canadian investment in the Colombian telecommunications and energy fields has increased consistently since the 1990's. Over the last five years, Canadian companies have also invested in the fields of agri-food, mineral exploration, pulp and paper, printing, shoe manufacturing, consulting, plastics, educational software, construction, and forestry. Colombia is very interested in associating with Canadian firms and this reflects the sharply increasing awareness of Canada as a source of technology and quality products. (The better appreciation in Colombia of Canada as a source of advanced technology may suggest generally that innovation relationships are worthy of more attention.) This perception owes much to the very high profile of Canadian companies active in Colombia such as Bata Footwear, Enbridge, Kruger Paper, McCain Foods, Nexen, Nortel Networks, President's Choice, International, Quebecor World and Talisman Energy.⁴³

Despite the country's problems, Colombia's economy is diverse and relatively advanced. With duty-free access to the other Andean nations, and negotiations for a FTA with both the U.S. and Canada are underway, Colombia is ideally placed to take maximum advantage of regional developments.

Chile

The Economist Intelligence unit places Chile as the best country in Latin America to do business, measuring indicators such as political and institutional environment, macroeconomic stability,

⁴² Discussion with Canada's International Development Research Centre office in Montevideo

⁴³ Canadian Embassy in Colombia <http://www.infoexport.gc.ca/ie-en/Office.jsp?oid=62>

policy towards private enterprise, foreign investment policy, financing, and infrastructure. There is wide consensus across the political spectrum in favour of economic liberalisation. Chile is known for its macroeconomic stability and for being a country open to foreign investment. Many foreign companies look at Chile as being a stepping-stone to managing or expanding their business into the rest of South America. EDC sees business opportunities across a wide range of sectors that match Canadian capabilities, including mining, infrastructure, power, and environmental applications.

Chile is a mining country. Mineral exports from the northern regions, predominantly copper, represent close to 50 percent of national foreign exchange earnings. Opportunities exist in exploring the estimated 1 million hectares of undeveloped mineral reserves in Chile. Mining equipment and supplies is an important opportunity area. There are opportunities for environmental protection technologies and expertise that reduces the environmental risks associated with mining. These opportunities will emerge as Chile enforces many of the environmental standards it recently adopted.

The following opportunities exist for suppliers of mining equipment/services for both new mining projects and existing mining operations:

- Mineral exploration (geophysics, mapping, diamond drilling, tunneling)
- Mining software (resource estimation, modeling, mine design and planning, maintenance and optimization)
- Processing technologies
- Contract mining
- Engineering services
- Environmental equipment (water and sewage treatment plants, effluent analysers, software)
- Environmental consulting (remediation and mine closure)
- Mine safety training and equipment
- Mining equipment

In the environment sector there are opportunities to sell advanced environmental services and consultancy, particularly to companies that export and have to adhere to strict E.U./U.S. technical/corporate governance standards. Regulations being implemented will generate demand not only for pollution control equipment, but also for technical environmental engineering and consulting services. Regulations require all wastewater to be treated by 2010. Investment in collection, transport, recycling, incineration, and final disposal of hazardous waste is anticipated.

A point arising in the consultations was the significance of aquaculture in Chile. Chile has become the leading world producer and exporter of fresh and frozen salmon. The industry cluster that has developed around the Lakes Region of Chile is world-class. Value added feed ingredients and plant based protein, for example in fishmeal, may be an opportunity area.

Peru

Peru is politically and economically stable, with annual economic growth of about 7 percent. Much of this growth is due to increased foreign investment in Peru and increased exports of minerals. Privatisation activity continues in Peru and many state-owned companies, particularly those dealing with ports, airports, roads, mining, oil and gas, energy, agriculture and telecoms, are earmarked for concession.

EDC sees growth opportunities for exports and investment in the following sectors: mining investment, mining equipment and services, power, and environmental applications and services. EDC expects that the economy will continue to be driven by strong investment, as a result of a number of projects in the mining and hydrocarbons sectors, as well as strong housing construction and public infrastructure spending. In November 2006, Canada and Peru signed a Foreign Investment Protection Agreement (FIPA).

Peru is a major player in the international metals marketplace. At present Peru's mining industry is second only to Chile's, and has the potential to become the leader in Latin America. Many of the world's top mining companies have made large investments in Peru. The government has issued concessions for exploration covering 12 million hectares, which it hopes will trigger further investment of \$11 billion over the next four years. The mining industry is booming, as is the economy. Nonetheless, the industry must concern itself with important environmental, Indigenous Peoples, and regional development issues. Peru requires infrastructure to allow the mining industry access to mountainous regions and other difficult terrains.

In the oil and gas sector Peru has opened up large areas of the country to exploration. The government is encouraging a \$1 billion modernisation of a state-run oil refinery and the construction of an export terminal for a huge liquefied natural gas project, which would be the biggest investment in Peruvian history. The government has granted more than 80 exploration contracts so far, covering 540,000 square kilometres.

Argentina

In 2003, the Argentine economy began to recover from the financial crisis of the previous year and has since grown by over 8.5% for four years in a row, fuelled by investment and consumption. Prospects continue to be good. EDC sees solid prospects across a wide range of sectors, with strong growth opportunities for Canadian companies in oil and gas services, mining equipment and services, information and communication technologies, infrastructure, and power.

In the oil and gas sector the privatization of the oil and gas industry has created opportunities for foreign suppliers. Pipelines are being developed to export natural gas from Argentina to Brazil, Chile, and Uruguay and additional exploration within Argentina is proposed. Alberta interests are significant investors. Several Alberta-based companies have operations in Argentina, including Nova Gas, Norcen, AEC (now EnCana), and TransAlta Utilities.

In the ICT sector, Argentina's telecommunications market has been completely liberalised, creating one of the fastest-growing telecommunications markets in Latin America. The most dynamic segments have been mobile and wireless telecommunications, broadband, high-speed communications, and data transmission and internet-related technologies. Argentina possesses the most advanced software industry in Latin America, largely due to its highly educated workforce and modern telecommunications infrastructure, as well as attracting investment from global firms including IBM and Motorola. Argentina is also starting to gain a growing share of the global IT outsourcing sector, and leads e-commerce development online in the Spanish-speaking world.

Cuba

Cuba remains a heavily authoritarian state, with severe limits on political freedoms, including freedom of expression and the media. Cuba has been subject to a U.S. economic embargo since 1962.

Cuba demonstrates high achievements in human development such as free health care, free education for all, and a social welfare system. Although the new president, Raul Castro, is introducing a number of reforms, the Economist Intelligence Unit expects gradual, rather than sudden, political (and economic) transformation. EDC notes that Canada has an established and stable trade relationship with Cuba and the potential is high for Canadian trade and investment opportunities in the country in all sectors, but most particularly in extractive, infrastructure, and environmental applications.

Canadian mining companies such as Sherritt International are very active in Cuba. Cuban exports of nickel and cobalt, much of which is refined in Alberta, is an important source of foreign currency earning for Cuba. Cuba holds major reserves of oil. Recent discoveries have shown that Cuba may be able to produce as much as 18.3 million barrels of oil per year. Cuba has opened an 112,000 square kilometre area in the Gulf of Mexico for deep-water oil exploration by foreign companies. New oil and natural gas extraction technology has resulted in increased production from operations along the northwest coast of Cuba where Sherritt International Corporation is active, in partnership with Cuba government-operated Cuba Petróleo (Cupet).

Cuba has strengths in medical technologies, and may be an inexpensive source of good science. The notion of outsourcing research to Cuba arose more than once in the consultations. Cuba's interest in nanotechnology also arose in discussions.

VI.c. Opportunities by Sector⁴⁴

DFAIT has identified the following sectors as offering clear market opportunities well suited to Canadian capabilities and interests in the LAC region⁴⁵:

- Building products & construction (includes services)
- Electric power equipment & services
- Environmental industries
- Information & communications technologies
- Oil & gas equipment & services

While commodities such as wheat, pulses, potash, paper, and coal dominate Western Canada's current exports to LAC, the focus of this study was to identify opportunities for collaboration in emerging and/or science & technology (S&T) sectors. More details on opportunities by specific sector are addressed in the country-by-country coverage above and in Appendix C. Opportunities in S&T sectors are considered in section VII of this report.

Corporate Social Responsibility (CSR) practices and initiatives by Canadian companies, conducted fairly and respecting local communities, cultures, and values, can contribute to local sustainable development and improve the standards of living of LAC countries. CSR practices can create a competitive advantage and contribute to enhancing Canada's image as a partner of choice for

⁴⁴ DFAIT's Market Reports can shed some light on sectoral opportunities by country. These Reports can be accessed at <http://www.infoexport.gc.ca/ie-en/IndustrySector.jsp>

⁴⁵ <http://www.international.gc.ca/commerce/assets/pdfs/r12-en.pdf>

business in the region. Western Canadian expertise in CSR, developed over many years of development experience in LAC, may be an area of commercial opportunity.

Mining

Mining opportunities for Western Canadians include exploration, investment, equipment, environmental and other services, and so on. Related technologies such as geomatics are important. Of the seven countries examined, mining opportunities are of major importance in Chile, Peru, Colombia, Argentina, and Brazil. Mining does not appear on the DFAIT list of best opportunity sectors (see preceding bullets), but is nonetheless a significant area of opportunity.

Canadian investment in mining in Latin America stands at \$35 billion⁴⁶. The top countries for Canadian mining investment are Brazil, Chile, and Peru. Argentina, the site of significant Canadian exploration activity, and Ecuador, where Canada has a large share of mining activity, are also important investment destinations. An important objective is to have Canadian goods and services exports follow the mining investment.

Oil and Gas / Energy

Oil and gas equipment and services opportunities are important in six of the seven countries, excluding Chile, according to EDC. The most important oil and gas markets are Venezuela (conventional and heavy oil), Brazil, and Colombia. Despite price caps, Argentina is also an important market. Opportunities may extend to enhanced oil recovery and CO₂ sequestration, with Trinidad and Tobago a possible market in particular.

There is thought to be about 50 Canadian energy services companies in the LAC market. Energy supply is an important consideration for the large mining industry that seeks Canadian energy expertise. Pipelines are a significant area of activity. For example, Enbridge owns 25% of a pipeline in Colombia. There is also interest in tidal, small hydro, and other Canadian alternate energy technology. Governance issues in the energy sector include Corporate Social Responsibility, sustainability, and renewable energy.⁴⁷

Life Sciences and Biotechnology⁴⁸

Generally, the consultations encountered interest in life sciences and biotechnology primarily with respect to genetics and bio-fuels in Brazil and Chile. EDC sees health related opportunities in Venezuela. Consultations also touched on Cuba's health related expertise. Aquaculture is an important industry in Chile, with strong historical links to British Columbia.

Information and Communications Technologies (ICT)

ICT is identified as an important opportunity area in Brazil, Venezuela, Colombia, and Argentina. Western Canada offers sophisticated technology solutions and IT services across a range of sectors. ICT is an area DFAIT identifies as a major opportunity area. Consultations suggested that generally with respect to advanced technologies, opportunities are more suitable to larger companies.

⁴⁶Natural Resources Canada Mining Sector

⁴⁷Natural Resources Canada CANMET

⁴⁸ Information on Environmental technology in particular in biotech clusters in Latin America (Brazil and Cuba) can be found in the following link: http://www.portofentry.com/site/root/resources/feature_article/2078.html
This article makes mention of Canadian cooperation with LAC. The article talks about CamBio Tec, which is the Canada-Latin America Initiative on Biotechnology for Sustainable Development, which is a body of international collaboration to foster commercialization of modern biotechnologies in Latin America.

Using geomatics as an example of ICT, Peru, Chile, and Brazil are developing long term plans to improve their geomatics capabilities. The activity focuses on natural disaster management, land use planning, and spatial data infrastructure.⁴⁹

Aerospace

Western Canada's aerospace industry is increasingly engaged with Embraer of Brazil. Embraer is a strong company with an interest in Canadian suppliers. Embraer's activities in the Very Light Jet field show particular promise.

Environmental Technologies

The Canadian environmental industry is a global leader in hydrogen and fuel cell technology. Many Canadian companies specialize in environmental management for major resource industries such as oil and gas, mining, and pulp and paper. Canada's environmental industry is comparable in size to pharmaceutical and aerospace industries and equally sophisticated in its products and services offerings. The market for environmental goods and services in Latin America presents a prime opportunity for Canadian investment and trade.

Latin America's larger, faster-developing economies are turning their attention and growing resources to environmental reforms. Strong economic growth and market-oriented reforms in Latin America, such as extensive privatization and hemispheric trade liberalization, have increased awareness of environmental problems and have generated pressure to solve them. Some key Latin American nations have begun to strengthen outmoded or weak environmental regulations. Increased environmental awareness throughout Latin America is being matched, in many cases, by additional resources to deal with environmental problems.

Although reliable statistics on environmental goods and services exports are difficult to obtain, the market for environmental technologies in Latin America was estimated at \$6-7 billion for 1992. The Southern Cone environmental market (Chile, Argentina, and Brazil) is now estimated at \$1.7 billion and is expected to grow nearly 30 percent over the next decade.⁵⁰

To tap into this potential, the United States is developing a new USAID program that matches the environmental technology needs of Latin America with the environmental products and services of U.S. companies. The Environmental Technology Network for the Americas (ETNA) provides information on environmental trade and investment opportunities in Argentina, Bolivia, Brazil, Chile, Ecuador, Mexico, Paraguay, Peru, Uruguay, and Venezuela. To collect the information, ETNA uses an extensive network of local technical representatives and environmental business advisors who identify product, service, and infrastructure needs in Latin America. Similarly the government of Israel has created the Israel Export & International Cooperation Institute, supported by over 2,600 member firms, private-sector bodies, this institute advance business relationships between Israeli exporters and overseas businesses and organizations. By providing a wide range of export-oriented services to Israeli companies and complementary services to the international business community, the Institute helps build successful joint ventures, strategic alliances, and trade partnerships.⁵¹

⁴⁹Natural Resources Canada's Earth Sciences Sector has an initiative headquartered in Vancouver addressing geoscience data on natural hazards in the Andean countries. Interestingly the project was located in B.C. because of the mountainous nature of the province, akin to the geology of the Andean countries.

⁵⁰ http://findarticles.com/p/articles/mi_m1052/is_n5_v115/ai_16042992

⁵¹ <http://www.export.gov.il/Eng/Articles/Article.asp?CategoryID=352&ArticleID=527>

VII. LAC SCIENCE AND TECHNOLOGY

WD has made a range of investments over many years across Western Canada focusing on building physical and human research infrastructure. To the extent that re-engagement in Latin America becomes a priority for WD, it makes sense for the department to build on the key technologies the department has already encouraged. Some of the innovation areas that may hold promise include bio-fuels, ag-biotech, vaccines, and aerospace among others. Working with Western Canadian innovation clusters to enhance science and technology based relationships with LAC counterparts may be an appropriate area of WD activity.

VII.a. Opportunities in Science and Technology

The National Research Council (NRC) identifies the following general areas of opportunity in Science & Technology for LAC: fuel cells, bio-fuels, aerospace, biodiagnostics, and plant biotechnology. Particular niches may include advanced vaccines work with Cuba and others. Metrology, the science that deals with measurement, may become important. NRC emphasizes that available resources to develop initiatives may be limited.

Despite the quite limited outreach by Western Canada's innovation clusters to Latin America, there are some cases where potential in LAC is recognized by innovation clusters and there is growing interest within Western Canada in the potential opportunities LAC could provide. The bullets below introduce some promising areas:

- The NRC Institute for Fuel Cell Innovation in Vancouver is aware of and interested in Brazilian expertise in biofuels, primarily the use of sugarcane to produce ethanol
- For aerospace, Embraer's activities in the Very Light Jet field show particular promise
- The University of Regina's Petroleum Technology/CO₂ Sequestration experts feel that there may be some interest in Trinidad and Tobago in enhanced oil recovery
- Canadian technology may be relevant to heavy oil development in LAC
- Genome BC's interests include genome attributes of South American crops, salmonids, and a developing project on grape and wine production in Chile
- The Vaccine and Infectious Disease Organization sees potential, particularly in Cuba and Brazil
- The Western Canadian oceanography cluster sees opportunity in LAC and wishes to stay apprised of and be involved in ACOA's upcoming ocean industries development activities

Argentina and Chile exhibit the greatest interest in Canadian science and technology and research and development. Chilean universities are well advanced in R&D, emphasizing water, environment, mining technology, reclamation, and mine closures. In Argentina interest centers on the same themes plus nuclear energy. There is interest in clean coal technology in Colombia. There is huge interest in innovation in Chile, for example computer modeling to forecast potential hazards from mine closures.⁵²

⁵² Discussions with Natural Resources Canada

VII.b. Chile Case Study: Improved Competitiveness Through Innovation⁵³

Chile has a strong interest in attracting Canadian investment. Chile provides incentives that target in particular investments that create new technologies and innovation capacity in Chile. Chile's innovation investment priorities⁵⁴, in order, are biotechnology, mining, and forestry.

Canada and Chile share interest in applied research in several natural resources fields, namely energy (biofuel), agriculture (including agri-food), forestry (genetics and certification), and mining (bio-processes). In the health field both countries are interested in research on the effects of arsenic on humans, vaccines for animals and humans, and nutraceuticals. Biotech is an important sector in Chile, encompassing ag-biotech, the linkage between mining and biotechnology, and bio-fuels. The food chain is also viewed as an important area with antibiotics of particular importance. Chile, now in a boom economy, needs to increase agricultural production.⁵⁵

As a result of a royalty payment levy passed by law in mid 2005 on copper exports (five percent tax) the Chilean State has established a fund to improve Chile's national competitiveness through innovation in a number of key clusters. The vision is for Chile to double its GDP per capita to US\$25,000 by the year 2020. The pillars of this major national initiative are CORFO, the national development agency, and CONICYT, the National Science and Technology Commission. The 2008 Chilean national budget has specified US\$410 million for innovation. Research and development expenditure as a percentage of GDP is 0.5 percent (1996-2002). This level of investment is set to double, with funds destined to innovation for a competitiveness program.

The Chile Council of Innovation for Competitiveness contracted a study that identified eight key clusters requiring in-depth development programs, where the state will have a funding role in favour of innovation. The eight key clusters are:

- Aquaculture
- Offshoring / outsourcing
- Tourism (wine, skiing, fly fishing, thermal)
- Financial services
- Copper mining
- Processed foods
- Fresh fruit
- Pork / poultry

CONICYT is the agency/advisory body to government on science and technology and is a pillar of Chile's national innovation for competitiveness program. CONICYT supports seven centres of excellence:

- biomedicine
- material sciences
- applied mathematics
- astrophysics
- environment and biodiversity
- oceanography research

⁵³ www.marketnewzealand.com/common/files/chile-cb.pdf

⁵⁴ <http://www.nzte.govt.nz/common/files/p4-seminar-jimenez.pdf>

⁵⁵ Discussion with International Development Research Centre office in Montevideo

- molecular cell studies

VII.c. Areas of Scientific Strength in LAC⁵⁶

The Office of the National Science Advisor had a report prepared in 2005 on Scientific Collaboration between Canada and Developing Countries.⁵⁷ The report was from a development aid perspective, but the underlying assumption in the report is that collaboration must be mutually beneficial in order to favour sustainable development. The report highlights the intensity of Canada's scientific relationship with Brazil. Brazil's scientific system is maturing quickly thus opening up several fields for mutually beneficial collaboration.

Table 5: Scientific Papers in Natural Sciences and Engineering, 1992-2003

Country	Number of Papers
Canada	306,753
Brazil	75,466
Argentina	35,157
Chile	16,953
Venezuela	7,648
Colombia	4,434
Cuba	3,636
Peru	1,705

This section attempts to provide some insights into Canada's potential scientific collaboration with the seven countries selected for more detailed coverage. The material selected for use in this report addresses the number of published papers per year in natural sciences and engineering and the Average Relative Impact Factor (ARIF). ARIF is an index computed from citations to scientific papers. Citations are a good proxy for the quality of published research. It is noteworthy that Peru has an ARIF of 1.04, which is higher than the world average.

Table 6: Relative Scientific Strengths

Country (overall ARIF for country)	Ranking of Countries' ARIF Scores by Scientific Field							
	Biology	Biomedical Research	Chemistry	Clinical Medicine	Earth & Space	Engineering & Technology	Mathematics	Physics

⁵⁶The consultations encountered a range of opinion of the scientific capabilities of Latin American countries. For example Agriculture Canada in Saskatchewan was not aware of strong agbiotech capabilities in Chile, despite Chile Invest's interests in agbiotech. In 1999, Saskatchewan Agriculture and Food and the Ministry of Agriculture of Chile signed a three-year Memorandum of Cooperation on agricultural biotechnology. For details visit http://www.agwest.sk.ca/vti_script/search.html0.idq and insert the word Chile in the search box and select from the search results the Word document entitled AGBIOTECH BULLETIN. Priority areas for cooperation included livestock genetics, animal feed production, natural products and plant extracts, molecular genetics and transgenics, plant tissue culture, biological fertilizers and rhizobia and novel plants and plant products.

⁵⁷ www.science-metrix.com/pdf/SM_2005_002_CNS_Collaboration_Canada-Developing_Countries.pdf

Canada (1.08)	1	1	1	2	1	3	3	1
Peru (1.04)	4	2	NA	1	NA	NA	NA	NA
Colombia (.91)	7	4	5	3	NA	NA	NA	2
Brazil (.86)	5	8	4	5	3	4	1	5
Argentina (.86)	3	5	3	6	4	1	4	3
Venezuela (.84)	6	7	2	4	5	2	5	6
Chile (.80)	2	3	7	8	2	5	2	4
Cuba (.72)	8	6	6	7	NA	NA	NA	7

NA indicates insufficient activity in the field for ranking purposes

Observations include Peru's apparent relative strength in clinical medicine and biomedical research, Colombia's strength in physics, Brazil's strength in mathematics, Argentina's strength in engineering and technology, Venezuela's strengths in chemistry and engineering and technology, and Chile's strengths in earth and space and biology. This material is strictly introductory, and for more insight the source document should be examined. Perhaps the principal observation is that, in terms of ARIF at least, Canada is surpassed by one or more LAC countries in three of the eight scientific fields.

VII.d. LAC National Innovative Capacity⁵⁸

This section provides information developed by Michael Porter and Scott Stern on the National Innovative Capacity of the seven selected countries. The countries are ranked by the National Innovative Capacity Index. Information on scientific and engineering staff is also provided. In addition, sub-indexes measuring important components of innovative vitality are shown. The sub-indexes are divided into four groupings: those bearing on innovation-related public policies (e.g. the effectiveness of intellectual property protection and the effectiveness of competition policy); those assessing the cluster innovation environment (e.g. the sophistication of local buyers and the quality of local suppliers); those measuring the strength of linkages; and those bearing on the degree of innovation orientation in company operations and strategies.

Table 7: National Innovative Capacity Indices* (2003)

Country	Innovative Capacity	Proportion of Scientists & Engineers	Innovative Policy	Cluster Innovation Environment	Innovation Linkages	Operations & Strategy
Canada	12	13	6	8	7	19
Chile	41	47	35	42	32	34

⁵⁸www.kellogg.northwestern.edu/.../sstern/htm/NEWresearchpage/Publications/Porter%20Stern%20GCR%202003.pdf

Brazil	42	51	53	29	36	33
Argentina	56	42	73	58	66	63
Colombia	62	65	60	53	64	57
Peru	65	54	80	77	76	71
Venezuela	67	56	82	76	77	75
Cuba	Indices Not Available					

*Indices are the rank of the country among the 95 countries analyzed.

Chile and Brazil clearly exceed the other selected LAC countries in terms of national innovative capacity.

VIII. POTENTIAL ACTION/SUGGESTED APPROACHES

The options below offer WD means to increase Western Canada's engagement in LAC and to effectively contribute to the 'whole of government initiative' underway to become better engaged in the LAC region.

The most promising area for activity by WD is in the advancement of Western Canadian innovation clusters through relationship building with key stakeholders in Latin America. While this study interviewed a sample of innovation clusters with respect to their existing activities in LAC, further research would be required to assess the potential for technology based partnerships for specific innovation clusters.

Some suggestions are provided below with respect to activities that can support relationship building and other objectives. The suggestions are presented in order, with those thought to be most useful to supporting the advancement of innovation clusters through relationship building.

S&T Study Tour to Western Canada

There are two Trade Commissioners at Canada's LAC Posts (Sao Paulo, Brazil and Santiago, Chile) with specific responsibilities for Science and Technology. It may be worth considering supporting these Trade Commissioners in undertaking a Study Tour of Western Canada's innovation clusters. Consideration could also be given to inviting an appropriate official from the Inter-American Development Bank, and possibly the Latin American director for IDRC.

There may also be potential for a Western Canada capabilities brochure for dissemination to Canada's LAC Posts.

Relationship Building with Canada's Posts in Miami and Houston

DFAIT notes the importance of Canada's Post in Miami with respect to Canada's Latin America market development efforts⁵⁹. Most big American companies active in Latin America are headquartered in Miami. Houston is significant in the oil and gas industry. For example, PetroBras maintains a major procurement office in Houston. WD could liaise with these two Posts to explore potential LAC opportunities under the North American Platform Program.

⁵⁹ <http://www.infoexport.gc.ca/ie-en/DisplayDocument.jsp?did=80259&cid=721&oid=219>

Monitor ACOA's Technology Partnering Initiative

ACOA plans to work with Posts and NRC-IRAP in one or more markets interested in technology partnerships with Canada to identify and introduce potential matches. The approach would be based on NRC-IRAP's Open House Canada Program. Consistent with other recommendations in this report about innovation clusters, this ACOA activity may be a model worthy of closer examination.

Facilitate Clusters/Academia Partnerships

One way to gain entry into many Latin American countries is through academic communities. The consultants encourage facilitation of an effective relationship between the innovation clusters and academic institutions, focused on the LAC region and led by the latter. WD could choose to facilitate a strengthened partnership between colleges, universities and the clusters to focus on the region, led by the academic community. Certainly collaborative partnership between academic institutions and these clusters are the norm today but a concerted effort along these lines should provide significant new leveraged results.

A related opportunity focuses on significant efforts to attract youth from the region to study in Canada and programs such as Global Vision Junior Team Canada⁶⁰, which create opportunities for young Canadians to travel and learn abroad. Relationships established in student exchanges are life long and life changing. There is a role here for WD to ensure maximum impact in Western Canada of such opportunities.

Countries that are logical, but not sole targets for such relationships include Brazil, Chile, Peru, and those with which Canada is finalizing Free Trade Agreements. However, a detailed review of relationships developed in recent years by Canadian colleges and universities will almost certainly yield opportunities in other countries in the region. When consulted the constant and reasonable refrain from interlocutors revolved around a lack of resources to expand either exploration or activity. WD could play a facilitative role here.

Support Industry Associations

There is potential for WD to support efforts by private sector industry associations actively seeking to expand corporate engagement in LAC. WD could play both a sponsorship and facilitative role and ensure these new approaches take into account the needs of client groups across Western Canada. In particular, WD could work with the Canadian Council for the Americas and the Brazil-Canada Chamber of Commerce both of which undertake business development activities in LAC.

Awareness Building

WD could have a significant role in disseminating or enhancing knowledge on LAC. In particular, WD can consider ways and means of increasing market awareness in the business community and innovation clusters. For example, WD could play a role in ensuring that Western Canadian business and innovation clusters are fully briefed on the opportunities and impacts of new Free Trade Agreements in Latin America. A parallel activity is ensuring that Western Canada's viewpoint is heard prior to negotiation of any new FTA.

Embraer Outreach

WD is active in bringing major federal procurement opportunities to the attention of Western Canadian aerospace suppliers. The Embraer connection is advancing and a role for the department

⁶⁰ <http://www.globalvision.ca/>

may be appropriate. An OECD plus Brazil agreement on buyer financing limits has improved the bilateral relationship, along with Air Canada's purchase of 60 Embraer aircraft. Embraer may be planning a mission of Canadian firms to Brazil.

Leverage Existing Western Canadian Links with LAC

Another opportunity is to have WD undertake a role in working with, leveraging, and supporting the very substantial economic links that already exist between Western Canada and the LAC region. Western Canadian corporations like Teck Cominco, Nexen, Enbridge, Methanex, EnCana, Canadian Superior Oil, Potash Corporation, Talisman and a dozen or more other energy and resources based firms are active and have invested billions of dollars in the region. These major Canadian companies have substantial experience in the LAC region that should be shared with other interested companies. Furthermore, their experience and knowledge can be used to advise and/or assist other Canadian firms. These companies have confronted the challenges of exporting to, investing in, and joint venturing with firms in the LAC region, and have experience dealing with policy, regulatory, and political challenges present in the region. .

In addition they could be tapped for their experience/advice and perhaps used to piggy back new firms into the region in sectors such as environmental and petroleum technologies. The Canadian Wheat Board books a quarter of their sales in LAC, and Western Canadian suppliers sold over \$150 million in peas, beans, and lentils into the area in 2007. These and other agriculture product exporters might be able to assist firms in the functional foods and nutraceutical cluster for example.

Non-Government Organizations (NGOs) with experience in the region can potentially be useful partners for initiatives in the LAC region. For example, business development in Latin America in many cases encounters impacts on Indigenous Peoples. NGOs are knowledgeable in such areas, including Corporate Social Responsibility which is a Government of Canada priority. Key NGOs with strong Western Canadian presence include the International Institute for Sustainable Development, the Suzuki Foundation, the Pembina Institute, and Canadian Business for Social Responsibility.

Inter-American Development Bank Annual Meeting in Western Canada

There is an opportunity to hold the Inter-American Development Bank's annual meeting in Canada in 2011. WD could explore advocating for a Western Canada location. Canada's Executive Director at the Bank would be supportive. Multilateral Development Bank meetings are big events, attracting large numbers of senior decision makers. Such a meeting could be a useful venue to showcase Western Canadian capabilities and build relationships. ACOA was involved with the annual meeting of the Caribbean Development Bank held in Halifax in May 2008.

Potential Action Areas Not Directly Under WD's Influence

Smart Park Linkages: About five years ago Industry Canada experimented with encouraging relationships between Smart Parks in Canada and Smart Parks in Scandinavia, and sees the concept as being of possible value for Western Canada and the more advanced areas of Latin America. Chile may be the best target area, given Chile's S&T strengths and the effort that country is making to develop such partnerships.

Science and Technology Counsellor: Canada's Science and Technology Counsellors undertake S&T policy and program monitoring and reporting. The objective is to contribute to Canada's S&T policy and program formulation by maintaining an up to date intelligence scan of S&T policy issues in the host country. Furthermore, these Counsellors promote S&T collaboration with the objective of fostering S&T partnerships of Canadian governmental institutions, the academic community, and the business sector, with their counterparts in the host country. Canada maintains senior Science and Technology Counsellors in Brussels, Paris, Berlin, Tokyo, London, Washington, and New Delhi. No such representative is posted in Latin America. Canada does have trade commissioners with specific S&T responsibilities posted in Brazil and Chile. Recognizing WD's interest in innovation clusters, the absence of a Science and Technology Counsellor in Latin America somewhat restricts WD's ability to readily understand the policy dimensions and collaboration partnership opportunities that may face innovation clusters in Western Canada interested in Latin America.

Latin America Statistics: Statistics Canada data on investment by industry sector for Latin America are embedded within the "all other foreign countries" classification. While this is not WD's direct concern, such data grouped for Latin America, if possible, would be helpful. (The groupings used are U.S., U.K., other E.U., Japan and other O.E.C.D., and all other foreign countries.)

EDC Matching: EDC has an impressive matching capability, wherein bonded Canadian companies are introduced to EDC's major corporate contacts in Latin America. On occasion in-coming buyers tours are arranged. For example the Chilean mining industry is seeking alternative sources of power. EDC organized a visit to Canada by Chilean decision makers. In particular, coal technologies, a Western Canada strength, was highlighted during the visit. This matching service may have the potential for WD, in partnership with EDC, to support commercial, bonded Western Canadian companies associated with innovation clusters.

DFAIT Post Plans: DFAIT post plans are online on the department's intranet system. These post plans could be a valuable resource for WD with respect to any initiative under consideration. WD would benefit from full consultation with DFAIT on any potential WD initiatives in the study area. Senior DFAIT staff in British Columbia noted the value in WD undertaking pan-Western initiatives.

IX. CONCLUSIONS

In summary the research and consultations undertaken for this study identified three major findings. First, economic conditions in Latin America are improving and a sense of awakening to the market can be discerned in Western Canada. Second, science and technology is a cornerstone of re-engagement efforts. Third, the Western Canadian innovation clusters sampled have minimal interaction with interests in the study area, but there are cases where potential is recognized, and there is increasing interest.

The study underlines that the Government of Canada is serious about re-engagement in Latin America. The consultants encountered many federal departments engaging in activities supportive of Canada's re-engagement strategy. Much of the re-engagement effort relates to stronger science and technology ties and related technology commercialization. WD's core competence in supporting development of innovation clusters can be very relevant to this important new direction of the Government of Canada.

WD can contribute best to re-engagement by working with innovation clusters to explore relationship building with Latin America. Western Canada's universities and community colleges could support the department and the innovation clusters in this objective.

Further efforts to consult Western Canada's innovation clusters with respect to prospects for Latin American partnerships is an appropriate next step for WD to consider in response to Canada's re-engagement strategy. Research to better understand capabilities of innovation clusters and analysis of the alignment between specific LAC markets and Western Canadian capabilities can be important supportive elements.

It should be acknowledged that there is little emphasis on Latin America at the National Research Council. While Canada does have special S&T linkages with Chile and Brazil, the MOU with Chile is unfunded and the nearly completed agreement with Brazil will provide only a few million dollars. DFAIT's Science and Technology Division cautions that substantial partnership development may be premature in that outside intellectual property is very much at risk in Latin America, where the immediate public good trumps corporate interests.

In the further development of initiatives relating to innovation clusters, it is recommended that WD develop strong relationships with the National Research Council and with DFAIT's Science and Technology Division. The Division leads Canada's Global Innovation Strategy, which, in LAC, identifies Brazil and Chile as priority countries. Priority sectors in the Strategy are environmental science and technologies, natural resources and energy, health and related life sciences, and information and communication technologies.

Given their understanding of the department's mandate and priorities, the consultants are of the view that WD should not become substantially involved in directly supporting individual companies in market development activity in Latin America. Rather, attention to innovation clusters and activities to enhance partnership development and other actions recommended in this report, if successful, will trickle down with eventual spin-offs to the related business communities in Western Canada.

APPENDIX A. TRADE STATISTICS⁶¹

1. Western Canada Versus the Rest of Canada: Contrasting the importance of the LAC region in Western Canada compared to the rest of Canada.

Percentage of Global Exports to LAC:

(\$ millions)	2000	2001	2002	2003	2004	2005	2006	2007
Western Canada's Exports to LAC	1,786	1,773	1,514	1,396	1,745	1,755	1,936	2,215
Western Canada's Total Exports	111,233	109,944	98,329	104,777	117,310	1334,496	137,552	144,627
% of Western Canada's Global Exports going to LAC	1.61%	1.61%	1.54%	1.33%	1.49%	1.31%	1.41%	1.53%
Rest of Canada's Exports to LAC	2,219	2,247	1,860	1,816	2,113	2,705	3,182	3,684
Rest of Canada's Total Exports	274,446	265,286	266,966	249,526	268,215	273,962	273,838	275,264
% of Rest of Canada's Global Exports going to LAC	0.81%	0.85%	0.70%	0.73%	0.79%	0.99%	1.16%	1.34%

Percentage of Global Imports from LAC:

(\$ millions)	2000	2001	2002	2003	2004	2005	2006	2007
Western Canada's Imports from LAC	672	574	668	728	835	807	1,334	1,346
Western Canada's Total Imports	58,164	60,554	59,978	59,077	61,758	69,144	76,308	77,231
% of Western Canada's Global Imports coming from LAC	1.16%	0.95%	1.11%	1.23%	1.35%	1.17%	1.75%	1.74%
Rest of Canada's Imports from LAC	5,722	6,159	6,236	6,253	8,163	11,207	11,751	12,300
Rest of Canada's Total Imports	298,828	282,557	288,975	277,064	294,128	311,715	320,337	329,458
% of Rest of Canada's Global Imports coming from LAC	1.91%	2.18%	2.16%	2.26%	2.78%	3.60%	3.67%	3.73%

2. Western Canada's Exports to LAC By Province

Manitoba Domestic Exports to Latin America excluding Mexico, 2007, CDN \$	
Industry 5-digit NAICS code	
11114 - Wheat Farming	85,504,430
31121 - Flour Milling and Malt Manufacturing	24,476,953
33991 - Jewellery and Silverware Manufacturing (probably the Mint)	14,777,787
11113 - Dry Pea and Bean Farming	14,570,984
33141 - Non-Ferrous Metal (except Aluminum) Smelting and Refining	10,291,525
32611 - Unsupported Plastic Film, Sheet and Bag Manufacturing	7,654,786
11119 - Other Grain Farming	6,313,849
33341 - Ventilation, Heating, Air-Conditioning, Refrigeration Equipment	3,243,867
31199 - All Other Food Manufacturing	2,894,141
11112 - Oilseed (except Soybean) Farming	2,786,768
TOTAL (ALL INDUSTRIES)	195,784,000

⁶¹ All trade data collected from [Trade Data On-Line](#), with calculations performed by North West International

Saskatchewan Domestic Exports to Latin America excluding Mexico, 2007, Cdn \$	
Industry 5-digit NAICS code	
11114 - Wheat Farming	378,443,895
21239 - Other Non-Metallic Mineral Mining and Quarrying	171,417,688
11113 - Dry Pea and Bean Farming	153,786,658
11119 - Other Grain Farming	48,341,273
32518 - Other Basic Inorganic Chemical Manufacturing	6,570,264
11112 - Oilseed (except Soybean) Farming	5,024,656
33451 - Navigational, Measuring, Medical and Control Instruments	2,816,374
31121 - Flour Milling and Malt Manufacturing	1,750,082
31111 - Animal Food Manufacturing	1,683,467
11221 - Hog and Pig Farming	1,667,282
TOTAL (ALL INDUSTRIES)	779,889 ,000

Alberta Domestic Exports to Latin America excluding Mexico, 2007, Cdn \$	
Industry 5-digit NAICS code	
11114 - Wheat Farming	244,148,000
33313 - Mining and Oil and Gas Field Machinery Manufacturing	70,930,000
21111 - Oil and Gas Extraction	58,118,000
31121 - Flour Milling and Malt Manufacturing	35,962,000
33391 - Pump and Compressor Manufacturing	29,815,000
33361 - Engine, Turbine, Power Transmission Equipment Manufacturing	21,293,000
33451 - Navigational, Measuring, Medical and Control Instruments	19,231,000
32521 - Resin and Synthetic Rubber Manufacturing	17,980,000
21211 - Coal Mining	17,857,000
33291 - Metal Valve Manufacturing	16,922,000
TOTAL (ALL INDUSTRIES)	723,820,000

British Columbia Domestic Exports to Latin America excluding Mexico, 2007, Cdn \$	
Industry 5-digit NAICS code	
21211 - Coal Mining	205,594,000
32212 - Paper Mills	95,723,000
32213 - Paperboard Mills	34,413,000
32518 - Other Basic Inorganic Chemical Manufacturing	18,899,000
33391 - Pump and Compressor Manufacturing	16,889,000
32211 - Pulp Mills	14,590,000
33451 - Navigational, Measuring, Medical and Control Instruments	13,306,000
33313 - Mining and Oil and Gas Field Machinery Manufacturing	10,219,000
31161 - Animal Slaughtering and Processing	9,130,000
33329 - Other Industrial Machinery Manufacturing	7,600,000
TOTAL (ALL INDUSTRIES)	511,948,000

3. Western Canada's Imports from LAC By Province

Manitoba Imports from Latin America excluding Mexico, 2007, CDN \$	
Industry 5-digit NAICS code	
11142 - Nursery and Floriculture Production	22,636,596
11133 - Non-Citrus Fruit and Tree Nut Farming	20,117,010
33312 - Construction Machinery Manufacturing	11,878,776
11121 - Vegetable and Melon Farming	7,366,870
33361 - Engine, Turbine, Power Transmission Equipment Manufacturing	3,294,718
32532 - Pesticide and Other Agricultural Chemical Manufacturing	2,763,434
33531 - Electrical Equipment Manufacturing	2,243,635
31522 - Men's and Boys' Cut and Sew Clothing Manufacturing	1,493,908
31499 - All Other Textile Product Mills	1,464,664
31523 - Women's and Girls' Cut and Sew Clothing Manufacturing	1,410,670
TOTAL (ALL INDUSTRIES)	101,923,779

Saskatchewan Imports from Latin America excluding Mexico, 2007, CDN \$	
Industry 5-digit NAICS code	
33312 - Construction Machinery Manufacturing	13,992,905
33121 - Iron and Steel Pipes, Tubes Manufacturing from Purchased Steel	6,823,660
33111 - Iron and Steel Mills and Ferro-Alloy Manufacturing	6,002,533
11133 - Non-Citrus Fruit and Tree Nut Farming	4,400,406
33391 - Pump and Compressor Manufacturing	1,871,283
33399 - All Other General-Purpose Machinery Manufacturing	1,611,495
32519 - Other Basic Organic Chemical Manufacturing	1,485,383
11121 - Vegetable and Melon Farming	1,201,781
32532 - Pesticide and Other Agricultural Chemical Manufacturing	1,009,699
33361 - Engine, Turbine, Power Transmission Equipment Manufacturing	841,814
TOTAL (ALL INDUSTRIES)	49,277,117

Alberta Imports from Latin America excluding Mexico, 2007, CDN \$	
Industry 5-digit NAICS code	
11133 - Non-Citrus Fruit and Tree Nut Farming	60,543,769
33121 - Iron and Steel Pipes, Tubes Manufacturing from Purchased Steel	49,302,475
31213 - Wineries	19,345,845
32519 - Other Basic Organic Chemical Manufacturing	16,487,323
33312 - Construction Machinery Manufacturing	9,765,097
33391 - Pump and Compressor Manufacturing	7,052,422
32799 - All Other Non-Metallic Mineral Product Manufacturing	6,980,353
11121 - Vegetable and Melon Farming	5,606,321
31161 - Animal Slaughtering and Processing	4,595,963
32621 - Tire Manufacturing	4,544,694
TOTAL (ALL INDUSTRIES)	236,346,605

British Columbia Imports from Latin America excluding Mexico, 2007, CDN \$	
Industry 5-digit NAICS code	
32411 - Petroleum Refineries	202,280,000
21223 - Copper, Nickel, Lead and Zinc Ore Mining	131,060,000
11133 - Non-Citrus Fruit and Tree Nut Farming	126,493,000
32519 - Other Basic Organic Chemical Manufacturing	96,350,000
31171 - Seafood Product Preparation and Packaging	58,212,000
21229 - Other Metal Ore Mining	27,140,000
31213 - Wineries	24,412,000
31131 - Sugar Manufacturing	22,860,000
33611 - Automobile and Light-Duty Motor Vehicle Manufacturing	22,658,000
21222 - Gold and Silver Ore Mining	22,132,000
TOTAL (ALL INDUSTRIES)	958,595,000

4. Export Market Rank Analysis⁶²

This table reflects a rank analysis of the destination markets for Western Canada's exports (defined as domestic exports) to Latin American markets. The overall rank reflects the export patterns over the five-year period. The scoring methodology to determine overall ranking of markets: first rank gives 10 points, tenth rank gives one point, with adjustments for ties.) The table gives equal weight to each Western province.

Overall Ranking of LAC Exports Markets for the 2002-2006 Period					
	Western Canada	British Columbia	Alberta	Saskatchewan	Manitoba
Brazil	1 (tie)	1	2 (tie)	1	5
Venezuela	1 (tie)	3	2 (tie)	2	2
Colombia	3	6	5	3	1
Chile	4	2	6	6	7
Guatemala	5 (tie)	4	4	7	8
Peru	5 (tie)	8	8	4	3
Ecuador	5 (tie)	7	7	5	4
Cuba	8	10 (tie)	2 (tie)	8	9
Jamaica	9	-	9	9	6
El Salvador	10	5	-	-	-

⁶² Trade Data Online, <http://www.ic.gc.ca/epic/site/tdo-dcd.nsf/en/Home>

5. Canada's Services Exports to LAC⁶³

Total Services Receipts (Exports) & International Transactions in Commercial Services		
Country / Region	Commercial Services Exported	Total Services Receipts (inc. commercial, travel, transport & government (exports))
World	36,888	66,979
South America	641	1,103
Argentina	49	94
Brazil	196	386
Chile	59	96
Colombia	41	94
Venezuela	119	170
Other South America	177	263
Central America	76	128
Costa Rica	5	16
El Salvador	2	9
Guatemala	13	23
Honduras	7	13
Nicaragua	4	9
Other Central America	45	58
Caribbean data dominated by financial and banking flows		
Antilles	2875	3271
Bahamas	37	62
Barbados	1061	1087
Bermuda	1516	1586
Jamaica	26	69
Trinidad & Tobago	16	118
Other Antilles	218	349
Caribbean Common Market	1178	1402

A very rough indication of the nature of commercial services provided is suggested by data that can be accessed from the Inter-American Development Bank⁶⁴. Data are available from the Bank, not reproduced here, that show Canadian technical assistance (consulting) work for the Bank, along with Canadian goods and works. Areas in which Canada has strong consulting relationships include education and training, urban development, transportation, governance, environment, health, telecommunications, etc. (This database is also an additional source of information about Western Canadian companies active in the region.)

⁶³ Source: Statistics Canada CANSIM database (via DFAIT), Data are for 2005, latest available by Latin American country

⁶⁴ <http://condc05.iadb.org/idbppi/asp/ppProcurement.aspx?pLanguage=ENGLISH>

APPENDIX B. WESTERN CANADIAN COMPANIES ACTIVE IN LAC

1. Business News America⁶⁵

This list was generated from Business News Americas' Company Profile and Information Database on Industries in Latin America. The list includes all of Latin America, **including Mexico**. Companies headquartered in Western Canada are in bold font. The list undoubtedly reflects in part a predisposition to resource industries by the source (Business News Americas). The strong presence of Western Canadian companies is of note. Mining and oil and gas predominate. Calgary-based companies dominate Canada's oil and gas activity. Western Canada's strong mining presence is largely headquartered in Vancouver.

The list below also identifies numerous central and eastern Canadian companies active in LAC. These firms are included in this report because they provide, along with their Western Canadian equivalents, potential customers for Western Canadian suppliers of goods and services.

Petro-Canada	Downstream, Refining, Upstream - Exploration, Upstream - Production
EnCana	Upstream - Exploration, Upstream - Production
Nexen	Others, Upstream - Exploration, Upstream - Production
Cansup	Upstream - Exploration, Upstream - Production
CGX	Upstream - Exploration, Upstream - Production
Petro Andina	Upstream - Exploration, Upstream - Production
Petrobank	Upstream - Exploration, Upstream - Production
Solana	Upstream - Exploration, Upstream - Production
Sherritt	Coal Mining, Nickel Mining, Renewable generation, Upstream - Exploration, Upstream - Production
Talisman	Upstream - Exploration, Upstream - Production
Antrim	Equipment/Services
Petrolifera	Upstream - Exploration, Upstream - Production
Vermilion	Financing, Upstream - Exploration, Upstream - Production
Argenta Oil & Gas	Upstream - Exploration, Upstream - Production
Enbridge	Downstream, Transportation
Gran Tierra	Upstream - Exploration, Upstream - Production
CPI	Consulting/Research, Other
Hatch Energy	Construction/Engineering, Consulting/Research, Engineering/Construction
Methanex	Equipment/Services, Final Products, Petrochemicals, Upstream - Production
PCS	Other, Others
TransAlta	Generation - Hydro, Other, Thermo/combined cycle generation
Hydro Quebec	Distribution, Generation - Hydro, Renewable generation, Thermo generation, Transmission
Brookfield	Distribution, Financing, Generation - Hydro, Renewable generation, Transmission
SNC-Lavalin	Cement/Concrete Products, Construction/Engineering, Consulting/Research, Logistics
Cintec	Solid Waste - Hazardous, Solid Waste - Industrial, Solid Waste - Residential
Aecon	Airports, Cement/Concrete Products, Financing, Highways/Bridges/Tunnels
Bombardier Transport	Cement/Concrete Products, Other Heavy Construction/Engineering, Railroads, Urban Transport
Alcan	Alumina/Aluminum, Metal Products, Mining Support Activities
Finning	Mining Support Activities, Other Heavy Construction/Engineering
YVRAS	Airports, Privatization/Concession
IDC	Internet/Data, Other, Satellite Communications
SR Telecom	Local Telephony, Public/Rural Telephony
Scotiabank Group	Commercial/Retail Banking, Financial Services, Investment Banking, Reinsurance
Canada Life	Credit & Bond, Healthcare, Life, Health and Burial, Property & Casualty, Reinsurance
Kinross Gold	Exploration, Gold/Silver Mining
Barrick Gold	Gold/Silver Mining
Breakwater Resources	Gold/Silver Mining, Zinc/Lead Mining

⁶⁵ http://www.bnamericas.com/factfile_home.jsp

Scorpio Mining	Exploration, Gold/Silver Mining, Zinc/Lead Mining
StrataGold	Exploration, Gold/Silver Mining
Crystallex	Gold/Silver Mining
Dofasco	Iron Ore Mining, Iron/Steel, Metal Products
Energold	Mining Support Activities, Other
Inmet Mining	Copper Mining, Exploration, Gold/Silver Mining, Zinc/Lead Mining
Miramar Mining	Exploration, Gold/Silver Mining
Southwest'n Resources	Copper Mining, Diamond Extraction, Gold/Silver Mining, Zinc/Lead Mining
Almaden Minerals	Copper Mining, Gold/Silver Mining
Andean American	Exploration, Gold/Silver Mining
Brazilian Diamonds	Diamond Extraction, Gold/Silver Mining
Brett Resources	Exploration, Gold/Silver
Corriente Resources	Copper Mining, Exploration, Gold/Silver Mining
Cusac	Exploration, Gold/Silver Mining
Eldorado Gold	Exploration, Gold/Silver Mining
Everton Resources	Copper Mining, Gold/Silver Mining, Nickel Mining
First Point	Exploration, Gold/Silver Mining, Zinc/Lead Mining
Fortune River	Exploration, Gold/Silver Mining
Malaga	Copper Mining, Exploration, Gold/Silver Mining
Northern Orion	Copper Mining, Exploration, Gold/Silver Mining
Pacific Rim	Gold/Silver Mining
Samex	Exploration, Gold/Silver Mining, Zinc/Lead Mining
UME	Diamond Extraction, Exploration, Gold/Silver Mining, Other Base Metals
Alamos	Gold/Silver Mining
Amerigo Resources	Copper, Copper Mining
Arcturus	Exploration, Gold/Silver Mining
Atacama Minerals	Other
Capstone	Copper, Gold/Silver, Gold/Silver Mining
Diagem	Diamond Extraction, Exploration
Dundarave Exploration	Copper Mining, Exploration, Gold/Silver Mining
Ecu Silver	Exploration, Gold/Silver
First Majestic	Exploration, Gold/Silver Mining
Frontera Copper	Copper Mining
Guyana Goldfields	Exploration, Gold/Silver Mining
Int'l Northair Mines	Exploration, Gold/Silver Mining
Kimber	Exploration, Gold/Silver Mining
Linear Gold	Copper Mining, Exploration, Gold/Silver Mining
Morgain Minerals	Gold/Silver Mining, Other
Orvana	Copper Mining, Exploration, Gold/Silver Mining
Palmarejo	Exploration, Gold/Silver Mining
Pan American Silver	Gold/Silver Mining, Zinc/Lead Mining
Panoro Minerals	Copper Mining, Exploration, Gold/Silver Mining
Silver Quest Resources	Exploration, Gold/Silver Mining
Silver Standard	Gold/Silver Mining, Tin, Zinc/Lead Mining
Silver Wheaton	Gold/Silver Mining
Sirios Resources	Copper Mining, Diamond Extraction, Gold/Silver Mining, Zinc/Lead Mining
S.Am. Gold and Copper	Copper Mining, Exploration, Gold/Silver Mining
Tumi	Exploration, Gold/Silver Mining
ValGold	Gold/Silver Mining, Nickel Mining
Vannessa Ventures	Diamond Extraction, Exploration, Gold/Silver Mining
Verena Minerals	Diamond Extraction, Exploration, Gold/Silver Mining
Yamana Gold	Copper Mining, Exploration, Gold/Silver, Gold/Silver Mining
Canarc	Exploration, Gold/Silver Mining
Fortuna	Gold/Silver Mining
Gitennes	Copper Mining, Exploration, Gold/Silver Mining, Other Base Metals, Zinc/Lead Mining
Radius Gold	Exploration, Gold/Silver Mining

Santoy	Coal Mining, Copper Mining, Diamond Extraction, Exploration, Gold/Silver Mining, Other
Yukon Zinc	Copper Mining, Exploration, Zinc/Lead Mining
Aquiline Resources	Exploration, Gold/Silver Mining
Coalcorp	Coal Mining
Gammon Gold	Exploration, Gold/Silver Mining
Petaquilla	Copper Mining, Exploration, Gold/Silver Mining, Other
Stealth Minerals	Copper Mining, Exploration, Gold/Silver Mining
Sulliden	Copper Mining, Exploration, Gold/Silver Mining, Zinc/Lead Mining
Arizona Star	Exploration, Gold/Silver Mining
Glencairn	Exploration, Gold/Silver
Globestar Mining	Copper Mining, Exploration, Gold/Silver Mining, Zinc/Lead Mining
Goldcorp	Exploration, Gold/Silver Mining
Peru Copper	Copper Mining, Exploration
Teck Cominco	Coal Mining, Copper Mining, Exploration, Gold/Silver Mining, Zinc/Lead Mining
Apogee	Exploration, Gold/Silver Mining, Zinc/Lead Mining
Atna	Copper Mining, Exploration, Gold/Silver Mining
Aurelian Resources	Gold/Silver Mining
Bear Creek	Copper Mining, Exploration, Gold/Silver Mining
Calypso	Exploration, Mergers & Acquisitions, Non-metallic Mining
Canadian Shield	Exploration, Gold/Silver Mining
Candente Resource	Copper Mining, Exploration, Gold/Silver Mining
Cardero Resource	Copper Mining, Gold/Silver Mining, Iron Ore Mining
Dia Bras	Copper Mining, Gold/Silver Mining, Zinc/Lead Mining
Eaglecrest	Exploration, Gold/Silver Mining
Endeavour Silver	Gold/Silver Mining
Excellon Resources	Exploration, Gold/Silver Mining
Exeter Resource	Copper Mining, Exploration, Gold/Silver Mining
Far West Mining	Copper Mining, Exploration, Gold/Silver Mining
General Minerals	Copper Mining, Gold/Silver Mining
Golden Peaks	Exploration, Gold/Silver Mining
Greystar	Exploration, Gold/Silver Mining
IAMGOLD	Exploration, Gold/Silver Mining
IMA Exploration	Copper Mining, Exploration, Gold/Silver Mining
Inca Pacific	Copper Mining, Exploration, Gold/Silver Mining
Intrepid	Exploration, Gold/Silver Mining
Lundin Mining	Copper Mining, Exploration, Gold/Silver Mining
MacMillan Gold	Exploration, Gold/Silver Mining
Mandalay Resources	Copper Mining, Exploration, Gold/Silver Mining
Minefinders	Copper Mining, Exploration, Gold/Silver Mining
Newport Exploration	Copper Mining, Exploration, Gold/Silver Mining, Nickel Mining
Quadra	Copper Mining, Exploration, Gold/Silver Mining
Ross River	Copper Mining, Gold/Silver Mining
Skye Resources	Exploration, Nickel Mining
Zaruma Resources	Copper Mining, Exploration, Gold/Silver Mining
Zinco Mining	Copper Mining, Exploration, Gold/Silver Mining

2. Provincial Databases

Manitoba Trade Company Directory⁶⁶: Manitoba Trade maintains a roster of Manitoba companies and their market interests. For example, Manitoba companies listed as 'active' in Colombia (Manitoba's top ranked market) are:

- 3M Canada
- ADSGO Trading Corporation
- Agricore United
- Alphair Ventilating Systems Inc.
- APEM - E.I.T.
- Brenntag Canada Inc.
- Canadian Telecommunication Consultants
- CanTech International Corporation
- Carberry International Sports Corp.
- C.O.M.E.T. (Canadian Ostrich Marketing)
- Designed Genetics Inc.
- Floyde's Purebred Swine Exports Ltd.
- Global Alternative Treats Ltd.
- Global Grain Canada Ltd.
- Heartland International English School
- Menlo Worldwide Forwarding
- Nenco (Northern Engineering Company)
- Northern D-Lites
- Roy Legumex Inc.
- Sabourin Seed Service Ltd.
- Schenker of Canada Limited
- Scott Wolfe Management Inc.
- Winpak Ltd.
- Woodsong Farms

Saskatchewan Trade and Export Partnership⁶⁷ (STEP): STEP maintains an on line members directory. Examination of the company profiles in the database identifies the following companies as active in various countries of Latin America:

- Burnett Immigration Services Inc.
- Canglobal Management Solutions Ltd.
- Inland Audio Visual Limited
- Lonewolf Native Plant & Herb Farm
- Morris Industries Ltd.
- NORAC Weighing & Control Systems
- Odyssey Livestock Consulting
- O'Kane Consultants Inc.
- Prairie Malt Limited
- Rem Enterprises Inc.
- SaskEnergy International Incorporated
- SaskPower International
- Saunders Evans Architects Inc.
- Schulte Industries Ltd.
- Veikle Grain Ltd.
- Wilger Industries Ltd.

⁶⁶ <http://db.itm.gov.mb.ca/MBIS/MCD.NSF/if?readform&ID=CompaniesHome>

⁶⁷ http://www.sasktrade.com/html/membersshowcase_main.shtml

3. Trade Mission Participants

2004 Canada Trade Mission to Brazil: Western Canadian Participants⁶⁸

Canadian Special Crops Association, (Winnipeg, Manitoba)
 Manitoba Trade and Investment Corporation, (Winnipeg, Manitoba)
 Bankix Systems Ltd., (Saskatoon, Saskatchewan)
 Walker Seeds Ltd., (Tisdale, Saskatchewan)
 Agrium Inc., (Calgary, Alberta)
 EnCana Corporation, (Calgary, Alberta)
 Evans Console, (Calgary, Alberta)
 Macleod Dixon LLP, (Calgary, Alberta)
 PowerComm Inc., (Edmonton, Alberta)
 Teilhard Technologies Inc., (Calgary, Alberta)
 Northstar Trade Finance Inc., (Vancouver, British Columbia)
 Terra Remote Sensing Inc., (Sidney, British Columbia)

2003 Canada Trade Mission to Chile: Western Canadian Participants⁶⁹

Grupo Canada Ltd., (Winnipeg, Manitoba)
 Manrex Limited, (Winnipeg, Manitoba)
 Standard Aero, (Winnipeg, Manitoba)
 Agtech Processors Inc., (Regina, Saskatchewan)
 Canglobal Management Inc., (Saskatoon, Saskatchewan)
 Saskatchewan Trade and Export Partnership (STEP), (Regina,
 Adaptive Engineering Ltd., (Calgary, Alberta)
 Agrium Inc., (Calgary, Alberta)
 BC Vine Biotechnology Inc., (Penticton, British Columbia)
 Canada Latin America Consulting, (Burnaby, British Columbia)
 CF Educational Services Ltd., (Vancouver, British Columbia)
 Gomberoff-Bell-Lyon Architects Group Inc., (Vancouver, British Columbia)
 Hatfield Consultants Ltd., (West Vancouver, British Columbia)
 Impact Communications Ltd., (Abbotsford, British Columbia)
 McRae Institute of International Management, Capilano College, (North Vancouver, British
 Columbia)

4. Other Company Lists

Canadian Clean Energy Companies⁷⁰

The government of Canada has mounted a substantial effort to support Canada's clean energy companies internationally. Of special note the website has lists of Canadian companies active in various markets. Lists are available for Brazil, Chile, Argentina, Venezuela, and Cuba. The Clean Energy website also includes project examples. One project reflecting Western Canada's environmental activity in LAC is the Peruvian Waste-to-Energy Project managed by Naanovo Energy Inc., a global waste-to-energy technology company based in Calgary. The firm has signed a contract with Municipalidad Distrito de Calango Canete, Peru for the installation of a five module Naanovo Waste to Energy plant.⁷¹

⁶⁸ <http://www.tcm-mec.gc.ca/brazil/company-en.asp?p=2>

⁶⁹ <http://www.tcm-mec.gc.ca/chile/company-en.asp>

⁷⁰ <http://www.cleanenergy.gc.ca> , http://www.cleanenergy.gc.ca/international/listitems_e.asp?cnt=105

⁷¹ http://www.cleanenergy.gc.ca/international/projects_e.asp

Association of Canadian Engineering Companies⁷²

ACEC maintains a large registry in which companies can be searched by city and by region of activity.

Canadian Association of Mining Equipment and Services for Export⁷³

CAMESE maintains rosters of their members interested in various countries including Peru, Argentina, Chile, Brazil, and rest of Latin America.

5. Profiles of Select Western Canadian Companies Active in LAC

Imaging Dynamics Company, Ltd. (IDC), Calgary, AB⁷⁴

On September 19, 2007, IDC announced that the company has recently completed its 50th shipment of its digital radiography (DR) technology to Latin American, with recent installations in Argentina, Brazil, Chile, Mexico, Venezuela, Colombia and the Dominican Republic. IDC recently opened a new South American office in Santiago, Chile to serve the region. The firm notes that they have been well received as a Canadian technology company.

Vancouver Airport Services (YVRAS), Richmond, BC⁷⁵

Vancouver Airport Services (YVRAS) is North America's leading global airport investment, management and development company. In 2006, YVRAS' network of airports recorded consolidated revenues of \$289 million and combined passenger traffic totaled 22 million. YVRAS was formed in 1994 to market the expertise and leading-edge management techniques and operating philosophies first developed by the Vancouver International Airport. YVRAS has projects in the Bahamas, Chile, Dominican Republic, Jamaica, and Turks & Caicos.

PotashCorp, Saskatoon, SK⁷⁶

PotashCorp is an integrated producer of fertilizer, industrial and animal feed products. A scan of the PotashCorp annual reports highlights Brazil as a very important customer. The rapid growth of Latin America as a market early in this decade is evident. Colombia and Trinidad are other particularly important countries in the company's operations.

Macleod Dixon, Calgary, AB⁷⁷

Law firm Macleod Dixon of Calgary has an office in Rio de Janeiro working with oil and gas, energy, mining, and service companies across Latin America. The firm assists clients in upstream and downstream ventures, power projects, oil service contracts, and general commercial activity.

FY Group, Vancouver, BC⁷⁸

FY Group is a company headquartered in Vancouver providing legal and accounting services. Their practice is focused to a large degree on Latin America. Work includes representation of advanced technologies in Latin America, analytical work, due diligence on mining acquisitions, projects for aerospace and satellite communications interests in Brazil, and agricultural development projects sometimes in association with the large Mennonite communities in Bolivia and Paraguay.

⁷² <http://www.acec.ca/en/member/member.html>

⁷³ <http://www.camese.org/company.cfm?task=countrylist>

⁷⁴ <http://www.imagingdynamics.com/content/view/210/>

⁷⁵ <http://www.yvras.com/about.aspx>

⁷⁶ http://www.potashcorp.com/investor_relations/why_invest/industry_overview/?link_type=rightNav

⁷⁷ www.macleoddixon.com

⁷⁸ www.fernandezyoung.com

Northstar Trade Finance⁷⁹

Northstar Trade Finance Inc. was created, with the support of Western Economic Diversification, to support Canadian exporters by offering financing to credit worthy buyers of eligible Canadian goods and services. Since its formation in the early 1990s, Northstar has supported over \$1.8 billion in Canadian exports. Seventy percent of Northstar's business is in Latin America (including Mexico for this statistic). Of the Latin American business, half would be Mexico and almost a third Brazil. It is interesting that Northstar does very little business in Chile. This is because Northstar focuses on markets where the banking system is not well developed and this is not the case in Chile. Northstar has agents in Peru, Colombia, Argentina, and Brazil.

Canada Export Centre, Vancouver, BC⁸⁰ (CEC)

CEC provides market development services for Canadian companies, relying in part on strong language capabilities of their research staff. Latin America is a strong market for this entity, comprising a large share of their business. While CEC's number one focus is Asia, the Centre serves almost as many clients interested in LAC. Important sectors are food and beverage, mining, and environmental services, among others.

⁷⁹ www.northstar.ca

⁸⁰ www.canadaexportcentre.com

APPENDIX C. OPPORTUNITIES IN LATIN AMERICA

Sectors of particular note, based simply on the number of existing DFAIT market studies for LAC countries (three or more), are Agriculture, Food and Beverages; Environmental Industries; Information and Communications Technologies; Metals, Minerals and Related Equipment, Services and Technology; and Service Industries and Capital Projects.

1. Opportunities by Country

This appendix reviews opportunities in various Latin American countries based on a wide range of sources.⁸¹ Seven countries are addressed, based on their importance as current and potential markets for Western Canada and WD interest.

Brazil

Jurisdiction	Key Market Opportunities Identified
Alberta	Industrial Machinery and Equipment
Ontario	Computer hardware, electronics Computer software Internet and e-commerce services Oil and gasfield machinery & services Airport equipment Franchising Safety and security equipment Telecommunications equipment Print and graphic arts equipment Iron & steel (Ontario also commissioned a market study on "The Brazilian Mining Sector".)
New Zealand	Food Processing Equipment and Consultancy Telecommunications Agritech and Hortitech Education
Australia	Education Information and communications technology Mining Oil and gas Wine
United States	Agricultural Equipment Aircraft & Parts

⁸¹ Ontario International Trade Branch

[http://www.ontarioexportsinc.com/oei/redirect.jsp?page=English/Target Your Market/Finger Tip World.html](http://www.ontarioexportsinc.com/oei/redirect.jsp?page=English/Target%20Your%20Market/Finger%20Tip%20World.html)

UK Trade and Investment

https://www.uktradeinvest.gov.uk/ukti/appmanager/ukti/countries?_nfls=false&_nfpb=true&_pageLabel=countries_landing

Alberta Market Studies

<http://www.alberta-canada.com/export/internationalMarketProfiles/index.cfm>

New Zealand Trade & Enterprise

<http://www.marketnewzealand.com/MNZ/services/14431.aspx>

Austrade

<http://www.austrade.gov.au/Industry-Country/default.aspx>

U.S. Department of Commerce

<http://strategis.gc.ca/epic/site/imr-ri2.nsf/en/gr-01000e.html>

	Airports Computer Software E-Commerce Energy Highways Insurance Iron and Steel IT Hardware Medical Equipment Mining Oil and Gas Pharmaceuticals Pollution Equipment Ports Railroads Safety and Security Telecommunications Travel and Tourism
--	--

Venezuela

Jurisdiction	Key Market Opportunities Identified
Ontario	Information technology Electrical power generation systems Electrical equipment Oil and gas field machinery Airport equipment Automotive OEM parts Automotive aftermarket parts Travel and tourism Engineering services
United Kingdom	Oil and gas - the main opportunity in Venezuela for contractors and service companies Power Infrastructure Financial Services Telecommunications Environment - including water Tourism Consumer goods Security Services

Colombia

Jurisdiction	Key Market Opportunities Identified
Ontario	Telecommunications services Industrial chemicals Travel and tourism Air cargo services Financial services Automotive parts and accessories Computer hardware and software services Oil and gas machinery and services Plastics materials and resins Telecommunications equipment Electrical power systems

United Kingdom	Agriculture (genetic material and live animals) Environment (water treatment, Clean Development Mechanism projects and environmental consultancy).
Australia	Agribusiness Mining
United States	Industrial Chemicals Safety and Security Telecommunications Services Plastic Materials and Resins Automotive Parts and Accessories Radiology Equipment Air Cargo Services Travel and Tourism Computer Hardware and Software Services Oil and Gas Machinery and Services Pollution Control Equipment Construction and Mining Equipment Electrical Power Systems Financial Services Food & Beverage Processing and Packaging Equipment

Chile

Jurisdiction	Key Market Opportunities Identified
Alberta	Building Materials and Construction Equipment Environmental Goods and Services Mining Equipment and Supplies Oil and Gas Equipment
Ontario	Mining equipment and supplies Environmental technologies and services Plastics production machinery and resins Electric power equipment Telecom. equipment and services Construction equipment Computers and peripherals Franchising Food processing and packaging equipment Air conditioning and refrigeration (Recent Ontario analysis prepared on the "Energy Market in Chile".)
United Kingdom	Environment – investment in clean technology is expected to reach \$4bn in the next few years Carbon Trading (CDM) – Chilean industry has already sold carbon credit for one project, and 46 others have been identified by the government as potential CDM projects. Opportunities for brokers and consultants. Healthcare – over US\$500 million will be invested in four Public Private Partnership hospitals in 2006 with opportunities for British equipment suppliers and consultants Construction – extensive private investment, and UK consulting engineers are starting to make an impact Telecommunications – US\$1.2billion a year is being invested in new products, technology and network expansion IT – Chile is Latin America's most developed IT market, and specific opportunities for industrial software and applications. Fishing – new technology for fish farming, processing and the renovation of fleets Mining – Chile's largest productive sector, niche opportunities are in environmental

	consulting, specialised engineering and industry equipment.
New Zealand	Food Processing Agritech Forestry Energy Generation Construction Building Products Medical Equipment Marine Resources and Aquaculture Plastics Industry Environmental Engineering Safety and Security Equipment Education
Australia	Food and beverage Information and communications technology Mining
United States	Construction Computer Hardware/Software/Services Electric Power Equipment Financial Services Food Processing/Packaging Equipment Franchising Healthcare/Medical Equipment Mining Equipment Plastics Machinery/Materials/Resins Pollution Control/Water Treatment/Environmental Services Safety/Security Equipment Telecommunications Equipment/Services Travel and Tourism

Peru

Jurisdiction	Key Market Opportunities Identified
Australia	Agribusiness Education Food and beverage Information and communications technology Mining Services
United States	Mining Industry Equipment Plastics Material and Resins Industrial Chemicals Travel and Tourism Air Conditioning and Refrigeration Equipment Oil and Gas Machinery Food Processing and Packaging Equipment Yarns

Argentina

Jurisdiction	Key Market Opportunities Identified
Alberta	Agricultural Equipment Computers and Software Construction and Building Materials and Services Environmental Equipment and Services
Ontario	Travel and tourism services Telecommunications equipment Computer software Computers and peripherals Management consulting services Airport ground support equipment Medical equipment Food processing and packaging Electric power systems Education and training
New Zealand	Telecommunications Food Processing Engineering and Technology Building Products Agritech Education
Australia	Agribusiness Education Food and beverage Franchising Information and communications technology Mining
United States	Electric Power Systems Agricultural Machinery, Equipment and Parts Industrial Chemicals Food Processing and Packaging Equipment and Parts Medical Equipment and Supplies Residential Building Materials and Supplies Information Technology Mining Machinery and Equipment Telecommunication Services Travel and Tourism Services Plastic Extrusion Machinery Security and Safety Equipment Hotel and Restaurant Animal Genetics (Bovine Semen) Food Ingredients Planting Seeds

Cuba

Jurisdiction	Key Market Opportunities Identified
Alberta	Education and Training Building Products Environmental Goods & Services Industrial Machinery Mining Equipment & Services Oil & Gas Equipment and Services
United Kingdom	There are opportunities for companies via joint ventures and other forms of commercial association in the following sectors: Healthcare Tourism Agriculture Oil and gas Power generation Biotechnology ICT Heavy industry

Notes from UK Trade and Invest on opportunities in additional countries that are significant recipients of Western Canadian exports (Guatemala, Ecuador, Jamaica, El Salvador) plus Panama are provided below:

Guatemala

- Power – privatisation, hydro and geothermal potential
- Water – expansion of capacity
- Airports – upgrades
- Telecommunications – privatisation
- Manufacturing – raw materials and equipment supplies
- Agriculture – technology

Ecuador

- Oil – upstream and downstream opportunities
- Airports – new construction
- Environment
- Water
- Security

Jamaica

- Tourism – consultancy, supply of goods and training particularly heritage tourism and eco-tourism.
- Construction – new piers, expansion of ports, airports and duty free complexes
- Mining – technical consultancy and plant equipment
- Telecommunications and IT – growth areas, with an extensive program to attract foreign investment underway
- Agriculture and manufacturing – demand for consultancy, technical expertise, training and equipment
- Energy – plans underway for a refinery upgrade, a new power generation plant and liquefied natural gas conversion and oil and gas exploration.
- Renewable energy – new sources are being explored; a UK company is already participating in a US\$25m wind farm project, hydro plants and solar energy.

El Salvador

- Automotive parts and service equipment – increasing demand
- Processed foods – rise in consumer spending sparked growth in this sector
- Architecture, construction and engineering – major infrastructure projects
- Telecommunications – privatisation

- Environmental technologies – compliance with recent laws
- Electric power generation – privatisation
- Plastics and resins – to supply manufacturing industries
- Paper and board – for packaging and newsprint

Panama

Panama's economy is driven by the Canal and its well-developed banking and service sectors. The service sector accounts for 80% of GDP. The country also has the world's second largest free trade zone. Opportunities:

- Eco-tourism
- Agriculture
- Information technology
- Telecoms
- Construction and infrastructure projects
- Chemicals and pharmaceuticals
- Electricity generation, transmission and distribution
- Manufacturing
- Ports and maritime

U.S. Trade Development Agency⁸²

As an example of the range of opportunities throughout Latin America, this is a list of some recent projects supported by the USTDA in Latin America and the Caribbean.

- Brazil: State of Ceara Data Center Project, COPASA Water Re-Use Project
- Colombia: Civil Aviation Renewable Energy, Telecommunications Capacity Building
- Costa Rica: El Diquis Hydroelectric Power Geotechnical and Financial Analyses
- Dominican Republic: Emergency Response Management System
- El Salvador: Single Window Electronic Customs Portal
- Guatemala: Customs Transit Control System
- Haiti: Port-au-Prince Airport Modernization
- Honduras: Port of Cortés Dry Bulk Unloading Terminal
- Nicaragua: National Ports Law – Nicaragua National Ports Law
- Panama: Port and Maritime Sector Monitoring and Control Center
- Peru: Lima Integrated Solid Waste Management, Lambayeque Flood Control System
- Uruguay: UTE Clean Coal Technology

⁸² <http://www.ustda.gov/program/regions/lac/>

APPENDIX D. INFORMATION SOURCES

1. Principal Information Sources

This section of the report identifies some of the principal information sources that were used to date and may assist further research. Additional sources are referenced elsewhere in the text of this report.

Latin American Network Information Center

LANIC is an excellent and widely recognized source of information on Latin America. LANIC is affiliated with the Lozano Long Institute of Latin American Studies at the University of Texas at Austin. In particular LANIC maintains comprehensive country profiles. The example of Jamaica can be found at the URL below.

<http://lanic.utexas.edu/la/cb/jamaica/>

<http://www1.lanic.utexas.edu/la/region/trade/>

<http://lanic.utexas.edu/>

Business News Americas

Company profile and information database on industries in Latin America. Very useful source, even without subscription. Business News Americas is a source of extensive company information. Business News Americas also produces substantive market reports.

<http://bnamericas.com>

Inter-American Dialogue

The Inter-American Dialogue is a leading U.S. center for policy analysis, exchange, and communication on issues in Western Hemisphere affairs.

<http://www.thedialogue.org/>

Comparing Canada's Engagement in Latin America and Asia

The Conference Board of Canada had planned for 2007 an analysis comparing Canada's engagement in Latin America and Asia. The report does not appear to be available at this time.

<http://www.conferenceboard.ca/ITIC/2007-ITIC-Annual-Report-web.pdf>

Canadian Association for Latin American and Caribbean Studies

CALACS facilitates networking and information exchange among persons, in Canada and abroad, engaged in teaching and research on Latin America and the Caribbean, fosters especially within Canadian universities, colleges, and other centres of higher education, the expansion of information on and interest in Latin America and the Caribbean; and represents the academic and professional interests of Canadian Latin Americanists.

<http://www.can-latam.org/>

Canadian Foundation for the Americas

"Canada in the Americas; the Ebbs and Flows of Assuming a Significant Role", 2007.

http://www.focal.ca/pdf/Torres_Canada_in_the_Americas_chapter.pdf

Export Development Canada Presentation

"Support to Canadian Investment Abroad", CCBC Round Table Rio de Janeiro
30 November 2007

www.ccbc.org.br/download/Fernanda_Custodio_301107rj.ppt

Scotiabank Presentation

"A Critical Look at Neglect and Opportunity in Latin America and the Caribbean; Canadian Investment & Trade in Latin America, Obstacles & Opportunities" 2006, <http://www.focal.ca/pdf/PBreard.pdf>

Bank Information Center, Latin America

The Bank Information Center partners with civil society in developing and transition countries to influence the World Bank and other international financial institutions to promote social and economic justice and ecological sustainability.

<http://www.bicusa.org/en/Region.4.aspx>

Latin Business Chronicle

Latin America business information. Ready source of information on upcoming major trade and investment conferences.

<http://www.latinbusinesschronicle.com/>

The 2008 Latin American Economic Outlook Report

OECD report

http://www.oecd.org/document/40/0,3343,en_2649_37417_38789800_1_1_1_37417,00.html

<http://www.oecd.org/dataoecd/0/11/39797645.pdf> (related ppt in Spanish)

U.S. Bureau of Western Hemisphere Affairs

<http://www.state.gov/p/wha/>

New Zealand Ministry of Foreign Affairs and Trade Latin America Strategy

Numerous useful reports.

<http://www.mfat.govt.nz/Foreign-Relations/Latin-America/0-strategy-paper.php>

<http://www.mfat.govt.nz/Foreign-Relations/Latin-America/index.php>

<http://www.nzte.govt.nz/common/files/p4-seminar-oehtinger.pdf>

<http://www.nzte.govt.nz/common/files/p4-seminar-walker.pdf>

Australia Foreign Affairs

Extensive information on Australia's commercial relationship with Latin America.

<http://www.dfat.gov.au/coalar/index.html>

Danish Latin America Strategy

<http://www.um.dk/en/servicemenu/News/NewsArchives2007/ReleaseOfTheGovernmentsNewDanishLatinAmericaStrategy.htm>

New Zealand Trade & Enterprise

New Zealand Trade & Enterprise has on-line, easy-to-use market studies for Argentina, Brazil, Chile, and Uruguay. This is current information and very useful as an introduction to these markets, although the reports are of course from a New Zealand perspective.

<http://www.marketnewzealand.com/MNZ/services/14431.aspx>

Austrade

Good source of detailed market studies by country and sector.

<http://www.austrade.gov.au/Industry-Country/default.aspx>

UK Trade and Investment

UK Trade and Investment is an authoritative information source on international business opportunities.

https://www.uktradeinvest.gov.uk/ukti/appmanager/ukti/countries?_nfls=false&_nfpb=true&_pageLabel=countries_landing

U.S. Department of Commerce

Industry Canada's Strategis allows access to an exhaustive array of U.S. Department of Commerce international market studies, at

<http://www.ic.gc.ca/epic/site/imr-ri2.nsf/en/gr-01000e.html>

U.S. DOC International Market Insights are available on Strategis. Second URL is example of Chile.

<http://strategis.ic.gc.ca/epic/site/imr-ri2.nsf/en/gr00002e.html>

<http://strategis.ic.gc.ca/epic/site/imr-ri2.nsf/en/gr-01718e.html>

U.S. DOC Market of the Month. Countries covered in this useful, recent series include Chile, Colombia, and Peru. These reports contain especially useful information on specific opportunities. Cutting and pasting the URLs, as is often the case at US DOC, is unreliable, but searches can locate these documents.

http://www.export.gov/articles/mom_colombia_link1.asp

U.S. DOC Doing Business in ... Reports from the U.S. Department of Commerce. Example given is Doing Business in the Caribbean.

<http://www.buyusa.gov/caribbean/en/>

Multilateral Development Banks

Valuable information sources include the sites of the World Bank, Inter-American Development Bank, North American Development Bank, and Caribbean Development Bank, along with regional financial agencies such as the Andean Development Corporation.

Inter-American Development Bank

Research Department: Macroeconomics

http://www.iadb.org/res/pub_list.cfm?pub_type_id=MAC&language=En

Alberta Market Studies

Alberta has available on-line International Market Development Profiles for Argentina, Brazil, Chile, Cuba, and Venezuela.

<http://www.alberta-canada.com/export/internationalMarketProfiles/index.cfm>

Manitoba Market Studies

Manitoba has available on-line market study information guides for Brazil, Argentina, Chile, Cuba, and several Central American countries.

<http://www.gov.mb.ca/trade/country/lac/index.html>

Ontario International Trade Branch

The Government of Ontario informs website users of export opportunities in various markets.

http://www.ontarioexportsinc.com/oei/redirect.jsp?page=English/Target_Your_Market/Finger_Tip_World.html

CEDQ Market Studies

CEDQ at one time produced market reports for Quebec industry. Numerous LAC studies were undertaken.

http://web.archive.org/web/20031020021410/http://www.dec-ced.gc.ca/asp/Publications/doc_domaine_activites.asp?LANG=EN&FICHER_RETOUR=doc_domaine_activites.asp#107

World Bank Foreign Direct Investment

Source of information on FDI and FDI opportunities.

<http://www.fdi.net/>

United Nations Economic Commission for Latin America and the Caribbean

"Latin America and the Caribbean. Projections 2006-2007". A good source of macroeconomic data, including presentations indicating strong GDP growth across LAC countries from 2004 to 2007.

<http://www.eclac.org/estadisticas/default.asp?idioma=IN>

Canadian Advanced Technology Alliance

Perhaps indicative on burgeoning interest in high technology markets in Latin America, in 2006 a Guide to Business Development in Latin America was published. The Guide was written to respond to CATA's needs analysis survey of companies doing business in or planning to expand in Latin America.

http://www.cata.ca/Media_and_Events/Press_Releases/cata_pr09210601.html

Virtual Business Corridors: A New Gateway to Latin America's High-Tech Industries

Companies in Argentina, Brazil, Chile, and Uruguay now have access to specialized electronic highways, Virtual Business Corridors (VBCs), that lead directly to other companies in Latin America and Canada. With funding from the International Development Research Centre (IDRC), the new VBCs are the result of a collaboration between business associations in Latin America and the Canadian Advanced Technology Alliance (CATA), which manages the electronic corridors. The project is intended to help Latin American industries enhance business communications, increase their level of collaborative research and development, and promote strategic alliances and partnerships.

http://www.idrc.ca/en/ev-5555-201-1-DO_TOPIC.html

Scientific Collaboration between Canada and Developing Countries

(Prepared for the Office of the National Science Advisor) March 2005

www.science-metrix.com/pdf/SM_2005_002_CNS_Collaboration_Canada-Developing_Countries.pdf

Ranking National Innovative Capacity

www.kellogg.northwestern.edu/.../sstern/htm/NEWresearchpage/Publications/Porter%20Stern%20GCR%202003.pdf

Chile's Competitiveness: Where Does the Country Stand?

www.isc.hbs.edu/pdf/Chile_CAON_2005.06.24.pdf

Fraser Institute Annual Survey of Mining Companies 2006/2007

This authoritative report is a good source of information about how mineral endowments and public policy factors such as taxation and regulation affect exploration investment.

http://www.fraserinstitute.org/COMMERCE.WEB/product_files/Mining06rv2.pdf

Agriculture and Agri-Food Canada

The department provides exhaustive Market Information for Latin America and the Caribbean, at: <http://atn-riac.agr.ca/info/lac-e.htm>

Canada's Trade and Investment Performance in Latin America

This is an older Industry Canada report.

[http://www.ic.gc.ca/epic/site/eas-aes.nsf/vwapj/tim2000e.pdf/\\$FILE/tim2000e.pdf](http://www.ic.gc.ca/epic/site/eas-aes.nsf/vwapj/tim2000e.pdf/$FILE/tim2000e.pdf)

Foreign Affairs and International Trade Canada

DFAIT has numerous valuable information sources addressing Latin America. Some of the most pertinent to this study are selected below.

www.international.gc.ca

www.infoexport.gc.ca

Re-Engaging the Americas Through Trade and Investment

February 22, 2008, Vancouver, British Columbia, Notes for an Address by the Honourable David Emerson, Minister of International Trade at Latin America Commitment Lunch, Hosted by Canadian Council for the Americas - British Columbia.

- Extract of particular note: " To help our businesses and investors succeed in Latin American and Caribbean markets, we're putting a new focus on getting more Canadian Trade Commissioners on the ground throughout the Americas."
- A synopsis of this presentation is available, prepared by CCA BC, but the full address is at the URL below.

http://w01.international.gc.ca/MinPub/Publication.aspx?isRedirect=True&Language=E&publication_id=385883&docnumber=2008/3

Brazil Market Plan, October 2007

<http://infoexport.gc.ca/ie-en/DisplayDocument.jsp?did=76231>

DFAIT Country Economic Profiles

The example given at URL below is Peru.

<http://infoexport.gc.ca/ie-en/DisplayDocument.jsp?did=61750>

DFAIT Market Studies

<http://www.infoexport.gc.ca/ie-en/IndustrySector.jsp>

Country and Regional Information, Latin America and the Caribbean

<http://geo.international.gc.ca/cip-pic/geo/lac-alc-en.aspx>

Notes for an Address by the Honourable Pierre Pettigrew, Minister for International Trade, at the Energy Issues in Latin America Conference, "Expanding Our Trade Relationships with Latin America: Challenges and Opportunities", Calgary, Alberta, October 10, 2002

(Older item but with focus especially relevant to Western Canada)

- The Canadian government's target countries in Latin America have traditionally been Brazil, Mexico, and Venezuela, those with substantial heavy oil resources.
- The Canadian energy services industry is competitive ... the oil and gas sector in the Americas continues to show great promise.

http://209.85.173.104/search?q=cache:e1wJfqDtFvoJ:w01.international.gc.ca/MinPub/Publication.asp%3Fpublication_id%3D379940%26Language%3DE+379940+dfait&hl=en&strip=1

Notes for an Address by the Honourable Peter Mackay, Minister of Foreign Affairs, "Expanding Trade and Foreign Relations in the the Americas: Canada Counts", Toronto, March 25, 2007

- Latin America is changing. It is becoming more prosperous, more competitive and more innovative, and more challenging in some respects. And Canada must be part of this process of change.
- Today, whether it's mining, power generation, education and financial services, oil and gas, or telecommunications, Canadians and Canadian companies are there to invest in growing economies.
- Canada continues to be a partner in a variety of educational and aid development projects throughout the Caribbean community.
- Canada has now become the second-largest investor in Latin America, surpassing Spain.

http://w01.international.gc.ca/minpub/PublicationContentOnly.asp?publication_id=385184&Language=E&MODE=CONTENTONLY&Local=False

Seventh Annual Report on Canada's State of Trade, Trade and Investment Update, 2007

http://www.international.gc.ca/eet/trade/sot_2007/sot-2007-en.asp

Foreign Affairs and International Trade Canada's S&T Program

<http://www.infoexport.gc.ca/science/program-en.htm>

DFAIT Office of the Chief Economist

<http://www.dfait-maeci.gc.ca/eet/menu-en.asp#trade>

DFAIT Country News Sites

The Government of Canada maintains websites that can be accessed by the following URL format:

www.country.gc.ca. An example would be www.peru.gc.ca.

2. Bilateral Trade Associations

Cámara de Comercio Chile - Canadá

(Spanish only.)

<http://www.chile-canada-chamber.cl/new/index.htm>

Cámara de Comercio Venezolano Canadiense

(Spanish only.)

<http://www.cancham.com.ve/>

Cámara de Comercio Canadá - Perú

(Spanish only)

<http://www.canadaperu.org/>

Cámara de Comercio Ecuatoriano Canadiense

(Spanish only)

<http://www.ecucanchamber.org/>

Chamber of Commerce Canada and Guatemala

(Spanish only)

http://www.canchanguate.com/portal/index.php?option=com_content&task=view&id=16&Itemid=39

Chamber of Commerce Canada and El Salvador

<http://www.canadaelsalvador.org/>

Colombo Canadian Chamber of Commerce

<http://www.cccc.com.co/>

Federation of Andean/Canadian Bilateral Trade Associations

<http://www.cccc.com.co/docs/sociospromocion-eng.pdf>

Brazil-Canada Chamber of Commerce

<http://www.ccacanada.com/bccc/>

Câmara de Comércio Brasil-Canadá

<http://www.ccbc.org.br/ingles/default.asp>

The Canada-Brazil trade association website includes a members list.

3. Interesting Reading

Two Articles from Wharton University

Latin America: Once a Money Pit, Now a Profitable Investment

<http://www.wharton.universia.net/index.cfm?fa=viewArticle&id=1193&language=english&specialId=>

'Trans-Latin' Corporations: The New Conquistadors of America

<http://www.wharton.universia.net/index.cfm?fa=viewArticle&id=1406&language=english>

The Forgotten Partners: Canadian Private Sector Involvement in Latin America

MBA candidate's paper, circa 2002 but of background interest.

<http://cibs.management.dal.ca/Files/pdfs/DP-188.pdf>

Strategic Plan for International Activities to 2010 of the Australian Academy of Technological Sciences and Engineering

A report on some strategic thinking in Australia with respect to international science and engineering activities, of possible relevance to international development of Western Canada's innovation clusters.

www.atse.org.au/uploads/stratplan2010.pdf

Review of the Literature: Causal links between innovation and international trade and investment

April 2006. UK study that addresses how, and to what extent, international trade and investment respectively influence domestic innovation performance, including R&D, and vice versa.

<https://www.uktradeinvest.gov.uk/ukti/fileDownload/2006LitReviewreport.pdf?cid=407746>

Gringos from the Far North. Essays in the History of Canadian-Latin American Relations 1866-1968

J. C. M. Ogelsby. Maclean-Hunter Press, 1976.

APPENDIX E. EXPERTS CONSULTED

Key Names

A large number of experts conversant with international trade development were consulted, across Western Canada and in Ottawa. In the following list, the names of those with whom face-to-face meetings are marked with an asterisk. Names are grouped when a joint meeting was held. Other substantive consultations were held by telephone and names are provided in normal font. Other interlocutors with whom brief telephone conversations were held are not listed. The input of the listed experts was of great value to this research study.

WD Steering Committee

Dayna Boutang*
Harold Deck*
Tyson Purcha*
Karla Radomsky*

WD Regions

Brent Depape*
Mark Nicholson*
Tom Kerkhoven
Kraig Short*

Municipal

- Greg Dandewich*, Economic Development Director, Destination Winnipeg Inc.
- Kent McMullin, Economic Development Edmonton
- Denean Tomlin, Calgary Economic Development

Provincial

- Alberto Velasco*, International Business Development, Mexico & Chile, Manitoba Competitiveness, Training and Trade
- Jennifer Evancio*, Director, Saskatchewan Trade and Export Partnership
- Rob Ziola*, Director, Saskatchewan Trade and Export Partnership
- Benigno Rojas-Moreno*, Senior Trade Officer, Energy, Fabricio Lima*, Timothy Beals*, Alberta IIAR
- Heli Carswell*, Senior Trade Director, Advanced Industries, AB Economic Development
- Rockford Lang*, Trade Director, AB IIAR
- Mike Carter*, ADM, and Laurence Lemay*, Marketing, Investment and Trade, B.C. Ministry of Economic Development

DFAIT Regional

- Suzanne Cormie*, Senior Trade Commissioner, Manitoba
- Mona Taylor*, Senior Trade Commissioner, Saskatchewan
- Michael Wilmot*, Trade Commissioner, Alberta
- Wayne Robson*, Director and Senior Trade Commissioner, B.C.
- Reid Henry*, Director and Senior Trade Commissioner, Prairies

DFAIT Ottawa

- Alex Bugailiskis*, ADM, Secretariat for the Americas Strategy, DFAIT (brief meeting)
- Pat Langan-Torell*, Director, Latin America and the Caribbean Commercial Relations, DFAIT
- Roman Hruby*, Donald Mackay*, Secretariat for the Americas Strategy, DFAIT
- Rene Wassill*, Deputy Director, Science and Technology Division, DFAIT

- Richard Cameron*, Senior Research Coordinator, David Boileau*, Office of the Chief Economist, DFAIT

Other Federal Departments

- Susan McCoy*, DG, Americas Branch, CIDA
- Emilee Pedruchny*, Director, Sector Intelligence and Analysis, Industry Canada
- Melanie Cullins*, Director, International Relations Office, NRC
- Federico Burone, Regional Director Latin America, IDRC, Montevideo, Uruguay
- Karine Morin*, Senior Advisor, Earth Sciences Sector, NRCan
- Robert Jones*, Director, Industry and Trade, Canadian Forest Service, NRCan
- Kim Stirling*, Minerals, Metals and Materials Policy Branch, NRCan
- Drew Leyburne*, Geoff Murphy*, Michael Wiggin*, CANMET, NRCan
- Mike Ellerbeck*, Project Leader, NRCan, Vancouver
- Peter Cameron*, Director, International Finance and Development Division, Finance Canada
- Bruce Mitchell*, Chief, Environmental Statistics, Statistics Canada
- Sonia Vieira*, International Market Development Officer, Agriculture and Agri-Food Canada, Ottawa
- Michele Kuxhaus*, Senior Marketing and Trade Officer, Agriculture and Agri-Food Canada, Saskatoon
- Doug Kinsey*, Deputy Executive Director, Industry Canada, B.C.

Innovation Clusters

- Curtis Rempel*, Research Development Manager, Richardson Centre for Functional Foods and Nutraceuticals
- Vic Gerden*, Manitoba Aerospace
- Paul Wiebe, Director, Business Development, NRC Institute for Biodiagnostics
- Malcolm Wilson*, Director, Office of Energy and Environment, University of Regina
- Richard Belzil*, Ivan Sierralta*, Calgary Technologies Inc. (Wireless)
- David Antoniuk*, Director, Business Development, TRILabs
- Yoga Yogendran*, Director, Technology Deployment and Commercialization, NRC Institute for Fuel Cell Innovation
- Tim Walzak* and Chris Edley*, Camosun College (Ocean Industries)
- Gabe Kalmar*, Executive Director, Operations, Genome BC
- (plus several telephone contacts noted in the text of this report)

Private Sector (terms of reference called for private sector consultations to be held to a minimum)

- Paul Drager, Partner, Macleod Dixon
- Bob Blackburn*, Sr VP, SNC Lavalin (brief meeting)
- Jim Fernandez*, President and CEO, FY International
- David Fissel*, President, ASL Environmental Sciences Inc.
- Harry Weiler*, AXYS Technologies
- Mark Mensing*, CEO, Canada Export Centre

Academia

- Ian Bailey*, Director, Industry Liaison Office, University of Regina
- Bob Schad*, A/Director, Office of International Cooperation and Development, University of Regina
- David Harvey*, Director, Business Development, Saskatchewan Institute of Applied Science and Technology
- Barry Carin, Centre for Global Studies, University of Victoria
- Elizabeth Montes Garces, University of Calgary

Export Development Canada/Northstar Trade Finance/Canadian Commercial Corporation

- Robert Forbes*, Group Vice President, International Business Development, Johane Seguin*, Geoff Stone*, Veronica Lares*, Nadia Avila Lopez*, Export Development Canada
- Linda Niro*, Western Region VP, EDC
- Scott Shepherd*, President & CEO and Miguel Lutz*, Northstar Trade Finance
- Tom DeWolf*, Director Business Development, Norm Weir*, Canadian Commercial Corporation

Associations

- Eric Kirschner*, Director, Marketing, Canadian Council of the Americas BC
- Andre Nudelman, Chairman, Canadian Council of the Americas BC
- Werner Knittel*, BC VP, CME
- Brian McCready*, AB VP, CME

Other

- Fabiola Galaz*, Representative CORFO Canada, Invest Chile
- Marlene Roy*, Information Resources Coordinator, International Institute for Sustainable Development
- Vinita Watson, Canadian Executive Director, Inter-American Development Bank
- Abraham Fox*, Structured and Corporate Finance, Inter-American Development Bank

Seminars Attended

The consultant's outreach included attendance at Canadian Council of the Americas seminars in Vancouver and Calgary and participation in a U.S. Department of Commerce webinar on the Inter-American Development Bank. A Manitoba Trade seminar on "Chile: key mining partner in Latin America" was also attended.

Subcontractors: The two subcontractors also held outreach meetings, in particular with senior DFAIT staff.